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Fair sustainable development
based on the capability approach

UFZ Discussion Papers

16/2013 – GeNECA 9

Do community currencies enhance sustainable quality of life?

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October 2013

Publisher:
Helmholtz-Zentrum für Umweltforschung GmbH - UFZ
Permoserstr. 15
04318 Leipzig

ISSN 1436-140X

Gerechte Nachhaltige Entwicklung auf Grundlage des Capability-Ansatzes
(Fair sustainable development based on the capability approach):

GeNECA

'Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' (WCED 1987)

Aims and objectives of the research project GeNECA

Sustainability policy has to consider the interdependencies of human life and nature; it has to meet the high moral standards of intra- and intergenerational justice set by the Brundtland Commission in 1987; and, finally, it has to motivate people to behave accordingly. This is quite a challenging task that often is responded to in a too simplistic way. Current sustainability science and civic engagement often focus on the environmental dimensions and herewith on intergenerational justice.

The Capability Approach is a leading paradigm in development economics that has informed development policy during the last 20 years. With its focus on human development it has highlighted the interaction between social and economic development. The issue of intragenerational justice constitutes an ongoing motive within the Capability Approach, but intergenerational justice and environmental concerns have often been left out of its scope.

The project GeNECA aims at conceptualizing sustainable development on the basis of the Capability Approach so as to combine the issues of inter- and intragenerational justice drawing on an integrated understanding of social, economic and environmental development. Resuming the spirit of the Brundtland commission, GeNECA puts the needs and capabilities of people all over the world, now and in future into its focus.

On the basis of conceptual reflections, current sustainability indicators will be complemented by capability-based indicators. The concept will further be used in case studies on various areas of governance to prove its usefulness in decision processes. A feedback mechanism will be installed to amend the conception to the demands of applicability.

GeNECA is a 3 years research project (04/2010–03/2013) funded by the German ministry for science and research as part of the funding programme "Economics for Sustainability". (FKZ 01UN1015A, www.wi-n.org)

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Abstract

Community currencies and their contribution to a sustainable development have been quite widely discussed. In contrast, their potential to raise the personal quality of life of their members and users has been less noted. Combining these two strands, we argue that community currencies enhance an individual sustainable quality of life. We underpin this by analysing data of an online survey of members and users of community currencies in Austria and Germany. The theoretical foundation of our analysis is the Capability Approach and its notion of quality of life, saying that a high quality of life is characterized by high freedom of choice of valuable doings and beings. A sustainable high quality of life would then be characterized by a high freedom of choice within the limits given by planetary boundaries and further sustainability criteria. This perspective allows inferringthat community currencies do not just contribute to sustainable development via their often emphasized effects in the field of regionalization and local value added, but in a much more encompassing way.

1. Introduction

Within the current European financial crisis, citizens increasingly look for alternatives to an intransparent financial system that seems to redistribute funds from the poor to the rich (Atkinson et al. 2011). Community currencies are an example of nearly exclusively local answers to global challenges and crises. Community currencies are initiatives which organize within the community of its members the exchange of goods and services without using conventional money; usually they are complementary to the national currency. Two main types of community currencies can be distinguished: local currencies and LETS (Local Exchange Trading Scheme) (Seyfang/Pearson 2001: 57).

The most current aim of community currencies is to facilitate transactions that are usually bound to local or regional consumption. These alternatives might use money or not. Such different forms of currencies represent a very interesting field of research as their behavioural effects are remarkable but often neglected. Bernd Lietaer, a Belgian finance expert, puts this in following words: "Money matters. The way money is created and administered in a given society makes a deep impression on values and relationships within that society. More specifically, the type of currency used in a society encourages – or discourages – specific emotions or behavior patterns" (Lietear, 2001: 4). A LETS is a type of cashless trading organisation, in which members trade goods and services among themselves. It is usually run by community volunteers and takes the form of purely notional credits and debits in a set of accounts (e.g. in time banks) that keeps track of trade in goods and services among members. Hence, it is a form of 'mutual credit', meaning that the currency is issued by the members themselves and is generated by the act of exchange itself. In LETS the members list their offers and requests for goods and services in a directory and then exchange them at a price negotiated in units of the local virtual currencies (Seyfang/Pearson 2001: 57.; Seyfang 2001: 976).

Local actual currencies are locally-issued notes or tokens which circulate freely among individuals and businesses in an area. A well-known example of this type is the 'Hours' system implemented in Ithaca, New York, for the first time and now spread in 20 cities across the USA with variants in other countries. The hours notes are utilized similar to national currencies to purchase goods and services, but are locally limited and thus foster the local economic environment. In most cases participation is based purely on exchange, and is facilitated by an internet platform and directory which lists businesses that accept the local currency (cf. Seyfang/Pearson 2001: 57).

So far most of the research about community currencies focused on their contribution to sustainable development from an economic and social perspective. Do community currencies tackle social exclusion and unemployment? Do they localise economies and increase local resilience? These are leading research questions (Seyfang/Longhurst 2013a: 4) answered in ambivalent ways. Whereas several contributions from Seyfang regard community currencies at least in some cases as being important parts of sustainability transitions (Seyfang 2004; Seyfang 2001; Seyfang 2009; Seyfang/Longhurst 2013a), Dittmer states that the small scale of community currencies hinders them from contributing in a significant manner to a degrowth economy (Dittmer 2013). In this paper, we want to have a deeper look into the dynamics of community currencies and focus on the options that community currencies are providing to their members, considering their impact on changing

collective capabilities, norms, and individual behaviour. We argue that community currencies enhance a sustainable quality of life. We base this statement on the Capability Approach saying that a high quality of life is characterized by high freedom of choice of valuable doings and beings. A sustainable high quality of life would then be characterized by a high freedom of choice of valuable doings and beings within the limits sustainability is setting, i.e. using resources in a way that is fair for current and future generations, i.a. by respecting the planetary boundaries (Rockström et al. 2009). This sustainable form of human flourishing requires that people generate well-being through new behavioural strategies which are based on appropriate intrinsic values furthering rather immaterial consumption, herewith respecting justice-based capability ceilings (Holland 2008).

Our empirical data support that community currencies contribute to such an increase of freedom of choice for sustainable behaviour and herewith to a higher as well as more sustainable quality of life.

The paper is structered in six further sections: The next one describes the theoretical background of this paper, including the description of how quality of life is viewed in the Capability Approach and how capabilities (individual and collective) are linked to (sustainable) quality of life. The third section briefly introduces the key messages of the literature review and the hypotheses deduced on this basis. Thereafter we will shortly describe the methods adopted in our empirical work and then, in the fifth section, report about the main results of our empirical investigation. This will be followed by a critical discussion of the results in the sixth section before concluding the paper with an overall summary.

2. Theoretical background: The Capability Approach, collective capabilities and their link to quality of life and sustainability

The main aim of this paper is to explain the positive impact of using community currencies on quality of life and on sustainability. We argue that by being an active member of those alternative systems the choices to live a valuable life increase. Sustainability comes in as many of the choices made by community currency members are considered part of more sustainable lifestyles. Whereas the standard approach within the Capability Approach (CA) is to analyse *individual* capabilities only (e.g. Robeyns 2005), it makes sense in our case to include *collective* capabilities (Ibrahim 2006) in the analysis. Within the theme of alternative currencies, especially the collective capabilities are enhanced and lead to increased capability sets.

2.1. The Capability Approach

In this section we briefly present those core elements of the CA that show why we assume it to be a particularly suitable framework for examining the impact of alternative currencies on quality of life. The CA was developed by the economist and philosopher Amartya Sen as a critique to standard welfare economics, but also with the aim of proposing an alternative method for policy evaluations.[1] At its core, the CA rejects both, preoccupation with monetary indicators of well-being and the purely utilitarian view on well-being. Concerning the first point, Sen (1999) advocates that income on its

[1] Compare Nussbaum 2011 and Déneulin and Shahalin 2009 for recent introductions into the CA.

own – in whatever currency – or the resources available to the person cannot be taken as an indicator of well-being because other aspects (e.g. rights and liberties, but also many others) are important as well[2]. Since the same resources may correspond to various "levels" of well-being, reflecting people's diversity and their specific circumstances, they can be at best considered as *means* to achieving certain well-being goals, but not as *ends* or single indicators of well-being. For an adequate assessment of one's well-being, aspects beyond income have to be considered as well. Aspects that contribute to well-being and that are relevant to local currencies and LETs might in particular be issues such as social capital, participation, or community building.

With regard to the second point, namely the critique of utilitarian approaches (which favour those actions which yield the highest societal/personal utility), Sen (1999) advocates that utility measured by mental satisfaction (in contemporary economics often reflected through revealed preferences) represents a poor measure of well-being for a number of reasons. One of them goes back to the issue of adaptive attitudes and a second point of criticism relates to the preference given to mental satisfaction over "creative discontent" and "constructive dissatisfaction" (Sen 1999: 19), which may bring about change and improvements in well-being in a longer run. A third point is connected to the monism of utilitarianism, or its failure to reflect the richness of what can constitute an ethical good (Sen, 1987). Substantially, utilitarianism receives Sen's strong criticism for its "indifference to freedoms, rights and liberties" (Sen, 1999: 57) by taking utility as its only informational base.

In turn, for CA adherents it is "the opportunity to live a good life, rather than the accumulation of resources, that matters most for well-being" (Anand et al., 2005: 10). The "good life" in the CA is constituted by a vector of *functionings*, or a multidimensional combination of "doings" and "beings" that people have reason to value, such as "being educated", "participating in community life", "having self-respect" and many others. These functionings are the measuring dimensions of capabilities, that can be achieved to different degrees (e.g. being illiterate, having basic education, high-school education etc. – see Robeyns, 2005, Clark, 2008, and Sen, 1999, for terminological issues). Well-being goes beyond the notion of achieving specific functionings by including the *freedom* to achieve those – independently of whether a specific functioning has actually been chosen or not. E.g. having the capability to be well nourished does not impede me from fasting and, in turn, not eating does not automatically imply that I am not able to be well nourished. Single freedoms, such as "being able to be well nourished", "being able to participate in a certain community", "being able to build up social capital", etc., refer to *capabilities* and altogether constitute the person's *capability set*. Within this framework, the ultimate goal of development is human flourishing, expressed through the enhancement of one's capability set (Sen, 1999).

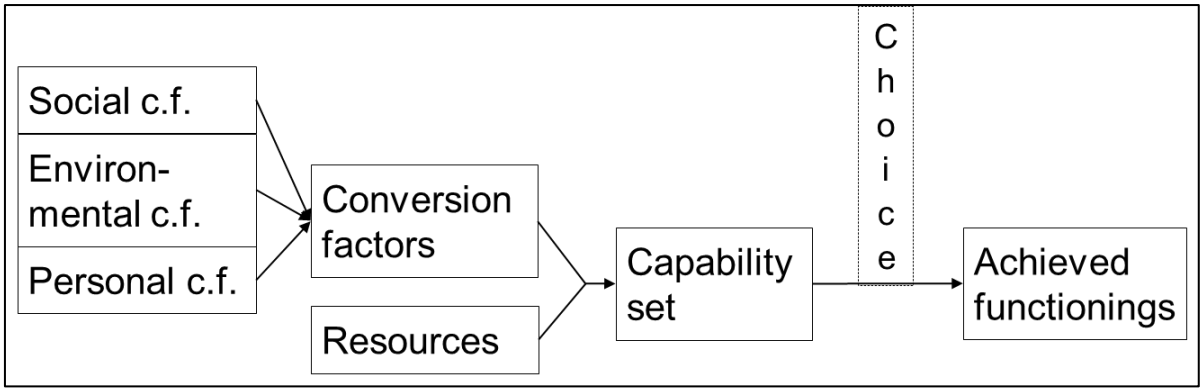
How can capabilities be enhanced and what are the factors that affect capability formation? In the CA, goods and services are valuable for the person to the extent that they affect his or her capabilities, and here, the specific conditions in which the person makes use of the available goods and services play a crucial role. From a CA perspective, goods and services become "converted"

[2] To stay terminologically clear, one should mention that the focus in the CA goes beyond exclusively individual's *own* well-being by including the aspect of *agency*, which embraces non-self-regarding goals and actions, i.e. commitments (see Grasso and Giulio, 2003; Robeyns, 2005).

through a set of *conversion factors* before their effects on one's capabilities can be distinguished (see Robeyns, 2003, 2005). Conversion factors in the CA can generally be divided into three groups: personal, social and environmental.

The group of *personal* conversion factors characterises how a certain person converts goods and services into capabilities based on her own (bodily, mental, etc.) abilities. For example, having a bicyde (a good) only leads to Suleika's capability to move around freely if she is able to ride it. The group of *social* conversion factors covers such aspects as social practices, gender roles, given norms and rules, etc. Following the previous example, it should be socially acceptable for Suleika to ride a bicyde on her own, e.g. without being accompanied by a male member of the family, in order for her to have the capability of being mobile. Finally, *environmental* conversion factors can enhance or impede capabilities via conditions such as geographic location, climate, clean air, extreme natural events, etc. In Suleika's case, with extreme temperatures, her capability of moving around is restricted due to the respective environmental conditions. Thus, the notion of conversion factors allows the CA considering factors beyond goods and services that influence people's capabilities, and ultimately their achieved functionings (Robeyns, 2005).

Figure 1: The core elements of the Capability Approach (following Robeyns 2005)



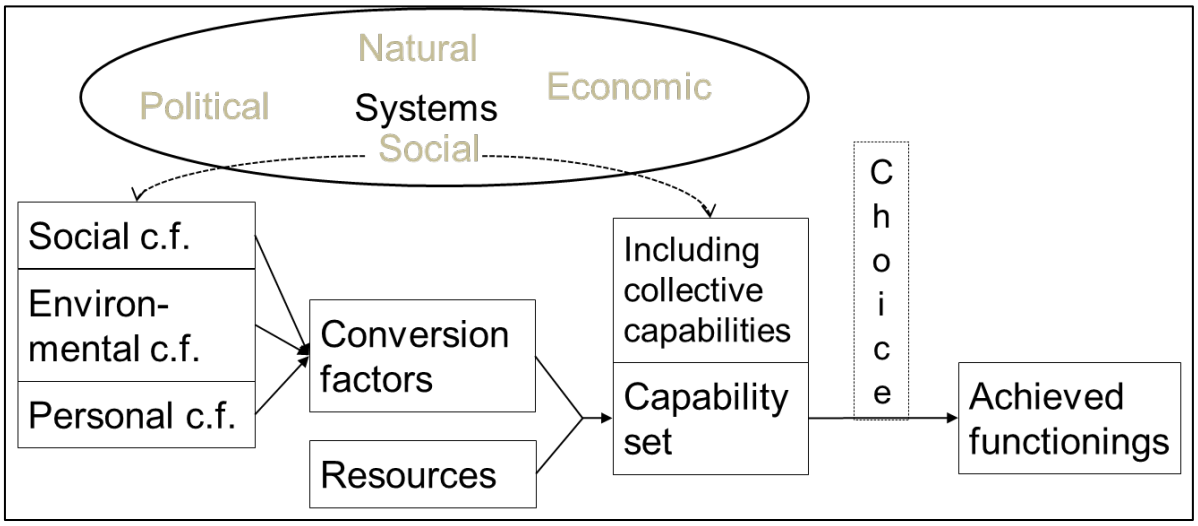
Collective Capabilities

A merely individualistic understanding of behaviour has been criticised for omitting e.g. the deep embeddedness of individual actions in cultural norms and social institutions (e.g. Shove 2010). As the CA is essentially individualistic in its normative basis (it is individual human flourishing that counts), but also in its practice (e.g. the CA is void of a theory of society), this criticism also hits the CA. Among the CA scholars, the (too) individualistic perspective has been criticized by different authors (see Ibrahim 2006, Stewart 2005) as too narrow e.g. to deal with the phenomenon of self-help groups constituted by social interdependencies (Ibrahim 2006). Community currencies are another good example for such interdependencies: on the one hand, certain actions can only be realized by an (organized) cooperation of a variety of different people and on the other hand, this cooperation has impacts on more than one person. Thus, the non-monetary exchange in LETS is dependent on the existence of others (at least one other person is necessary in order to perform an exchange). For local currencies, a purchase of a product by using a local currency does not only have impacts on the acting person, but also on the participating companies producing the good, and finally on the

perceived capacity of the community currency group to act as such in its endeavour to create money in order to shape society at least partly .

Due to this narrow methodological perspective[3] (Robeyns, 2005) and especially because of the importance of collectivities for enhancing capability sets, it was proposed to enlarge the CA through the concept of collective capabilities. One of the more elaborated concepts we are going to refer to, is the concept of Solava Ibrahim, who defines collective capabilities as follows: „They are defined as the newly generated capabilities attained by virtue of their engagement in a collective action or their membership in a social network that helps them achieve the lives they value. They are not simply the sum (or average) of individual capabilities, but rather new capabilities that the individual alone would neither have nor be able to achieve, if he/she did not join a collectivity" (Ibrahim 2006: 404). In this definition, the interaction between individual and collective level is emphasized since options for actions on an individual level arise due to actions in a group context.

Figure 2: The Capability Approach including collective capabilities



Sen (2002) both criticizes the general idea of developing a "collective capability" approach (esp. Evans 2002) and at the same time puts the differences in perspective by stating that the use of the term "collective capabilities" is mainly a matter of nomenclature, but that the issue behind nevertheless should be taken seriously. He refers to those capabilities that are dependent on social interactions as "socially dependent individual capabilities" since the experience of an "intrinsic satisfaction" still takes place on an individual level. In contrast, genuine collective capabilities in his sense, are capabilities exceeding an individual's power, such as "the capability of a world nuclear

[3] According to Robeyns (2005), different forms of individualism can be stated: Ethical individualism perceives only individuals as "the units of moral concern", methodological individualism focus on the explicability of everything by the "reference to individuals and their properties only" and ontological individualism defines society as a sum of individuals and their properties only (Robeyns, 2005: 107). Following Robeyns, only ethical individualism will come into play concerning the Capability Approach (ibid.: 109), but can in principle account for groups and social structures although it does not provide a prefunded theory of society, institutions, or organizations. Thus, "more elaboration and integrity on collectivity issues is needed particularly because CA scholars often involve collective entities in their claims for justice (e.g., Nussbaum, 2011)" (Griewald/ Rauschmayer, 2013).

power to kill the entire population" or "humanity as a whole (if it could get its act together) to cut child mortality" (Sen 2002: 85).[4]

Despite this divergence, we refer in our study to Ibrahim's collective capabilities since community currencies can be seen as a suitable example for collective capabilities: Only due to the cooperation of a group (LETS or local currency) certain options of actions can be achieved which are impossible to accomplish for individuals. Ibrahim assumes that collective capabilities influence individual choices in two ways: First, they extend the range of available options; second, they also influence the individual perception of a "reason to value" which, again, affects the conversion of capabilities to achieved functionings: "In contrast to individual agency where a person pursues 'individually' his/her own perception of the good, through acts of collective agency the individual can pursue this perception of the good collectively by joining or participating in a group with similar goals. Collective agency is thus not only instrumentally valuable for generating new capabilities, but also intrinsically important in shaping and pursuing the individual's perception of the good." (Ibrahim 2006: 405). In this vein, we assume that community currencies shape the individual perception of the good. We therefore investigate how users of community currencies understand quality of life compared to the general population.

2.2. Quality of Life according to the CA

As already mentioned above, the CA rejects both the preoccupation with monetary indicators of quality of life and purely utilitarian views on it. Instead of the accumulation of resources or a somehow measured life satisfaction, the CA states that it is the opportunity to live a good life that ultimately matters (Anand et al., 2005: 10). As also said above, the "good life" in the CA is constituted by a vector of functionings (achieved functionings in CA terms). Quality of life, in turn, goes beyond the notion of a "good life", as it also includes the freedom to achieve such functionings from individual and collective capabilities – whether actually chosen or not. Summarising we can say that an increase in quality of life is achieved by enhancing the capability set as this entails a high level of valuable choices.

2.3. Sustainable Quality of Life

Sustainable Development in its most used definition means a systemic development that allows the current and the future generations to meet their needs. It is thus a concept addressing inter- and intragenerational justice. The CA however is, in most of its current foci (e.g. Deneulin and Shahani, 2009) mainly concerned with intragenerational justice, which was one reason for setting up the GeNECA project, which aimed to combine the CA with sustainable development. In a recent issue of the Journal of Human Development and Capabilities (Rauschmayer and Lessmann 2013), the authors differ in their perception of the difficulty of combining CA and sustainability: Sen (2013) does not see big problems whereas e.g. Lessmann and Rauschmayer (2013) indicate several difficulties – the

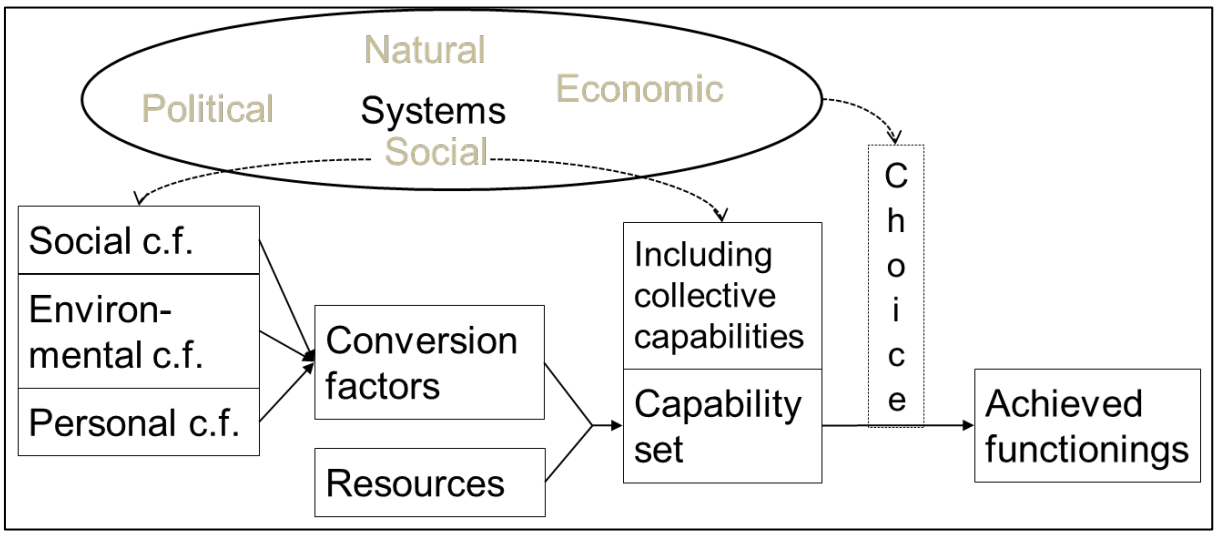
[4] For a recent uptake of the debate on collective capabilities, see the June 2013 newsletter of the Human Development and Capabilities Association Maitreyee:
http://www.ufz.de/export/data/408/52182_MaitreyeeJune2013.pdf

missing conception of collectives and society within the CA being one of them. Nevertheless, the CA offers a promising concept to integrate issues of inter- and intragenerational justice in a systematic and partly measurable way (Gutwald et al., accepted).

To allow future generations to meet their needs requires that their capability set and herewith their resources and conversion factors (individual, environmental and social conditions) are given in a certain quality or quantity. If no resources (economic and environmental) are given, then no functionings can be achieved and needs cannot be met. The world's current development is not sustainable at all, as humans use too many resources (material, energy, water, land), more than our planet can offer when considering an intergenerationally just distribution. Thus, a high quality of life in the future is endangered, if we continue the current path. New lifestyles and economic approaches are needed. A quality of life that is compatible with sustainability asks for restrictions of choice in resource use (see for instance Jäger, 2007; Dittrich et al., 2012). Not every capability can then be chosen, i.e. not every functioning achieved, if such choice would lead to overusing resources in disrespect of the planetary boundaries. Our current way of living privileges the high quality of life for a certain group of people within the current generation in an ethically unjustifiable way.

Thus within a sustainable world, we have to limit our choices. But this does not mean that people cannot flourish. On the contrary, using fewer resources by living a more dematerialised life can lead to an even higher quality of life. This can happen, e.g., when people value immaterial functionings more than material ones and chose alternative lifestyles which allow using fewer resources. Governments and also business can largely contribute to such choices. The following figure is an adapted version of Figure 2, including a rough interpretation of the concept of sustainability. The difference is merely that respecting the planetary boundaries is depicted here as a systemic restriction of individual choices – restrictions in the economic and social system, stemming from restrictions in the natural system and mediated through the political system (cp. Lessmann and Rauschmayer 2013).

Figure 3: The Capability Approach including choice restrictions due to sustainability



3. Community Currencies: literature review and our hypotheses

Our research is based on an extended literature review covering German and English literature on community currencies, capabilities, sustainability and quality of life. A literature database on community currencies (http://www.cc-literature.de/10.databank/) was helpful as well as general overviews of the relevant literature of this topic (cf. Schroeder et al 2011, Longhurst/Seyfang 2011), since thereby the overall picture could be reasonably ensured. The influence of community currencies on interpersonal trust, the perceived capacity to act, intrinsic values, a sustainable norm system and social capital emerged as key topics for our research interest. In the following subsections we will present the most important contributions from the literature regarding these aspects concluding the subsections with our hypotheses for our own study.

3.1. Increased well-being as consequence of increased social capital

Several empirical studies could already successfully show the impacts of community currencies on the social capital of their users and hence also their well-being and quality of life (cf. Briceno/Stagl 2006: 1548; Wheatley 2006: 3; Schwaiger 2006:22; Seyfang/Longhurst 2013b: 68). Social capital describes relationships, relations of trust, reciprocity, and exchange; the evolution of common rules; and the role of networks. It encompasses the involvement of civil society and collective action. As this relation already is well described we did not focus on this in our research, but will rather present the most relevant findings from the literature:

Social capital can increase through community currencies at different societal scales: Most changes are observable on a mesolevel, including the field of so called weak ties, as community currencies foster social interactions between strangers or not well known people. The involved people often share similar socio-cultural backgrounds and therefore “bonding” social capital can be enhanced. But also “bridging” social capital might increase as community currencies (espacially LETS) enable contacts between disparate social groups, e.g. elderly people and teenagers (Seyfang/Longhurst 2013a: 68). These effects on the mesolevel are especially important for opposing the increasing social segregation (cf. Molnar 2011: 16ff.). In some cases community currencies can also increase social capital on a microlevel: Schmidt et al. (2001) found that for people with little social capital and incisive biographical events (eg. divorce, unemployment, widowhood etc.) persons of the community currency take over functions usually carried out by very cosely related persons (family, close friends). These functions could for example relate to the maintenance of the house or illness (Schmidt et al. 2001: 19). In these ways community currencies, no matter of which type (cf. Hubert 2007: 26), often provide a newly generated sense of belonging (cp. Ozanne 2010: 8ff.).

3.2. Trust and Reciprocity

We assume that the increase of interpersonal trust can be seen as a side effect of an economy based on community currencies: Its special characteristic consists of the idea that mutual trust does not have to be limited to friends and acquaintances. On the contrary, community currencies require that trust has to be extended far beyond since community currencies require people to contact and exchange goods or services with complete strangers. This sense of confidence cannot develop on an individual level, but only from the social dynamics of interactions (e.g. positive experiences in

exchanging goods with strangers); therefore it must be seen as a collective capability. The second criterion to be fulfilled according to Ibrahim (2006) to characterize a capability as collective is the enhancement of well-being on a societal level in addition to potential positive effects on the individual well-being. This target is met due to the fact that interpersonal trust counts as constitutive element of social cohesion and the generalized enhancement of individual trust levels therefore has positive effects on the social cohesion as a whole (cf. Putnam 2000). The individual level of interpersonal trust influences the individually feasible functionings in manifold ways as various social systems are based on trustful relationships. Examples can be "couch surfing" or private car sharing initiatives or the common key at the neighbour's home to make sure that flowers at home will survive holiday trips. Botsman, author of the book "What's Mine is Yours. The Rise of Collaborative Consumption" goes as far as to state: „The currency of the new [authors: i.e. the sharing] economy is trust" (Botsman/Rangers 2011). Depending on the trust I have in fellow human beings, some functionings occur as real options or are excluded a priori.

Most literature says that community currencies foster trust, cooperation and reciprocity by the central role of activities such as "sharing and trading" based on these features within these systems (cf. Seyfang 2009: 8). Molnar extends this approach by the thesis that time banks, a special form of community currencies, promote Putnam's "generalized reciprocity": „These mutual relationships most often involved 'generalized reciprocity' (Putnam), which implies long-term, indirect exchanges within a network of people rather than the short-term, direct exchanges between two or more individuals that are a characteristic of 'direct reciprocity'" (Molnar 2001: 18).

We decided to analyse these rather indirect but very interesting impacts of community currencies by focusing on the following hypothesis:

Users of community currencies show more trust in other people than the average population does.

3.3. Perceived capacity to act

Community currencies offer different possibilities to shape the own local surrounding: By using local currencies, the economic environment (e.g. support of small enterprises and manufacturers) can be influenced, hitherto unused talents and abilities (e.g. language, music, or artistic skills) can be used within LETS, and people can use services which would not be affordable for them otherwise (e.g. massages, repair, catering etc.). Thus, we assume that community currencies offer room for experiencing ways to create the individual environment and gain greater influence on larger societal developments. Through the common engagement in an institutionalised initiative, people can also influence further institutions and structures. This has a great impact on the individual attitude facing global challenges which often is resignation. Schwaiger confirmed this impact in a study on regional currencies: Regional currencies offer people a possibility for action by specifically supporting the region and thus being able to influence larger societal processes. Since people often feel powerless with respect to global problems, this possibility for actively taking over responsibility in the context of community work increasingly gains importance (Schwaiger 2006: 23).

Based on this literature, the following hypothesis was developed:

Users of community currencies consider global developments more changeable than the average population does.

3.4. Intrinsic values and dematerialization

One important aspect within the literature concerns the tendency within community currencies to shift towards a dematerialized lifestyle: "In fact, the most significant benefit of time banking, for many participants, was the opportunity to redefine what is considered 'valuable' [...] in other words: creating and putting into practice new institutions of wealth, value and work which are necessary for sustainable consumption and development" (Seyfang 2004: 10). Briceno/Stagl also report from a survey of members of a LETS which showed that 91% of the respondents could agree to the statement that a future development should involve more quality of life and less material consumption (cf.: Briceno/Stagl 2006: 1548).

Crompton and Crompton give a good explanation why dematerialized values are important for sustainable behaviour: They describe those dematerialized values that are based on community, belonging, and individual development, as intrinsic values. In contrast, extrinsic values comprise status enhancement, power and wealth which are based on the judgement of other people (cf.: Crompton 2010: 10). An important statement when discussing the realization of sustainable capabilities, is that „intrinsic values are assosciated with concern about bigger-than-self problems and with corresponding behaviours to help adress these problems. Extrinsic values, on the other hand, are associated with lower levels of concern about bigger-than-self problems, and lower motivation to adapt behaviours in line with such concern." (Crompton 2010: 10). "Bigger-than-self problems" according to Crompton are challenges which exceed the individual sphere of influence such as the increase of global poverty, climate change or loss of biodiversity (cf.: Crompton 2010: 8). Crompton et al. hence assume that intrinsic values lead to an involvement with bigger-than-self problems and thus have a great influence on sustainable behaviour. Therefore we postulate the following hypothesis:

Users of community currencies hold a more dematerialized idea of quality of life than the average population does.

3.5. Sustainable norm system

Social norms represent important conversion factors for the formation of individual capabilities. When sustainability as the consideration of intra- and intergenerational justice is perceived as a relevant social or personal norm (even if badly specified), then it is also part of the capability set, and may influence the achieved functionings (as individuals may be influenced by this norm in their actually chosen behaviour) (cp. Schäpke and Rauschmayer, accepted). Community currencies contribute to activate a sustainability norm system by creating a "green network" enhancing the awareness for sustainability: "in the survey 52% of the respondents had increased their environmental awareness to some extent through LETS" (Briceno/Stagl 2006: 1546). On the other hand, such networks are stimulating environments for outreaching changes in behaviour towards sustainability which takes place on an organized and common level: „The scheme has therefore nurtured specifically green social networks, sharing and reinforcing SLD [sustainable local development] values and encouraging SLD initiatives such as local organic producers, artisans, car-sharing pools, recycling, etc. to flourish" (Seyfang 2001: 992). On an individual level: „Therefore, the

creation of green social networks has been a significant factor strengthening the environmental dimensions of LETS. In many instances, the programmes have instigated changes in consumption patterns as a result of the concerns and actions of some individuals“ (Briceno/Stagl 2006: 1548). Based on this knowledge, the following hypothesis is investigated:

Users of community currencies more frequently include the high importance of sustainable actions into their norm systems than the average population.

4. Method

The hypotheses have been created by reviewing the literature as well as by including results of conducted expert interviews. The empirical analysis of the hypotheses is based on 160 online surveys of members of community currencies distributed over the German speaking area (mainly Austria and Germany, also Switzerland)[5]. The online survey was distributed in 12 different community currency schemes mainly through key contacts. As we did not control for this second-level distribution, we cannot give reliable data about the return rate. Community currency scheme members assessed the accessibility of the survey via internet as positive, as also many community currency schemes work via internet and people are familiar to use it.

The questions included information about general attitudes, value orientations, sustainable lifestyles and the frequency of use of the respective currency. The questions have been formulated in a way to enable a direct comparison with results of representative surveys (European Social Survey 2006, ALLBUS 2010, Eurobarometer, SOEP-IS 2012). SOEP-IS has a central role among them due to the fact that we were able to pose our own questions in a bigger module about sustainability and the Capability Approach. After a comparison with different representative sets of data, we assessed the results in a second step through another expert interview. Because of the cross-sectional and not longitudinal characteristic of our data we do not have insights in causal effects and relations. When we speak about causal relations, we do this being aware that our assumptions are not fully supported by reliable data. Additional insights were gained through an observation of the implementation of a community currency in the city of Graz. The following table gives an overview of the respondents of the survey:

Table 1: Overview of the sample

Name of the currency	type	% of sample	Respondents in absolute numbers	Place
„Waldviertler“	local currency	18	26	Waldviertel, Niederösterreich, AUT
„Styrrion“	local currency	17	24	Steiermark, AUT

[5] You may find the questionnaire and some more analysis in a working paper at: http://www.ufz.de/export/data/408/53898_Regionalwaehrungen_SERIwp.pdf

„LETS Wien“	LETS	14	21	Wien, AUT
„Sterntaler“	LETS and local currency	13	19	Berchtesgadener Land, Bayern, DE
„Talente Tauschkreis Wien“	LETS	12	18	Wien, AUT
„Genossenschaftskooperationsring REGIOSTAR“	LETS	8	11	Berchtesgadener Land, Bayern, DE
„Talente Tauschkreis Kärnten“	LETS	6	8	Wien, AUT
„Chiemgauer“	local currency	5	7	Rosenheim/Traunstein, Bayern, DE
„Talente Tauschkreis Niederösterreich“	LETS	1	2	Niederösterreich, AUT
„Talente Tauschkreis Südburgenland“	LETS	1	1	Burgenland, AUT
„KAESCH“	LETS	1	2	Wien, AUT
„Rheingold“	Alternative currency (not limited by a specific region)	1	1	DE, CH, AUT
other		3	5	

5. Results: Community Currencies expand collective capability sets and enhance sustainable quality of life

5.1. General information about the sample

53% of the survey participants are users of a regional currency, 43% are users of a local exchange trading system. 54% of the respondents are female, 46% are male. The majority of respondents is between 40 and 49 (31%) and 50 and 59 (28%) years old. 88% are working age people (15-64 years), 20% of the respondents are retired. The education level of the respondents is higher than average - 41% have a university / college degree, 30% have a high school diploma/ GCE A-levels.

Nearly two-thirds of the respondents have used the community currency since 2008 and almost 20% use it several times a week or even more often. Supporting social economic structures seems to be an important motivation for using the community currency (70% of the respondents agree with this statement.) 62% approve that strengthening the regional economy and the countering of the current

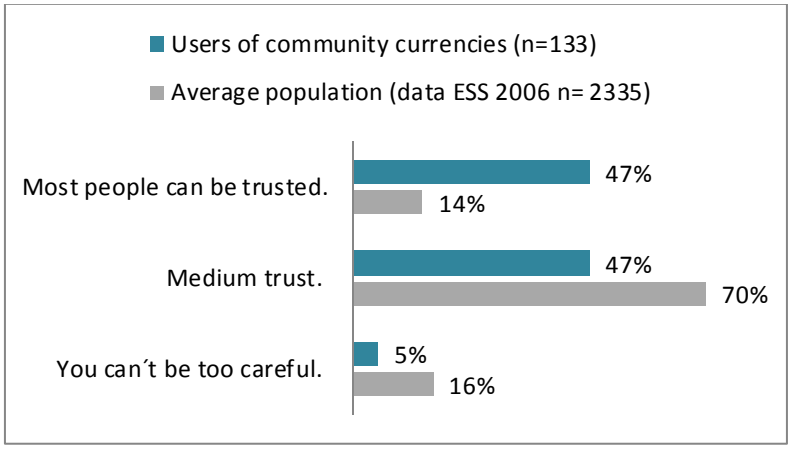
financial system is a reason for using community currencies . Moreover, users / members of community currencies think that it is important to support environmentally sustainable economic structures (58%), to be independent of large corporations (55%) and to enforce a certain sense of community (53%).

5.2. Trust and reciprocity

Hypothesis: Users of community currencies show more trust in other people than the average population does.

Our examination showed distinct and significant differences between users of community currencies and the average population in the extent of interpersonal trust. Users of a community currency have an above average confidence in fellow human beings and also believe - more than average - that people would try to be fair to them. 47% of the users of a community currency have confidence in most people whereas only 14% of the average population share this opinion (see data from ESS 2006). A similar picture emerges when asking about the faith in the fairness of others. Users of a community currency believe in the fairness of others more than average (53% of users a community currency as opposed to 21% of the general population).

Figure 4: "Most people can be trusted"



In terms of "generalized reciprocity" users of a community currency have a strong faith in a kind of "poetic justice". Users of a community currency agree to the following statement more often than average: "If I help someone one day also I will be helped": 38% of the users of a community currency against only 10% of the general population (data ESS 2006) fully agree with this statement.

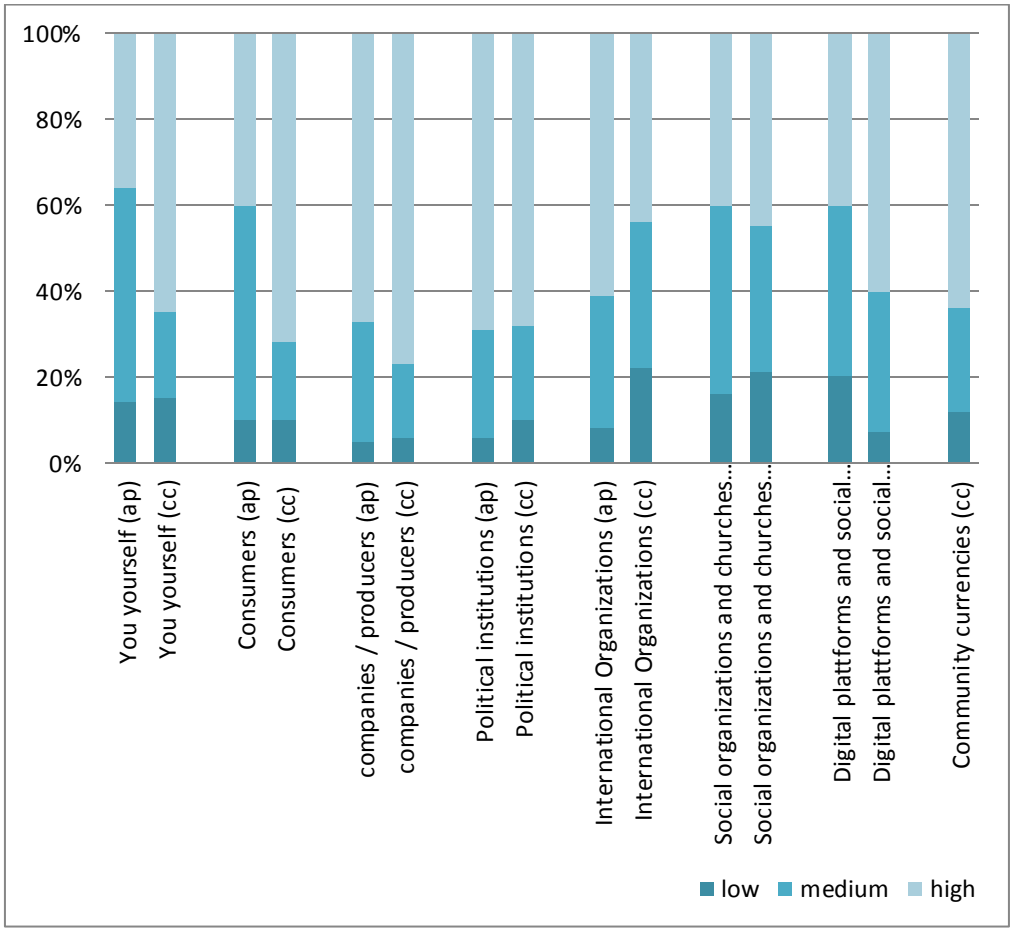
5.3. Perceived capacity to act

Hypothesis: Users of community currencies consider global developments more changeable than the average population does.

The capability set of users of community currencies is enriched by a high degree of perceived capacity to act. Users of community currencies regard their own capacity to act as well as that of other actors as higher than the average population. When asked how the respondents would

estimate the possibilities of various actors (political institutions, businesses, consumers, themselves ...) to make a contribution to the protection of the environment or future generations users of community currencies answered significantly higher than the average population[6]. They attribute a higher capacity to act to themselves, to them in their role as consumers, but also to entrepreneurs and to digital platforms and social networks. The average population on the other hand sees international organizations as more relevant actors in dealing with global developments. The data regarding the average population is drawn from SOEP-IS 2012 which include all relevant items for the comparison apart from the one regarding community currencies.

Figure 5: "How would you assess the potential of following people/ groups of people to protect the environment and the living conditions of future generations?". Comparison of user of community currencies (cc) and average population (ap) (data set SOEP-IS 2012)



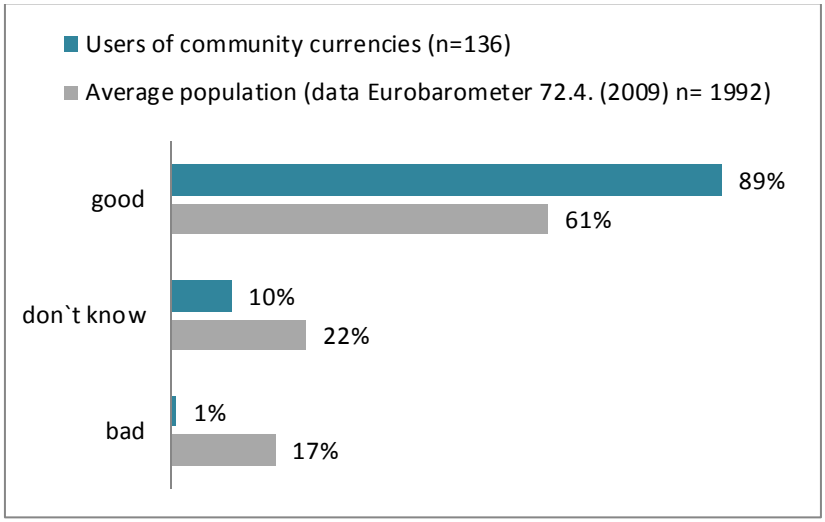
6 The hypothesis was investigated by asking: "How would you assess the potential of following people / groups of people - you yourself, consumers, companies / producers, political institutions, international organizations, social organizations / churches, digital platforms / social networks – to protect the environment and the living conditions of future generations on a scale from 0 (= very low) to 10 (=very high)? In order to interpret the belief in a changeable world an average index was formed including all actors. The mean values of this index was compared (t-test) for the group of community currency users/ members and the average population (data SOEP-IS 2012). On a scale from 0 to 10, the group of users of community currencies has a mean of 8 and the general population (SOEP) has a mean value of 7.5. The difference between the two groups is relatively small but statistically significant.

5.4. Intrinsic values and dematerialisation

Hypothesis: Users of community currencies hold a more dematerialized idea of quality of life than the average population does.

To investigate whether users of community currencies hold a more dematerialized idea of quality of life, two questions were posed in the survey. One aimed at an assessment if "less emphasis on money and material possessions" would be a good or bad thing to strive for. Comparing the responses of the users of a community currency to those of the general population (data Euro barometer 72.4, survey 2009) there is a clear difference: 89% of users of a community currency evaluate the statement "less emphasis on money and material possessions" as a good thing, whereas just 61% of the general population share this opinion. This difference is statistically significant.

Figure 6: "Less emphasis on money and material possessions."



Additionally, we used the Inglehart-Index to measure materialistic versus post-materialistic value orientations, which confirmed the former result: 2% of our survey can be associated to the materialistic types whereas these are 12% for the general population. The post-materialistic orientation is represented by 27% in the average population (cf. ALLBUS 2010), compared to 37% in the sample of users of community currencies.

5.5. Sustainable norm system

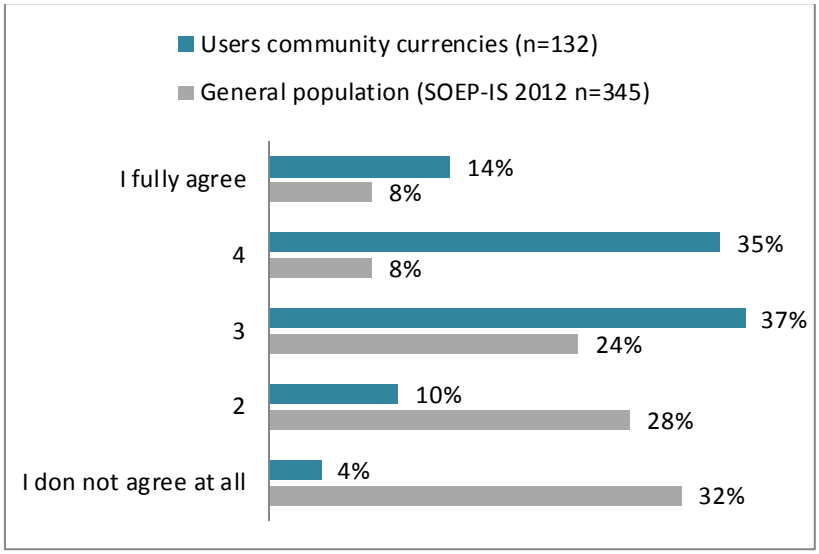
Hypothesis: *Users of community currencies more frequently include the high importance of sustainable actions into their norm systems than the average population.*

The social norm system of the respondents was captured by asking whether the personal surrounding (friends / family) implements the activities of buying organic food and of biking / walking instead of using the car.

There is a significant difference between users of community currencies and the general population concerning the food sector. As the social norms of community currency users emphasize buying

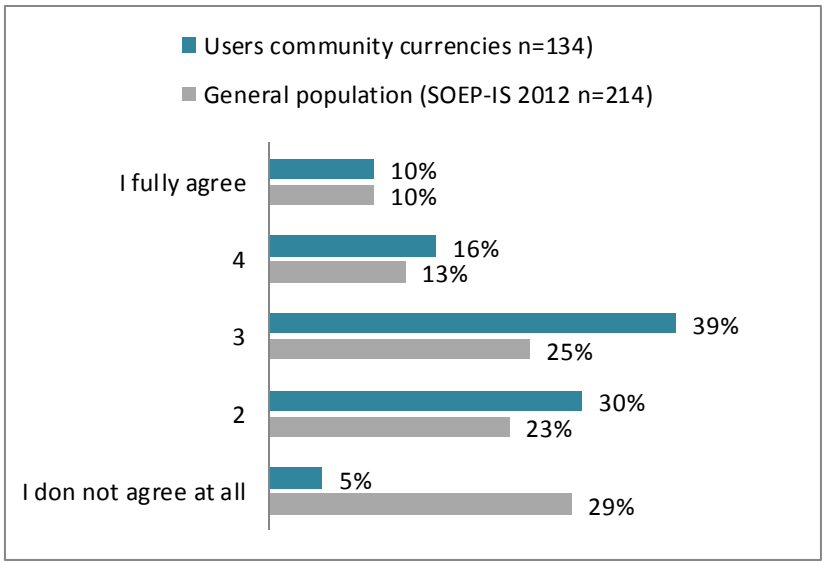
organic food more than for the average population, the social norm system of community currency users can be characterized as being more sustainable in this respect. Nearly half of our sample (49%) agreed (fully) to the statement "Most people who are important to me do usually buy certified organic food" whereas only 16% of the general population do agree (fully).

Figure 7: "Most people who are important to me do usually buy certified organic food."



Regarding mobility there is also a significant but much less pronounced difference between the general population and community currency users , for whom the social norm system is more frequently reenforcing sustainable actions.

Figure 8: "Most people who are important to me run errands by using public transport, bicycle or go by foot rather than by car."



6. Discussion

6.1. Trust and reciprocity

Users of community currencies trust to a considerably higher degree their fellow human beings and also incorporate the concept of "generalized reciprocity" to a certain degree. As this facilitates those options for which trust is kind of a prerequisite (e.g. car sharing, "couch surfing" etc.), the personal capability set is enhanced. Thereby users of community currencies are offered more options to choose a lifestyle they regard as valuable and can thus increase their quality of life. At the same time most of those initiatives root in the ecological or social sustainability field. Hence we can find a direct connection to a sustainable quality of life.

6.2. Perceived capacity to act

Users of community currencies perceive the capacities to act and influence global developments of various actors embracing also themselves, higher than the average population. Thus, they do contribute to a lesser extent to the wide-spread feeling of helplessness in front of global challenges that often translates in resignation. The importance of this self-efficacy is highlighted for example by the WBGU flagship report 2011: "What is lacking both at a global and a national level is an awareness of the self-efficacy, and the realisation of the power that actors such as these have: people who are already, whether consciously or unconsciously, participators in the transformation" (Schellnhuber et al. 2011: 241).

Also for this hypothesis, we have to be aware that we do not know the causal relation (Do only persons with an increased perception of capacities to act join community currencies or do community currencies increase this perception?), but nevertheless we can assume that the increased perception has to do with the experience to actively shape one's own local environment through the community currency. This argument can be based on the result that the respondents of our sample attributed more capacities to act to those actors who are central for community currencies (themselves, consumers, as well as social networks and digital platforms). On the other hand, the survey respondents assigned less capacities to act than the general population to actors which are of less importance for community currencies, as for example international organizations, .

Our research also gives first hints about how this capability is translated into an achieved functioning (accomplished behaviour): Within the users of community currencies we found a positive relation between the perceived capacity to act of actors (themselves, consumers, entrepreneurs) and the actual behaviour: Those users which perceive their capacities to act as higher also buy organic food more often.

6.3. Intrinsic values and dematerialization

Looking at the value orientation we can confirm a clear difference between the general population and users of community currencies, as the latter hold significantly more often post-materialistic values, although we can clearly not claim a causal relationship between the value

orientation and the use of the community currency. As post-materialistic values are comparable to Crompton's intrinsic values that foster sustainable behaviour (Crompton et al. 2010), this seems also of importance for the actual behaviour. This effect of community currencies to redefine what should be regarded as valuable should therefore not be underestimated.

6.4. Sustainable norm system

We can observe that people dear to community currency users implement sustainable behaviour in the fields of food consumption and mobility more often than the general population. We can therefore deduce that the respondent's surrounding is marked by a more sustainable norm system. In the Capability Approach, social norms are regarded as important conversion factors and play a central role in the decision which capabilities are selected to become achieved functionings. If norms are of a more sustainable character, the probability that also the achieved functionings will be more sustainable, is therefore more elevated.

7. Conclusions

We discussed that community currencies apparently expand capability sets in various ways: Trust and a sense of reciprocity is raised, the capacity to act is perceived as higher compared with the general population, a post-materialist value orientation dominates within community currencies and also the norm systems of users more frequently include sustainability As increased capability sets enhance quality of life, we argue that community currencies raise quality of life. Our empirical data as well as the literature review show that the increase in quality of life observed with community currencies users compared to the general population can lead to a more sustainable quality of life. The post-materialist value orientation in combination with a higher capacity to act and higher trust in others indicates such tendency. But in order to evaluate this more clearly, a more refined definition of sustainability is necessary (e.g. process-, outcome-, or impact-related, cp. Rauschmayer et al. 2009) as well as a more refined model of human behaviour including those variables.

The impact of community currencies on (sustainable) quality of life, though, is an important, but so far rarely considered notion on the effects of community currencies. Analysed from this more encompassing perspective, it becomes clear that community currencies do not just contribute to sustainable development via their effects in the field of regionalization and local value added, but in a much deeper way. Thus community currencies can not only be regarded as complementary to the conventional money system, but also more generally as a niche of sustainability transitions on the societal level (Seyfang/Longhurst 2013a; Seyfang/Longhurst 2013b), as they offer the possibility to experiment with ways of realising high quality of life in a more sustainable way.

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