

Venere Stefania Sanna\*

## Grassroots Initiatives for Sustainability Transitions: Community-wide Impacts and Economic Functioning

### Abstract

Community-based initiatives (CBIs) are increasingly being advanced as promoters of a systemic transition towards increased sustainability, and as leading the de-growth transformation. Prior studies have typically dealt with the potential impacts of CBIs on individuals, without necessarily reflecting on their community-wide impacts. This article aims to do both: it develops a set of indicators aimed at estimating the economic and financial impacts of a wide range of CBIs across six European countries, at both individual and community levels. The results provide insights into commonalities between CBIs, and suggest that they deliver essential services, often contribute to creating jobs within their communities, and thereby contribute positively towards community development.

Keywords: community-based initiatives, sustainability transitions, comparative case study, economic impact assessment (JEL-Codes: O17, Q56, L30, O35, C18)

### Introduction

Over recent years the role of community-based initiatives (CBIs) in the promotion of systemic sustainability, climate change, and de-growth transformation has increasingly captured the interest of scholars, experts and policy-makers (Girardet, 2006; Seyfang, 2010; Tornaghi, 2014). Various forms of CBI, namely community activism, citizen self-organisation, solidarity economies, and grassroots innovation, may be considered as examples of “diverse economies” focused mainly on the everyday practices of alternative ways of living, producing, and consuming, and growing outside common capitalist logic (Gibson-Graham, 2008), and are ever more portrayed as on-the-ground solutions for societal transitions towards more sustainable economies.

These initiatives “have been championed for their potential to provide a soft and bottom-up approach not only to environmental sustainability, but also to community-building, social inclusion, economic revitalization, political mobilization, and innovation, and for increasing communities’ resilience to social, economic and environmental shocks” (Celata & Hendrickson, 2016, p.16). They form the societal test-beds (or niches) in which novel approaches to sustainability are created and incubated before broader transitions can occur (Hopkins, 2010; Seyfang, 2010). As

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such, they have the potential to reshape people's lifestyles and behaviours, foster a more sustainable and resilient economy, and – in the ethos of de-growth movements – “call for an economy of care, gifting and conviviality, rather than an economy of scarcity and trade”. In this sense, CBIs challenge not only the outcomes but also the very spirit of capitalism. Moreover, CBIs play an active role in communities' self-expression of as they resist environmental injustice. Climate mitigation scientists and social scientists have indeed recognised the importance of these community-based experiments (Seyfang & Smith, 2007; Sengers, Wiczorek, & Raven, 2016).

At the same time, CBIs have also been challenged in terms of their ability to efficiently deliver tangible benefits, often accused of being too locally focused – and therefore being limited in effect – and of lacking the recognition of the politics of exclusion or privilege, social or environmental justice (Rose, 1999). Despite these critiques, actual evidence of the functioning and organisation of CBIs and their impacts is scarce. These aspects, we argue, are crucial for a better understanding of CBIs, and merit specific assessment. The comprehension of such issues – such as local economic impacts and economic effects on participants, as well as social inclusion, empowerment, political engagement and mobilization – is instrumental to fostering the environmental, economic, political and societal impacts of these initiatives, and represents the essential drivers and goals of community activism.

Much of the existing literature on the subject is based on individual case studies and offers fragmented (and sometimes anecdotal) evidence which implies the need for more multi-dimensional assessments of the functioning and impacts of CBIs. This article therefore proposes an operative framework for monitoring and evaluating the economic dimension of community activism in a variety of domains: from food production and distribution (e.g. community gardens and solidarity purchasing groups) to recycling, from sustainable mobility (e.g. local bike-sharing schemes) to community energy (e.g. community-based PV installations). This article attempts to go beyond the current limited evidence, with an analysis that is both systematic and comparative, aimed at systematizing the results of research activities that were performed on a selection of 63 CBIs across six European countries (Finland, Germany, Italy, Romania, Spain, and the United Kingdom) working in the domains of food, transport, waste and energy<sup>12</sup>.

- 1 Source <https://degrowth.org/2015/02/07/summer-school-on-degrowth-and-environmental-justice/>
- 2 This analysis was conducted within the European Union Seventh Framework Programme research project “TESS: Towards European Societal Sustainability”. Website for further information: [www.tess-transition.eu](http://www.tess-transition.eu) and [www.sustainable-communities.eu](http://www.sustainable-communities.eu)

## Theoretical Context: The Multiple Dimensions of Community Organising

A “community-based initiative” is an elusive concept that has different meanings in different scientific communities, as well as in the eyes of practitioners and observers. For the purposes of this study and to delimit the scope of the analysis, we defined several criteria for CBIs: they are collective actions that are initiated and managed by communities – i.e. any group of individuals (albeit not necessarily geographically proximate) that feel they share a connection – whether of interest, place, lifestyle, culture or practice – and have self-organized in order to deliver benefits, engage in socially innovative activities, and reduce environmental impacts by committing their time and/or sharing resources, and/or implementing projects to serve the community. These initiatives are not managed by public authorities (though they may have received public money); they may be non-profit as well as for-profit; nevertheless, their revenue model should serve the community.

In addition to this general definition, as we will discuss in their respective chapters, CBIs operate in different contexts, and are considered highly diverse in their motivations, functioning and outcomes. Previous research shows a diversity of objectives, including enhancement of public spaces, leisure and fun, community building, social innovation, reducing ecological footprint, and greenhouse gas mitigation, etc. (for a review see: Celata & Sanna, 2014). Some CBIs, such as community energy initiatives or solidarity purchasing groups, are aimed more towards delivering material benefits to their members, while others more closely resemble social movements or political activism. As we will discuss later, for some, sustainability and reducing environmental impacts are the primary and explicit aims, while others are driven by a desire to increase social cohesion in the areas where they are located. Some are more experimental, while others merely provide a ‘community-based’ or alternative approach to the delivery of traditional services.

Whether or not CBIs are aimed towards tangible benefits, their economic, financial and organisational functioning are crucial in terms of their chance of survival. Assessing how CBIs are economically sustained is crucial to understanding the degree to which they are resilient to external or internal shocks.

The CBIs selected for this investigation all aim to deliver some sort of goods or services to their communities. This means that they provide some sort of economic benefit, firstly to their members and direct beneficiaries, and secondly to the wider community and to the local context in which they operate. In the following subsections, based on the existing literature and empirical evidence, we outline a method to measure the economic and organisational functioning of CBIs, and to assess their economic impact on their beneficiaries and the local economy.

## The Economic Functioning and Performance of Community-Based Initiatives

The economic dimensions of CBIs can be analysed at different scales. Table 1 summarises the principal case-study-based literature available on various CBIs and provides evidence of their effects.

One commonly-adopted distinction in this regard is between (i) the internal economic challenges faced by initiatives – e.g. how they are sustained and managed, what assets they require, how vulnerable they are to shocks – and (ii) external effects that impact the economic situation of individuals, households, communities and, more generally, the local area.

### The internal challenge of community-based initiatives

CBIs' economic models can be highly diverse. Establishing, maintaining, and balancing financial sustainability with wider objectives is a core challenge for many CBIs. These organisations face a myriad of challenges in satisfying their objective/s and delivering products and/or services while covering their expenses and/or generating a surplus that could be reinvested in the organisation to maintain ongoing activities.

CBIs financially sustain their activities using different means and sources. Research has highlighted how securing funding is difficult in the long term, yet instrumental to achieving the initiatives' other aims (Smith, 2006, 2007; Seyfang & Smith, 2007; Seyfang, 2009). Funds must be obtained to carry out the activities and fulfil their mission. The public sector, volunteers, donors, banks, etc. are the primary sources of finance, and development. Nevertheless, CBIs are extremely fragile if they rely on external funding and/or if a large portion of their budget depends on a single source (Ehnert et al., 2018). Thus while prolonged or exclusive reliance on external funding can prove problematic (White & Stirling, 2013), highly diversified funding sources is the ideal support for their overall financial sustainability (Léon, 2001; Sontag-Padilla, 2012). Moreover according to White and Stirling (2013), most CBIs see financial sustainability as related to their capacity for internal income-generation, to obtain greater security and less external dependency.

CBIs are mostly non-profit organisations. However being non-profit does not mean “for-loss” (Léon, 2001, p. 7), and generating a surplus is not prohibited. It is also worth noting that when CBIs are run/registered as charities or non-profit organisations, any surplus must be spent on purposes strictly related to the organisation's objectives.

Table 1: Selective literature review of potential impacts of CBIs

Author	Year	Type of organisation	Region	Subject of the study	Q	I	S	i	n	Hypothesis	Results
Adams & Perlmutter	1991	Non-profit organisations	Philadelphia, USA	Venturing and commercial sale of services and products		x	x	x	101	The increase in commercial ventures by non-profits is to some extent a by-product of the expansion of government activity concentrating in the social welfare field.	Even when successful, commercial ventures pose significant risks to non-profit organisations.
Boyer	2015	Ecovillages	USA	Replication, scaling up, and translation potential of ecovillages				x	3	Regulatory, technological, and financial structures that guide urban development bear some association with the project's diffusion or replication capacity.	The three case studies presented suggest that different niche projects play different roles in a larger "ecovillage" movement.
Bellows et al.	2003	Urban agriculture initiatives	North America and Western Europe	Health benefits of urban agriculture	x	x				Urban agriculture produces a series of practical health benefits.	Benefit can be measured with regard to nutrition, food security, exercise, mental health, savings on medical care, etc.
Brown & Carter	2003	Urban Agriculture (UA) initiatives	USA	Different forms of initiatives that grow food in cities and their potential impact						UA plays a crucial role in food security in cities and metropolitan areas.	UA generates significant social, economic, public health, and environmental benefits.
Cumbers et al.	2017	Urban Gardens	UK	Social impact of community gardens (CG)	x	x		x	16	Gardening work fosters knowledge, skills and social empowerment.	UGs play an important role in reclaiming derelict and vacant spaces, generate labour, and reinforce the sense of community.
Dinnie & Holstead	2017	CBIs active in different domains	UK	Impact of public funding and policies	x	x		x	14	Public funding policies can influence CBIs' roles and relationships.	Public funding is an important resource for CBIs, both enabling community-led activities, and influencing their activities and operation.

Author	Year	Type of organisation	Region	Subject of the study	Q	I	S	i	n	Hypothesis	Results
Flachs	2010	Urban Agriculture initiatives	Greater Cleveland Area, USA	Social impact of community gardens	x		x			UA fosters personal and communal growth.	UA has a multitude of motivating factors and effects, including economic, political, environmental, social, and nutritional.
Hagan & Rubin	2013	Local food retailers and grassroots initiatives	USA	Social and economic impact of local food retailers and grassroots initiatives	x					Innovations in food retailing, distribution, and production can serve as economic development strategies and produce substantial social impacts.	Healthy food access induces economic benefits in addition to nutritional and wider social improvements.
Forrest & Wiek	2015	Household energy efficiency project, community gardens	UK	Success factor of Community-Based Initiatives		x		x	i = 4	A wide range of factors play a role in the success of an initiative.	Socio-demographics, governance, skills, organisation and management, resources, and mobilization are some of the crucial success factors.
Hargreaves et al.	2013	Community Energy (CE) grassroots organisations	UK	CE projects as potential sources of innovation to support sustainable energy transitions	x	x	x		s = 113; i = 15	Whilst local projects may be critical in developing solutions to sustainability problems, these same 'grassroots innovations' often face profound challenges in surviving, growing and spreading.	CE intermediaries play a series of key roles in niche development processes. CE projects differ markedly in their aims, ideologies and approaches; so too does dynamic policy.
Katzev	2003	Car Sharing initiatives	USA	Environmental consequences of car sharing and effects on mobility behaviour		x				Car sharing has the potential to decrease dependence on private vehicle ownership and travel, and can positively affect both environment and individuals.	Car sharing could yield considerable economic, and environmental savings.
NYDC	2009	Bike Sharing schemes	New York City, USA	Feasibility study designed to consider various bike-share models and assess their potential for New York City.	x		x		s = multiple	Bike-Sharing programs offer opportunities for economic growth and job creation, as well as providing considerable health benefits.	Bike-Sharing schemes offer tangible benefits (e.g. increased transportation opportunities, better environmental quality, health outcomes, etc.).

Author	Year	Type of organisation	Region	Subject of the study	Q	I	s	i	n	Hypothesis	Results
Sælensminde	2004	Walking and cycling initiatives	Norway	Cost-benefit analyses of walking and cycling track networks		x				Building walking and cycling track networks in Norway is beneficial to society.	The return on investment in cycle networks are estimated to be at least 4-5 times the cost.
Seyfang et al.	2013	Community Energy projects	UK	Success factor and challenges of community energy projects		x	x		s = 190	CEIs pursue social, economic, environmental, political and infrastructural objectives. Their success is affected by many factors.	A wide range of key internal and external factors have influenced the development of community energy sector.
SGS Economics and Planning	2012	Car Sharing initiatives	Sidney, Australia	Cost-benefit analyses of car sharing		x	x	x	s = 956, i = multiple stakeholder	The Council wished to determine the economic costs and benefits of car sharing schemes.	The majority of benefits relate to cost savings associated with deferred car purchases. Health benefits associated with increased walking are also key benefits.
Voicu & Been	2009	Community Gardens (CG)	New York City, USA	Economic impact of community gardens on neighbourhood property values			x			Gardens, parks and other open spaces can have a significant positive impact on the sale prices of properties and produce a gain in tax revenue.	CGs have positive impact on residential property prices within 1,000 feet, that increases over time. This impact was highest in the most disadvantaged neighbourhoods.

Legend: Q = Qualitative study, I = In-depth study, s = survey, i = interview, n = number of observations  
 Source: elaboration of the author

Some CBIs not only provide food, transport and other services to their participants but also, in some cases, provide inventory surplus that can be sold in local markets, generating additional income for them (Brown & Carter, 2003; Flachs, 2010). This increases their financial autonomy and enables them to make independent decisions that better reflect their own – rather than external donors’ – priorities.

According to Phillips and Graham (2000), volunteer organisations have similarly had to adopt more business like attitudes and behaviours and recruit more business-oriented and entrepreneurial members, rather than selecting those who are more socially focused (Adams & Perlmutter, 1991). Moreover, this has been accompanied by an increased focus on adopting new governance and management structures and practices. CBIs all face challenges that refer to how they are organised and managed, and the monetary resources and skills they require, which can leave them vulnerable to wider shocks such as funding cuts, loss of key personnel, or changes in policy priorities (Hargreaves, Hielscher, Seyfang, & Smith, 2013; Seyfang & Smith, 2007).

### The wider external effect of CBIs

Grassroots organisations often have an economic effect on their participants and the local economy. Scholars (Table 1) have shown that some CBIs make goods and services available and/or more affordable for their participants (e.g. providing products that individuals would otherwise need to pay for, giving participants access to affordable transport, energy, food, etc.) making a direct positive impact on their disposable income. This is supported by previous research that suggests, for instance, that the majority of participants in car sharing schemes and urban gardens agreed the most important reasons for joining CBIs, “was due to the financial savings” (Katzev, 2003, p. 71). This rationale has become more pressing in the current economic crisis, and previous studies have shown that participants “saw their efforts in most of these initiatives as supplementing their income in the recession” (Flachs, 2010, p. 2).

More generally, CBIs can create new jobs, and enterprises can help revitalize commercial districts and local economies, assist businesses to thrive, keep money circulating in the local economy, create local investment opportunities, improve nearby land values, generate additional tax, provide new training and learning opportunities, or redistribute local wealth.

CBIs can also produce indirect positive impacts such as improved health from better diet and consumption patterns, increased physical activity, lowered stress levels from recreation, and increased civic participation.

Nevertheless, not all impacts of CBIs are positive. Perhaps as a result of academic enthusiasm for such schemes, there is considerably less literature available regarding the downsides of CBIs. Firstly, they can have a negative economic impact on their

participants: in addition to membership fees, many initiatives require periodic payments, or may charge up-front for goods and services. Participants may additionally be asked to contribute to cover recurring operational, maintenance, and management costs.

CBIs can have, or be perceived to have, negative local economic impacts too, such as income/revenue losses to local retailers because of increased competition or displacement of existing businesses. There may be other indirect and negative, non-economic effects on public health and safety, and may also generate negative spillover such as negative visual impacts on the area. Some authors have documented how various kinds of initiative promote new forms of enclosure and (ecological) gentrification by increasing the value and attractiveness of undeveloped inner-city areas which, as extensive literature about gentrification indicates, may negatively affect low-income and homeless residents (Dooling, 2009).

## Research Methodology

This study addressed the economic function and outcomes of CBIs operating in a variety of domains of activity and in different European countries (Table 2). The main empirical goal was to define a set of indicators for the monitoring and comparative assessment of the economic functioning of CBIs and to estimate their impacts on individuals, and on the local economy. The study was guided by two overarching research questions: (i) “how do CBIs fund themselves, and are they financially sustainable?” and (ii) “what economic impact do they have on individuals and/or on the local community/area/economy?”.

### Analysing the landscape of community-based initiatives for sustainability

An initial mapping of sustainability-focused CBIs in Finland, Germany, Italy, Romania, Spain and in the United Kingdom, was conducted in 2014. Initiatives were identified through internet sources, from local knowledge and through snowball sampling.

This mapping exercise identified 320 eligible initiatives. Subsequently a systematic and pragmatic selection process was undertaken to select 14 ‘key’ case studies, and 49 ‘supporting’ case studies, accounting for activities in the food, transport, energy and waste domains, and CBIs’ willingness to participate in a three-year study.

Table 2: Number of CBIs and average size per type of activity and per country

Code	Type	Definition	# of CBIs	Distribution per Country	Average size (# of active participants)
CG	Community gardens	Plot of land collectively managed and gardened by a group of people, typically within an urban area, in order to produce fresh products and to provide a green space for socialization or recreation.	3	Germany (1)	17
				Italy (1)	34
				Spain (1)	30
CSA	Community-supported agriculture	Initiatives that link a group of consumers directly to one or more local farms from which they receive goods. These consumers support the local farm/s through financial or in-kind contributions.	7	Finland (1)	30
				Germany (1)	21
				Italy (1)	72
				Spain (2)	7
				Romania (2)	76
FC	Food cooperatives	Initiatives aimed at distributing food or meals and, in some cases, dealing with the transformation of primary products. They are typically based on principles of cooperativism, social responsibility and ethical/fair trade.	3	UK (1)	76
				Spain (1)	35
				Romania (1)	14
				UK (2) (CG, SCE)	58
MU	Multi-activity	Initiatives that carry out activities pertaining to more than one of the above categories.	7	Finland (1) (FC, SM,SCE)	30,000 (*)
				Italy (1) (SPG, SCE)	25
				Spain (2) (FC, RU, SCE; FC, RU)	12; 35
				Romania (1) (FC, SM)	50
				UK (2) (CG, SCE)	58
				Finland (1) (FC, SM,SCE)	30,000 (*)
				Italy (1) (SPG, SCE)	25

Code	Type	Definition	# of CBIs	Distribution per Country	Average size (# of active participants)
RU	Re/upcycling	Initiatives aimed at any form of re-use of material goods; recycling, i.e. any treatment and recovery of waste; up-cycling, i.e. a creative reuse of waste aimed at producing new goods; and repair activities.	8	UK (1)	54
				Italy (2)	30
				Spain (1)	6
				Romania (4)	27
SPG	Solidarity purchasing groups	Initiatives that bring together groups of consumers who buy directly from local producers or retailers, which respect various ethical and production principles.	5	Italy (4)	18
				Spain (1)	25
SM	Sustainable mobility	Initiatives aimed at providing alternative transport solutions for goods or persons, especially with the use of pedalled transport.	7	UK (2)	31
				Germany (1)	22
				Italy (1)	3,500 (*)
				Spain (1)	8
				Romania (2)	48
SCE	Sustainable/ community energy	Initiatives aimed at providing alternative community-based solutions to electricity or heat production or distribution.	4	Finland (3)	46
				Spain (1)	250
				<b>Average</b>	<b>41 (*)</b>

(\*) the final average excludes the two outliers  
 Source: code, type and definition are elaborations, based on Celata et al., 2015

## Summary of data

Primary data collection was conducted in 2015 via face-to-face interviews and a survey<sup>3</sup>. For each initiative, the database indicates the exact location, opening date, founder(s), legal status, information about participants, relationships with other initiatives and/or local actors, and in general an extensive set of social, economic, and environmental information.

After the data collection, a process of data cleansing was conducted and from this, due either to a lack of consistent information, or to poor data quality, 19 CBIs were then excluded from the sample. This resulted in a final group of 44 organisations that were suitable for the comparative assessment (5 in Finland, 3 in Germany, 10 in Italy, 10 in Romania, 10 in Spain, and 6 in the United Kingdom). The activities of the CBIs were classified according to the taxonomy shown in Table 2 (columns 1-3), where their geographical distribution is also described (column 5).

## A brief reflection on the strengths of, and constraints to, the comparison

Many factors can affect the activity and trajectory of such an organisation. In order not to neglect the multiple constraints that arise when comparing different initiatives in a variety of geographical areas, a series of taxonomic exercises were conducted with the aim of reflecting on the characteristics of the organisations investigated, considering each CBI's core activity, legal status, age, size, gender composition, policy context, motivations, etc. While there are commonalities between grassroots initiatives across Europe in terms of potential impact, there was no emergent pattern to allow simple pigeonholing. Nor does this selection of CBIs perfectly represent the entire European landscape of such initiatives, since the sample was never intended thus, and the scope and number of CBIs in Europe remains unknown. Nevertheless, the data provide noteworthy insights not heretofore observed.

## Typologies of CBI analysed

CBIs may assume official incorporation according to their national legislation or they may act in a more spontaneous and flexible way. According to Seyfang and Smith (2007), "the institutional forms for grassroots innovative niches are (...) complex (...). There are diverse organisational forms: cooperatives, voluntary associations, mutual informal community groups, social enterprises" (p. 591). The choice of organisational form and decision-making structures can cause tensions within initiatives (Fisher et al. 2017). The initiatives in our sample had a wide range of legal forms, and to compare these across differing national contexts and legal requirements, we developed the fourfold classification in Table 3 and described the

3 CBIs in the key case studies participated in both qualitative and quantitative data collection processes, while the supporting cases participated only in a quantitative assessment. The data were collected between January and June 2015 according to the methodology described in detail in Celata et al. 2015, 2016.

distribution of different typologies and legal structures in Table 4. The most common legal form for the initiatives in our sample was as a non-profit constituted body (24 of the CBIs). Ten initiatives operated without any formal legal identity, while cooperatives – of which there were nine – were also a common organisational form. There was only one for-profit enterprise in the sample. As mentioned above, it was not important for the sample if an initiative were profitable or non-profit, since the key aspect for it to be considered suitable for this study is that its revenue model serve its community.

**Table 3: Community-based initiatives' legal status**

Legal Structure	Description	Number of CBIs
Informal organisation	A group of people who have an interest, activity, or purpose in common. This organisation is 'casual', in that it is not officially registered with any authority/ies.	10
Non-profit organisation	An organized body of people who convene due to a shared interest, activity, or purpose. These are registered with the relevant authority/ies. This category can include: charities, community development trusts, associations, and NGOs.	24
For-profit organisation	Legal and registered entity in which members share a common purpose and come together in order to focus their various talents, and organize their collectively available skills or resources, to achieve specific, declared goals, among which is a financial goal, albeit with a societal benefit in mind. In this case, a company that sells goods and/or services for common benefit.	1
Cooperative	Jointly-owned enterprise engaging in the production or distribution of goods or the supplying of services, operated by its members for their mutual benefit, typically organized by consumers or farmers.	9

In terms of average size (Table 2, column 6), a key descriptor of these initiatives is the number of active participants, defined by the project as people “who actively contribute or are associated in any way to the initiative; they may work there, participate in meetings or decision making, give/spend time, contribute to activities, running events, etc.”. Studies on de-growth and transition initiatives advocate that small-scale actions can make a difference and may be one of the most effective ways to bring about macro-change (Kallis, 2015; Forrest & Wiek 2015). The size of the CBIs analysed seems to fit with their composition, on average, of 41 active participants (with the exclusion of two initiatives that in terms of this metric must be considered outliers). Sustainable community energy CBIs tend to be the biggest type – with an average of 148 participants, while solidarity purchasing groups were the smallest, with an average of 22 participants. The size of a CBI also relates to its political aims and aspirations. As emerged from qualitative interviews, a small size al-

lows for more participative forms of operation and higher degree of flexibility (Sekulova, 2016).

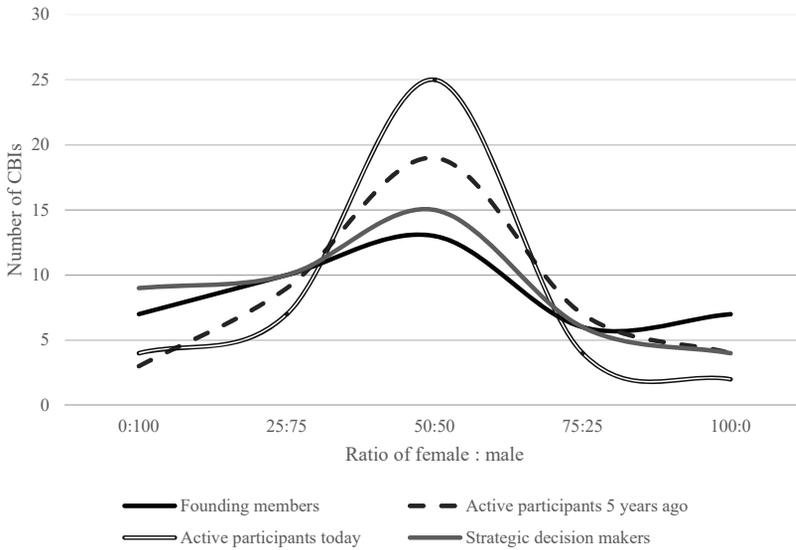
**Table 4: Distribution of CBIs per typology and legal status**

CBI typology / Legal status		Informal organisation	Non-profit organisation	For-profit organisation	Cooperative	Total
CG	Community gardens	2	1	-	-	3
CSA	Community-supported agriculture	1	3	-	3	7
FC	Food cooperatives	-	2	-	1	3
MU	Multi-activity	2	5	-	-	7
RU	Re/upcycling	1	7	-	-	8
SCE	Sustainable/community energy	-	1	-	3	4
SM	Sustainable mobility	1	4	1	1	7
SPG	Solidarity purchasing groups	3	1	-	1	5
<b>Total</b>		<b>10</b>	<b>24</b>	<b>1</b>	<b>9</b>	<b>44</b>

Age is another important feature of CBIs. Their characteristics can be defined and fixed in time by contemporaneous concerns. The median age (at the end of 2015) of the sample was seven years; 82% were less than 15 years old; while 18% were less than four years old. The oldest was founded in 1984.

Finally, as discussed by Bauhardt (2014) “sustainable economic change is intrinsically linked to gender equity”, and in practical terms sustainability transitions “would then imply a fundamental transformation of male-biased economic concepts, of gendered modes of knowledge production, and thus of gendered power relations” (p. 66). To assess gender equality we calculated the overall balance of female participants to males in the CBIs (in 2014 and 5 years before) and the presence of females among founding members, and strategic decision-makers. In Figure 1 it can be seen that the composition of founding members skews somewhat towards male-dominated groups – although groups with male-only and female-only founders number seven each. Nevertheless, strategic decision-makers continue to be male-dominated (9 all-male versus 4 all-female groups). However, in participant numbers the current situation is fairly equal, and compared to participation distribution five years previously there has been a small but demonstrable shift towards a balance between genders.

**Figure 1: Female:Male ratio among - founding members, participants 5 years ago, participants in the present (2014) and strategic decision-makers (2014)**

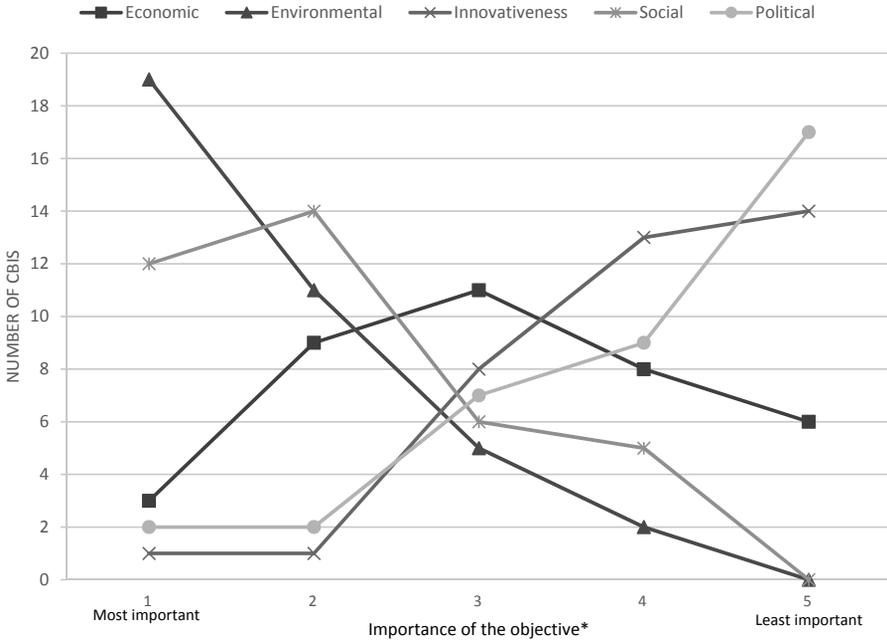


### Grassroots drivers and motivations

As revealed by qualitative interviews, “the emergence of CBIs tended to be driven by a desire to change the *status quo*, even if the initiative took a more pragmatic turn over time” (Sekulova, 2016, p. 14). Many of the older initiatives emerged because of the founders’ idealized vision of societal transformation. In other cases, CBIs were careful to craft their aspirations in a politically non-partisan way, seeking merely to demonstrate alternative forms of living (Fischer et al., 2017).

In order to understand whether CBIs are actually driven by the ideal of a transition beyond growth – and therefore beyond capitalism – we conducted a “self-assessment”, examining how CBIs position their aims and functions within a wide variety of dimensions. To this end, we first asked initiatives to rank the importance they accorded to five areas in which they might have an impact: environmental, social, economic, political, and innovativeness. Figure 2 shows the distribution of initiatives that gave each area a score out of five. Initiatives consistently ranked environmental and social objectives highly, with very few low rankings. Political and innovativeness objectives exhibited an opposite distribution with very few high rankings. Economic impact was the factor ranked with most variation but only three initiatives ranked economic objectives as their top priority. It should be noted, finally, that seven initiatives in our sample (16%) declined to prioritise using the categories that we provided. These represented the most politically “radical” CBIs and they argued that the distinction between these areas was artificial.

**Figure 2: Distribution of rankings given to five types of objective by 37 initiatives**



\*The score ranks from 1 - the most important - to 5 - the least important

In addition to the simple ranking exercise, we also asked initiatives specifically about a range of objectives. As shown in Table 5, they were asked to say whether they were relevant to their initiative (“*Is this objective/aim relevant for your initiative? Is your activity focused on it?*” - column 2) and, if so, how important they were on a scale of 1 to 10 (“*If it is an objective then, how important is this objective for you?*” - column 3). Overall, rankings of importance were broadly similar to the rankings described above, with little variation between the political and the economic when considered the ranks given to objectives within the same category.

Finally, we asked CBIs the degree to which they perceive they have achieved the aforementioned objectives (“*To what degree do you feel it has been achieved to date?*” - column 4). All CBIs ranked the importance of their aims above their achievements, this could indicate either extreme modesty among CBIs, or very high aspirations. In terms of declared achievement, the ranking is reversed with the following order: innovativeness (7.05), social (7.00), environmental (6.82), economic (6.73), and political (6.02). Political objectives consistently ranked lower than all other objectives both in terms of importance and in terms of achievement. As revealed in qualitative interviews, in countries such as Spain and Italy the importance afforded to political mobilization reflects the autonomous and often antagonistic nature of such CBIs:

“we have a quite anti-institutional politics”; “they have been persecuting us and have tried to throw us out” (Spain); by contrast, in Northern Europe grassroots initiatives appear to be more closely connected with local and national institutions, and in some cases are recognized as participants in local governance. Overall, the level of political engagement appears to be sparse, with 68% reporting not having been involved in campaigns, protests, petitions or other types of political pressure during the previous year. “The majority of the CBIs are reluctant to be politically-involved, on the grounds that radicalism could jeopardize [their] goals and continued existence” (Sekulova, 2016, p. 21).

To conclude, the result of the “self-assessment” section of the survey provided further interesting insights concerning the importance accorded to aims such as providing learning opportunities, socialization and empowerment, networking, etc.

**Table 5: CBIs’ self-assessment of the importance and degree of achievement of several aims**

<i>Objective</i>	<i>Yes Relevant (%)</i>	<i>Importance (mean rank)</i>	<i>Achievement (mean rank)</i>
<i>All environmental (average):</i>	90%	8.50	6.82
■ Reducing GHG emissions	91%	8,30	6,48
■ Using natural resources efficiently	91%	8,48	7,10
■ Raising environmental awareness	89%	8,72	6,90
<i>All social (average):</i>	82%	8,27	7,00
■ Opportunities for socialisation	91%	7,98	7,13
■ Social inclusion	70%	8.10	6.74
■ Empowerment	82%	8.44	7.25
■ Promotion of sustainable lifestyles	86%	8.58	6.89
<i>All political (average):</i>	70%	7.23	6.02
■ Political mobilisation	64%	7.57	5.79
■ Networking with collective actors	77%	6.79	6.12
■ Networking with other CBIs	70%	7.32	6.16
<i>All economic (average):</i>	67%	8.36	6.73
■ Financial sustainability	66%	8.17	6.34
■ Delivery of benefits to participants	73%	8.25	7.34
■ Local economic impact	64%	8.64	6.50
<i>All innovativeness (average):</i>	64%	8.11	7.05
■ Stimulate innovation	55%	7.88	6.67
■ Provide learning/knowledge diffusion	73%	8.34	7.44

## The context in which CBIs operate

To study the context in which CBIs operate and how this can affect their activities and trajectories, we determined whether initiatives operated in an urban, intermediate, or rural context, using the EC's 'NUTS3' classifications (Table 6). 57% of the initiatives analysed operate in an urban region, 25% in intermediate regions and 18% in predominantly rural areas. The latter are situated in Finland, Romania and the UK, and are either multi-domain or oriented towards energy, mobility, or re/upcycling. While re/upcycling and sustainable mobility initiatives are in general widely dispersed, by their nature food-related CBIs (CG, SPG, CSA and FC) are more likely to be found in urban areas.

**Table 6: Urban–rural typology, by EU NUTS 3 regions**

Typology	Description	Frequency (# and %) of CBIs
Predominantly urban regions	Rural population: <20 % of the total population	25 (57%)
Intermediate regions	Rural population: 20–50 % of total population	11 (25%)
Predominantly rural regions	Rural population: >50 % of total population	8 (18%)

Local governance can have a significant effect on CBIs, and can either represent an obstacle to what they want to achieve, or a way of enabling activities (Seyfang & Longhurst, 2016; Enhnert et al., 2018; Ruggiero, Martiskainen, & Onkila 2018). As revealed by the qualitative interviews conducted, some of the CBIs emerged from public sector support or in partnership with local governments, particularly in the UK, Finland and Germany. “In Scotland, partnerships with local councils, as well as private sector bodies (providing core funding), have largely created the context for the emergence of CBIs” (Sekulova, 2016, p. 14). Other initiatives grew up independently (mostly in Italy, Spain and Romania), sometimes despite unfavourable regulations, sometimes due to a regulatory gap (Spain and Romania), or sometimes they emerged from the need to circumvent regulations, such as recovering unspoiled food from supermarket waste bins (Germany) or bikes from general waste (Italy). It may be argued that these forms of collaboration – between public bodies and CBIs – represent a possible contradiction between theory and practice of the de-growth and sustainability transition narrative. Nevertheless, in many cases we saw that despite their oppositional character, there were indeed strategic and targeted collaborations with public institutions.

In order to understand how CBIs perceive their policy environment, we asked them whether there were any policies that they found supportive, or which they felt constituted an obstacle, to their emergence or development. Responses varied widely, and as shown in Table 7 both supportive and obstructive policies yielded respectively four different – but not exclusive – areas. Overall, nearly half of the CBIs inter-

viewed (45.5%) felt their policy environment as supportive, and in particular 27% of them pointed out as beneficial the type of policy support related to the access to public funding and financial incentives: “*especially investment support from EU and national funds*” (Finland); “*local tenders supporting the emergence of solidarity purchasing groups and urban gardens*” (Italy); “*source of funding (...) from the city council*” (Spain); and “*a law that permitted the redirection of (...) personal taxes to NGO*” (Romania). Accordingly, looking in more detail at those who responded positively, we asked them to identify the scale at which this occurred. The answer to this showed that there is little difference in the scale of policymaking considered supportive for the emergence and development of CBIs, with a slight indication that national policies (24%) were more influential than local (17%), and EU/international (15%). As stated “*...the development of the group has been influenced by certain strands in national policy. Nothing specific but a generally supportive environment around inclusivity, sustainability, etc.*” (UK).

In parallel, a consistent number of those interviewed (63.6%) felt their policy environment was also characterised by regulations that had in some way been an obstacle to the emergence or development of their activity. More than 25% indicated legislation regulating state aid and bureaucracy as the main obstacle to their activity: “*the license procedure concerning the main activity*” (Finland); “*the need for an official certificate which costs a lot, and requires a lot of bureaucracy and time (...) is also a burden*” (Spain); “*administrative obstacles and bureaucracy*” and “*an absence of laws and support from the institutions*” (Italy); “*laws referring to access to the information of public interest*” (Romania). In these cases, when asked to identify the scale at which this occurred the answers showed that local policies (52%) are the most problematic, followed by national (11%), and EU/international (4%).

**Table 7: Percentage of initiatives benefiting from, or facing obstacles from, policy support in each of the policy areas relevant to their emergence and development**

<b>Main policy support areas</b>	<b>% of CBIs</b>
Property rights, and access to resources, property and/or land	9.09
Economic development, tax, financial incentives	27.27
Community or social development	20.45
Environment, transport or food	15.91
<b>Main policy obstacles areas</b>	<b>% of CBIs</b>
State aid rules, funding or bureaucracy	25.00
Property access, public spaces or legal barrier	18.18
Organisational structure, employment law or volunteering	15.91
Environment, transport, health or hygiene	9.09

## Economic Indicators For A Comparative Assessment

Following a logical framework derived from the literature review summarised in Table 1, for each of the dimensions described in Chapter 3 – internal and external – an operative indicator for the comparative assessment of CBIs was designed and tested.

### Measurements for the internal functioning of CBIs

In terms of internal economic functioning, both the literature and evidence collected for this study show that most CBIs do not require substantial investment, and tend to have low running costs. However low they are, though, they do have costs that must be covered in some way, and sourcing funds can be difficult, particularly given that most initiatives are not run for profit. ‘Not-for-profit’, though, is not the same as running at a loss, and even though CBIs are not usually created to generate revenue, they must still cover expenses related to their activities in order to accomplish their mission. It is therefore important to assess their potential for financial sustainability.

To do this, we considered indices used to assess the financial profiles of charities and non-profit organisations proposed by Tuckman and Chang (1991), Greenlee and Trussel (2000), and Abraham (2003). Of these, the indices that allowed for a robust comparative assessment were the revenue concentration index, and the income generation index. The use of other financial sustainability indicators regarding, for example, profitability, are less relevant to community organisations which pursue a social purpose – particularly because most of them are non-profits. Moreover, our survey gathered data for a single year of activity; while income and expenses may vary substantially from one year to the next, the distribution of revenue sources is assumed to be a more stable indicator.

To assess revenue concentration, it has been established (Léon, 2001; Sontag-Padilla, 2012) that a CBI can count on a diverse set of funding sources, either internal: (i) fees/subscriptions/membership dues, (ii) sale of goods produced by the initiative, (iii) sale of services produced by the initiative; and/or external: (iv) cash donations, inheritance, etc.; (v) public grants; (vi) private sponsorship; (vii) other. As pointed out before, CBIs can be extremely fragile when their funding relies mainly on external sources, or even on a single source.

To measure the degree of revenue concentration, we used the Herfindahl Index, a commonly-used measure of concentration (Tuckman & Chang, 1991). The formula is as follows:

$$\text{Revenue concentration index} = \sum (r_j / r_{\text{total}})^2$$

Where:

$r_j$  is the amount of the  $j$ th source of revenue;

$r_{\text{total}}$  is the total revenue.

Below we use the normalised Herfindal index, so that it can range from 1 (maximum concentration) to 0 (maximum diversification). If the CBI has equal revenue from many sources the value of the index will be close to zero; if revenues come from a single source it will have an index of one. The organisation is most likely to be financially sustainable when its concentration index is close to zero (Abraham, 2003).

The second aspect, income generation, can be assessed using an index focused on the evaluation of the periodic result of a CBI. A positive margin is a measure of the monetary amount remaining after total expenses have been covered using all sources of revenues previously described.

$$\text{Income generation index} = \frac{r_{\text{total}} - e_{\text{total}}}{r_{\text{total}}}$$

Where:

$r_{\text{total}}$  is the total revenue.

$e_{\text{total}}$  is the total expenses.

Considering that CBIs mostly provide products or services to participants, and that their activities are not profit-oriented, this may vary hugely from one year to the next according to the variability of the different sources of income. In general, a low or negative index means that there is little or no cash surplus that can be drawn down before the CBI must cut program support. When the index is positioned in the bottom quintile the initiative is labelled “at-risk”, and if it shows a negative result it “is already likely to be in the process of reducing program offerings” (Tuckman & Chang, 1991, p. 453).

### The wider external effect of CBIs

CBIs can produce a variety of direct and/or indirect effects on their group of participants. In particular, direct positive or negative impacts can be measured around any increase or decrease in individual or household income, expenditure, or debt (Celata & Sanna, 2014, p. 24).

Considering the wide range of possible variables to be measured, the variety of domains, and the difference between CBIs, such an estimate is complex. In an attempt to devise a proxy for the economic benefits to participants, and considering the lack of data availability and consistency, the indicator selected to assess the potential of CBIs to deliver monetary benefits to participants focused on the estimation of the amount of money that they save annually as a result of the project activities. Data

needed to evaluate this proxy was collected by asking CBIs: “how much do you estimate that your users/utilisers save annually as a result of your project activities?”.

### **Direct impact to participants = $D_i$**

Where:

$D_i$  is the total amount of money annually saved by the CBI active participant, expressed in euro (PPPs 2014)<sup>4</sup>.

Various alternative measures may be adopted to measure the local economic impact of community initiatives, e.g. wealth generation or wealth retention. Some of these measures, however, proved to be extremely difficult to calculate objectively, uniformly and exhaustively, and were overly reliant on uncertain information.

To minimize these difficulties, we opted for a simple measure of local productivity by calculating the resources CBIs spent locally on each employee and volunteer. Uniform labour inputs were calculated by transforming the number of employees and volunteers into full time equivalents (FTE)<sup>5</sup>, based on their weekly workload. The formula for the indicator is the following:

$$\text{Local economic impact} = \frac{(tc * lc)}{tfe}$$

Where:

$tc$  is the yearly total costs or expenses (expressed in euro PPPs 2014);

$lc$  is the percentage of expenses which is spent locally;

$tfe$  is the total ‘human effort’ in terms of FTE of paid and volunteer work.

Finally, in relation to the potential for job creation, as with many non-profit organisations, CBIs had positive implications for community development and delivered essential services, were locally controlled, and contributed to creating jobs within their communities. In particular, the potential of the studied CBIs to create new jobs was evaluated using an *ad hoc* index that considers the net number of permanent new jobs created, expressed in FTE by CBIs by dint of their activity. This included employment directly created within the CBIs, as well as other jobs that were created indirectly due to a CBI’s activities (e.g. funded by grants).

The Job creation index therefore, consists of the sum of these two components – indirect and direct jobs – calculated in FTE.

$$\text{Job creation index} = \frac{D_{tfe} + I_{tfe}}{BF}$$

4 In order to equalize the purchasing power of different currencies by eliminating the differences in price levels between countries we used the rate of currency conversion PPPs (EU28=1) actual individual consumption 2014 provided by the Eurostat.

5 For this analysis, we calculated FTE by assuming that a full-time employee works 40 hours per week.

Where:

*D tfte* is the total direct job/s created in terms of paid work, in FTE. This means staff employed and other jobs created = person-hours paid per month by CBI.

*I tfte* is the total indirect job/s created of paid work, in FTE. This means jobs created outside the CBIs but directly attributable to the CBIs activities.

*Bf* is the total number of beneficiaries of the CBI, an element needed to normalise the initiatives according to their dimension of impact.

To estimate direct employment created within the CBIs we asked: “how many people are employed by the initiative?” meaning “how many people received a salary or wage”.

To estimate employment indirectly created in their local area, we also asked, “besides the people already employed at the initiative, are there any outside new paid jobs (FTE) created thanks to the initiative activities?”.

## Results

### Assessing the internal functioning of CBIs

The first piece of evidence (Table 8) to emerge from differentiating income sources between internal and external is that on average, solidarity purchasing groups (SPG) rely solely on internal sources (mainly subscriptions and sales of services), and are totally independent from external ones. The revenue concentration index for this typology of initiatives is the highest (99%) of the entire group.

Overall, significantly more than 50% of the budgets of sustainable/community energy (SCE), community gardens (CG), community-supported agriculture (CSA), re/upcycling (RU), and multi-activity (MU) CBIs come from internal sources, meaning that they do not rely heavily on external sources. A contrasting situation is shown by food cooperatives (FC) and sustainable mobility (SM) CBIs, where more than 50% of their budget comes from external sources of funding. Excluding only CSA, RU, and MU, the revenue concentration index is always in the top quartile (> 0.75).

In groups that rely on internal sources, the largest source of funds is generally membership dues, which provide 25% of the total income of these initiatives, followed by sales of services (22%), and sales of goods (14%). On average, external sources for these groups are less substantial than internal sources. In this case, public grants comprise an average of 17% of the income of a CBI, 11% from private sponsorship, 7% from other sources, and cash donations are a fairly trivial 5%. As noted above, external funding was often found to be important for the emergence of CBIs; nevertheless in the long term, aspirations towards autonomous income generation enable them to make independent decisions that reflect their own priorities, rather than those of donors or investors. Because of this, those in the SPG category

can be seen as an exception to the general pattern of the index, since their activities are based entirely on subscriptions (81%) and sales (19%).

**Table 8: Distribution of funding source as a proportion of total sources per typology of CBI (%)**

CBI typology	Source of funding							Total		Revenue Concentration Index
	A	B	C	D	E	F	G	Internal sources	External sources	
CG	0.49	0.00	0.17	0.34	0.00	0.00	0.00	0.66	0.34	0.83
CSA	0.16	0.28	0.28	0.03	0.12	0.11	0.01	0.73	0.28	0.56
FC	0.13	0.00	0.00	0.00	0.33	0.17	0.37	0.13	0.87	0.81
MU	0.09	0.20	0.24	0.00	0.23	0.00	0.24	0.53	0.47	0.71
RU	0.31	0.23	0.03	0.07	0.20	0.16	0.00	0.57	0.43	0.66
SCE	0.04	0.24	0.58	0.00	0.14	0.00	0.00	0.86	0.14	0.84
SM	0.09	0.00	0.31	0.05	0.26	0.29	0.00	0.40	0.60	0.79
SPG	0.81	0.00	0.19	0.00	0.00	0.00	0.00	1.00	0.00	0.99
Mean average	0.25	0.14	0.22	0.05	0.17	0.11	0.07	0.61	0.39	0.75

Legend - Source of funding: A: Fees/Subscriptions/Membership dues; B: Sale of goods (produced by the initiative); C: Sale of services (produced by the initiative); D: Cash donations, legacy, etc.; E: (Public) grants; F: (Private) sponsorship; G: Other (...)

The Herfindal index (Table 9) reveals that three-quarters of CBIs have a concentration of funding sources that ranges between moderate (18.2% with H. between 0.51 and 0.75) and high (56.8% with H. > 0.75). The other quarter of the CBIs shows low concentration (with H. between 0.25 and 0.50), and no CBIs at all have an unconcentrated index (H. below 0.25). This means that only a small number of CBIs have an adequate and balanced diversification of financial sources. Attaining financial sustainability through a single source of funds is largely infeasible, and CBIs relying heavily on external funding are significantly exposed to adverse conditions or changes in funding structure.

**Table 9: Revenue concentration index**

Revenue concentration Index		CBIs
Unconcentrated	0 - 0.250	0.0%
Low	0.251 - 0.500	25.0%
Moderate	0.501 - 0.750	18.2%
High	0.751 - 1.000	56.8%
	Total	100.0%

The qualitative interviews also revealed that “the availability of economic resources strongly influences [their] survival”, and for many of them income generation is an imperative for achieving their objectives (Sekulova, 2016, p. 18). In relation to this

second index, three quarters of the CBIs successfully covered their costs during 2014. Only a quarter of them failed to achieve this objective and were therefore labelled as “at risk”. Of the initiatives that claimed to have covered costs, 36% had a positive surplus, while 39% declared a zero surplus, meaning that they had a balanced budget with neither positive nor negative financial results, which is not an issue, since “for many of them money is considered an instrument, rather than a goal in itself (...) and was not the central driver for their emergence” (Ibid, p. 15). In general, the best results in terms of costs covered were obtained by RU (18%) CBIs, SM groups (16%), CSA (16%), MU (16%), and SPG (11%). The mean average of the surplus produced was approximately €11,500 per CBI. Despite this, the potential revealed by the income generation index of each type of initiative is quite low (Table 10). CG, CSA, MU, and SM groups show a negative index, meaning that they run at a loss and must cover their costs by other means. Meanwhile CBIs that run with a surplus are not consistent in application of funds: they are allocated in varying proportions and for different purposes.

**Table 10: Income generation index**

CBI typology	Income Generation Index
CG	-0.33
CSA	-1.33
FC	0.00
MU	-0.31
RU	0.09
SCE	0.42
SM	-0.49
SPG	0.04
Mean average	-0.30

### Assessing the wider external effect of CBIs

In an attempt to create a proxy for the economic benefits to participants, and considering a lack of consistent and available data, the indicator selected to assess the potential of CBIs for delivering monetary benefits to participants was an estimate of the amount of money that the group of active participants of the CBI saves annually as a result of project activities.

The average CBI under consideration does indeed deliver monetary benefits to its active participants, with a mean average of more than €685 per year per person. As shown in Table 11, SPG created the highest annual benefit (€2,300) to their participants, followed by MU which created a benefit of more than €1,300, and SCE with over €1,100. RU were able to deliver over €580 to each member, CG more than €400, SM nearly €300, and only FC and CSA provided a yearly benefit of less than €100.

**Table 11: Indicator of economic benefit to participants**

CBI typology	Economic benefit to participants (euro PPP 2014)
CG	419.92
CSA	35.12
FC	80.04
MU	1,320.68
RU	588.75
SCE	1,130.14
SM	296.10
SPG	2,312.73
Mean average	685.19

With regard to local economic impact, estimating the resources each CBI spent locally on each employee and volunteer FTE gives a proxy for this figure in the community. Table 12 shows that the most promising categories of initiative are the SCE type, which produced an annual impact on the local economy that was more than €43,700, CSA with more than €37,000, and MU with more than €24,000. All the other typologies produce an impact below an average of about €20,500. RU produce a consistent impact, on average slightly below the average (€19,664). FC and SM between €10,000 and €15,000, and CG and SPG (both active in the food domain) show the lowest potential in terms of local economic impact with an annual impact of about €1,000 and below respectively.

**Table 12: Indicator of local economic impact**

CBI typology	Local economic impact (euro PPP 2014)
CG	1,007.12
CSA	37,149.40
FC	12,058.56
MU	24,110.10
RU	19,663.46
SCE	43,776.30
SM	14,066.22
SPG	586.64
Mean average	20,495.98

Finally, data gathered shows that 56.8% of CBIs directly or indirectly created jobs. Table 13 shows that CSA and RU CBIs - with the highest Job Creation Index - had a high potential for actual job creation. The first category appears particularly successful in the creation of work roles. The study showed that such initiatives tend to employ people to play key roles in their production activities and management. Multi-activity organisations show great potential in the indirect creation of jobs by supporting employment outside the initiative, e.g. with grants.

Community gardens, which are based exclusively on the voluntary work of their participants, proved unable to create any jobs; moreover, there is little potential for solidarity purchasing groups to create job roles. In these two cases the job creation index, which considers a normalisation factor (the number of CBI beneficiaries) was zero.

SCE groups, despite their concrete creation of external employment, have a large number of beneficiaries and thus a very low index; while other types of initiatives have successfully created a significant number of (direct and/or indirect) jobs. The mean average of total job creation by all initiative types (direct and indirect) was 5.32 FTE, which breaks down to a mean of 2.69 direct and 2.64 indirect.

**Table 13: Job creation index and detail of direct, indirect and total jobs created by CBIs per typology**

<b>CBI typology</b>	<b><i>Direct jobs</i></b> <b><i>(FTE)</i></b>	<b><i>Indirect jobs</i></b> <b><i>(FTE)</i></b>	<b><i>Total jobs</i></b> <b><i>(FTE)</i></b>	<b><i>Job Creation</i></b> <b><i>Index</i></b>
CG	0.00	0.00	0.00	0.00
CSA	7.99	2.29	10.27	19.11
FC	1.41	0.33	1.75	2.50
MU	3.00	11.14	14.15	2.21
RU	2.64	0.13	2.76	9.44
SCE	0.02	3.25	3.27	0.13
SM	2.16	1.00	3.16	0.32
SPG	0.15	0.00	0.15	0.00
Mean average	2.69	2.64	5.32	5.34

## Discussion and Conclusions

The objective of this article was to propose a methodology for the assessment of various economic impacts of CBIs, and then to demonstrate this methodology in practice, focusing on the CBIs analysed during this research. Our methodology was to create indicators to measure and compare the diverse impact of CBIs, and despite a near-infinite number of ways to explore such impacts, the measurements that we chose were those that were felt would best reflect CBI performance across a very diverse number of CBI typologies and scales, and across a wide spread of cultures, economies, political contexts, and geographical locations. Other constraints were imposed by data availability and in some cases even the willingness of organisations to share their data – for which there was occasionally significant political and economic resistance; indeed occasionally the nature of the CBIs was so politically radical that members refused to allow a fiscal comparison to be drawn between their activities and the ‘normal’ economy.

Despite huge differences in terms of motivation, legal status, political engagement, geographical area of operation, etc., our sample reveals some interesting trends and even commonalities: they tend to be relatively new, small-scale initiatives with an average size of 41 active participants, and a mean age of 7 years; gender is relatively equally represented even though strategic decisions tend to be male-dominated; and environmental aims are the most predominant objectives, together with social aims. Despite possible contradictions between theory and practice in the de-growth and sustainability transition narrative, in Northern Europe strategic and targeted collaborations with public institutions have largely created the context for the emergence of CBIs, while in Southern and Eastern Europe they have tended to have arisen more independently from institutions, often with an adversarial character.

Despite the limitations under which we were operating, we were nevertheless able to use our indicators to reveal fundamental commonalities and trends, which for the most part backed up the existing literature – though in some cases contradicted it.

The starkest data revealed by the revenue concentration index shows the fragility of most of these initiatives, especially those that do not present a variety of funding sources or are propped up by a single large donor. Very few receive public grants, sponsorship, or cash donations from the public, which the qualitative interviews showed to have been a provider of start-up funding. Because of this, and despite their ability to be economically productive, the majority of revenue generated internally by CBIs is consistently reinvested in the organisations.

By contrast, the indicators showing the external economic impact of CBIs on their members reveal a surprisingly high benefit to individuals. This supports the literature, which, for example, showed that the majority of participants in transport-related CBIs did so because of financial savings (Katzev, 2003; Flachs, 2010). Participants in gardening schemes, too, save significant amounts of money on produce: one project in the US estimated that community gardeners saved between \$50 and \$250 every season (Armstrong, 2000, p. 320). Similarly in the case of the gardening CBIs that we researched, we were able to show an estimate of a €400 annual saving per head.

Our indicators showed a positive trend in terms of local economic impact and job creation. Previous studies have claimed that CBIs can contribute to revitalizing commercial districts, keeping businesses thriving and money circulating in the local economy, and generating additional tax revenues (Bremer, Jenkins, & Kanter, 2003; Sherer, 2006). We did indeed find that the mean average of local economic impact per typology of CBI per year was €20,500 per annum, with important peaks in the case of sustainable/community energy CBIs, and community-supported agriculture.

The literature stresses that the operational costs of a CBI may include labour, unpaid effort or more tangible contributions (e.g. space, means of transport, etc.), and

participants may be required to directly dedicate resources to the initiative. By contrast, our indicators found that this kind of organisation in fact contributes to the economy by actual job creation, both directly as paid employees – for example we showed that community-supported agriculture created an average of direct 7.99 FTE per initiative within each scheme – and multi-activity initiatives employed a large number of people directly (3.00 FTE), with an average of 2.69 FTE per initiative – or indirectly, by stimulating external job creation, such as sustainable/community energy with 3.25 FTE, community-supported agriculture again, which has been shown to cause local farmers to employ more workers at an average of 2.29 FTE per scheme, and in multi-activity initiatives a notable 11.14 FTE.

The contribution of CBIs to the economy of a local area also goes beyond the benefits they deliver to their beneficiaries or to their community. Although – as emerged from the self-assessment exercise – the generation of economic impact is rarely a CBI's primary stated aims, it is in fact an issue of huge societal concern, especially in times of recession, high unemployment, and the government introduction of austerity measures. The ability of CBIs to contribute to the wellbeing of a wider community, and the specific locations and policy contexts where they act, is crucial to community organisations as well, insofar as one of their explicit aims is often to pursue a 'relocalisation' agenda, to revitalize the areas where they operate, both physically and economically, or to adopt a locally-focused economic model. Many CBIs deliver essential services, are locally controlled, and often contribute to stimulating local employment, thereby contributing positively towards community development and sustainability. Even though our indicators are necessarily mere proxies for the real situation, we were able to reveal trends and commonalities that for the most part backed up the existing literature, and thus we were able to add figures to that which had previously been proposed on a theoretical basis.

Finally, we emphasise the fact that the literature reviewed, and our research, both focus solely on factors related to the success and survival of CBIs. A large gap exists in terms of research that deals with their failure: investigations of how and why they fail, and what impact this has is currently unavailable. This topic would therefore be an interesting area for future research.

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## References

- Abraham, A. (2003). *Financial sustainability and accountability: A model for non-profit organisations*. AFAANZ 2003 Conference Proceedings, 6-8 July. Brisbane, Australia. Retrieved from <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1781&context=commpapers>
- Adams, C., & Perlmutter, F. (1991). Commercial venturing and the transformation of America's voluntary social welfare agencies. *Nonprofit and Voluntary Sector Quarterly*, 20, 25–38.
- Armstrong, D. (2000). A survey of community gardens in upstate New York: Implications for health promotion and community development. *Health & Place*, 6, 319–327.
- Bauhardt, C. (2014). Solutions to the crisis? The green new deal, degrowth, and the solidarity economy: Alternatives to the capitalist growth economy from an ecofeminist economics perspective. *Ecological Economics*, 102, 60–68.
- Bellows, A. C., State, T., Community, S., Trust, L., Smit, J., & Urban, M. C. P. T. (2003). Health benefits of urban agriculture. *Agriculture*, 19, 702–703.
- Boyer, R. H. W. (2015). Grassroots innovation for urban sustainability: Comparing the diffusion pathways of three ecovillage projects. *Environment and Planning A*, 45, 320–337.
- Bremer, A., Jenkins, K., & Kanter, D. (2003). *Community gardens in Milwaukee: Procedures for their long-term stability & their import to the city*. Milwaukee: University of Wisconsin, Department of Urban Planning.
- Brown, K., & Carter, A. (2003). Urban agriculture and community food security in the united states: Farming from the city center to the urban fringe. *Agriculture*, 27, 1–32.
- Celata, F., & Sanna V.S. (2014). *Community activism and sustainability: A multi-dimensional assessment*, Working Paper, Dept. Metodi e Modelli per l'Economia il Territorio e la Finanza. Retrieved from <https://www.memotef.uniroma1.it/sites/dipartimento/files/wpapers/documenti/FuIITextWP137.pdf>
- Celata, F., Sanna, V. S., Hendrickson, C. Y., Reusser, D., Holsten, A., Pradhan, P., Martellozzo, F., Ramos, L. A., Passani, A., Revell, P., Prampolini, A., Rabbi, S., Ward, N., Nastase, C., & Coletti, R. (2015). *Assessment data sheets for community-based initiatives including the ecosystem services and green infrastructure (ES-GI) assessment toolkit*. Retrieved from [www.tess-transition.eu/wp-content/uploads/2015/07/TESS-Deliverable\\_2.2\\_FINAL.pdf](http://www.tess-transition.eu/wp-content/uploads/2015/07/TESS-Deliverable_2.2_FINAL.pdf)
- Celata, F., & Hendrickson, C.Y. (2016). *Case studies integration and policy recommendations*. Retrieved from [www.tess-transition.eu/wp-content/uploads/2016/11/TESS\\_D4.1\\_Case-study-integration-report.pdf](http://www.tess-transition.eu/wp-content/uploads/2016/11/TESS_D4.1_Case-study-integration-report.pdf)
- Celata, F., Sanna, V.S., & Hendrickson, C.Y. (2016). *Multi-criteria analysis for carbon efficient projects*. Retrieved from [www.tess-transition.eu/wp-content/uploads/2016/11/TESS\\_D4.2\\_Multi-criteria-analysis-for-carbon-efficient-projects.pdf](http://www.tess-transition.eu/wp-content/uploads/2016/11/TESS_D4.2_Multi-criteria-analysis-for-carbon-efficient-projects.pdf)
- Cumbers, A., Shaw, D., Crossan, J., McMaster, R. (2017). The work of community gardens: Reclaiming place for community in the city. *Work, Employment and Society*, 32(1) 133–149.
- Dinnie, E., Holstead, K. L. (2017), The influence of public funding on community-based sustainability projects in Scotland, *Environmental Innovation and Societal Transitions* (in Press).

- Dooling, S. (2009). Ecological gentrification: A research agenda exploring justice in the city. *International Journal of Urban and Regional Research*, 33(3), 621–639.
- Ehnert, F., Frantzeskaki, N., Barnes, J., Borgström, S., Gorissen, L., Kern, F., Strenchock, L., & Egermann, M. (2018). The acceleration of urban sustainability transitions: A comparison of Brighton, Budapest, Dresden, Genk, and Stockholm. *Sustainability*, 10(3), 612.
- Fischer, A., Holstead, K., Hendrickson, C. Y., Virkkula, O. & Prampolini, A. (2017). Community-led initiatives' everyday politics for sustainability – conflicting rationalities and aspirations for change? *Environment and Planning A*, 49(9), 1986–2006.
- Flachs, A. (2010). Food for thought: The social impact of community gardens in the Greater Cleveland area. *Electronic Green Journal*, 1(30), 1–10.
- Forrest, N., Wiek, A. (2015). Success factors and strategies for sustainability transitions of small-scale communities – evidence from a cross-case analysis. *Environmental Innovation and Societal Transitions*, 17, 22–40.
- Gibson-Graham, J. K. (2008). Diverse economies: Performative practices for other worlds. *Progress in Human Geography*, 32, 613–632.
- Girardet, H. (2006). *Creating sustainable cities*. Schumacher Briefings, Totnes, Devon, UK: Green Books.
- Greenlee, J. S., & Trussel, J. M. (2000). Predicting the financial vulnerability of charitable organizations. *Non-profit Management & Leadership*, 11, 199–210.
- Hagan, E., & Rubin, V. (2013). Economic and community development outcomes of healthy food retail. *Policy Link*. Retrieved from <http://ccednet-rcdec.ca/en/node/11933>
- Hargreaves, T., Hielscher, S., Seyfang, G., & Smith, A. (2013). Grassroots innovations in community energy: The role of intermediaries in niche development. *Global Environmental Change*, 23(5), 868–880.
- Hopkins, R. (2010). Localisation and resilience at the local level: The case of Transition Town Totnes (Devon, UK), Retrieved from [https://pearl.plymouth.ac.uk/bitstream/handle/10026.1/299/Hopkins%20R%20J\\_2010.pdf?sequence=4](https://pearl.plymouth.ac.uk/bitstream/handle/10026.1/299/Hopkins%20R%20J_2010.pdf?sequence=4).
- Kallis, G. (2015). *The degrowth alternative*. *Great transition initiative*. Retrieved from [www.greattransition.org/images/GTI\\_publications/Kallis-The-Degrowth-Alternative.pdf](http://www.greattransition.org/images/GTI_publications/Kallis-The-Degrowth-Alternative.pdf)
- Katzev, R. (2003). Car sharing: A new approach to urban transportation problems. *Analyses of Social Issues and Public Policy*, 3(1), 65–86.
- Léon, P. (2001). Four pillars of financial sustainability. *The Nature Conservancy*, 2, 4–29.
- NYCDCP (2009). *Bike-share opportunities in New York City 2009*. *New York City Department of City Planning*. Retrieved from [www.nyc.gov/html/dcp/html/transportation/td\\_bike\\_share.shtml](http://www.nyc.gov/html/dcp/html/transportation/td_bike_share.shtml)
- Phillips, S. D., & Graham, K. A. (2000). *Hand-in-hand: When accountability meets collaboration in the voluntary sector*. In K. Banting (Ed.), *The nonprofit sector in Canada: Roles and relationships* (pp. 149–190). Kingston and Montreal, Canada: School of Policy Studies, Queen's University.
- Rose, N. (1999). *Powers of freedom*. Cambridge: Cambridge University Press.
- Ruggiero, S., Martiskainen, M., & Onkila, T. (2018). Understanding the scaling-up of community energy niches through strategic niche management theory: Insights from Finland. *Journal of Cleaner Production*, 170, 581–590.

- Sekulova, F. (2016). *Report on success factors*. Retrieved from [www.tess-transition.eu/wp-content/uploads/2016/05/4.29.2016-Deliverable3.3\\_Final-rectified.pdf](http://www.tess-transition.eu/wp-content/uploads/2016/05/4.29.2016-Deliverable3.3_Final-rectified.pdf)
- Sengers, F. Wiczorek, A.J. & Raven, R. (2016). Experimenting for sustainability transitions: A systematic literature review. *Technological Forecasting and Social Change*, (in press). Retrieved from <https://www.sciencedirect.com/science/article/pii/S0040162516302530?via%3Dihub>
- Sontag-Padilla, L., Staplefoote, L., & Morganti, K. (2012). *Financial sustainability for non-profit organisations: A review of the literature*. RAND Corporation. Retrieved from <http://www.jstor.org/stable/10.7249/j.ctt5hhvjg>
- Sælensminde, K. (2004). Cost–benefit analyses of walking and cycling track networks taking into account insecurity, health effects and external costs of motorized traffic. *Transportation Research Part A: Policy and Practice*, 38, 593–606.
- Seyfang, G. (2009). *The new economics of sustainable consumptions: Seeds of change*. UK: Palgrave Macmillan, Basingstoke.
- Seyfang, G. (2010). Community action for sustainable housing: Building a low–carbon future. *Energy Policy*, 38(12), 7624–7633.
- Seyfang, G. & Longhurst, N. (2016). What influences the diffusion of grassroots innovations for sustainability? Investigating community currency niches. *Technology Analysis & Strategic Management*, 28(1), 1–23.
- Seyfang, G., Park, J. J., & Smith, A. (2013). A thousand flowers blooming? An examination of community energy in the UK. *Energy Policy*, 61, 977–989.
- Seyfang, G., & Smith, A. (2007). Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental Politics*, 16(4), 584–603.
- SGS Economic and Planning (2012). *Benefit–cost analysis of car share within the City of Sydney*. Sydney. Retrieved from [www.cityofsydney.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0012/122502/CarShareEconomicAppraisalFINALREPORT.pdf](http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0012/122502/CarShareEconomicAppraisalFINALREPORT.pdf)
- Sherer, P.M. (2006). *The benefits of parks: Why America needs more city parks and open space*. Retrieved from [www.tpl.org](http://www.tpl.org)
- Smith, A. (2006). Green niches in sustainable development: the case of organic food in the United Kingdom. *Environment and Planning C: Government and Policy*, 24, 439–458.
- Smith, A. (2007). Translating sustainabilities between green niches and socio–technical regimes. *Technology Analysis & Strategic Management*, 19(4), 427–434.
- Tornaghi, C. (2014). Critical geography of urban agriculture. *Progress in Human Geography*, 1–17.
- Tuckman, H. P., and Chang, C. F. (1991). A methodology for measuring the financial vulnerability of charitable non-profit organisations. *Non-profit and Voluntary Sector Quarterly*, 20, 445–460.
- Voicu, I., & Been, V. (2008). The effect of community gardens on neighbouring property values. *Real Estate Economics*, 36(2), 241–283.
- White, R., & Stirling, A. (2013). Sustaining trajectories towards sustainability: dynamics and diversity in UK communal growing activities. *Global Environmental Change*, 23(5), 838–846.