

Katarzyna Sadowy

SGH Warsaw School of Economics
ORCID 0000-0001-5791-2236

Justyna Biernacka

SGH Warsaw School of Economics
ORCID: 0000-0001-7724-6883

Institutional potential and barriers for a circular economy. The case study of Warsaw

ABSTRACT

The paper presents the study conducted in the Mokotów district in Warsaw, encompassing circular practices of eight chosen local entities, from private, public, and NGO sectors. The choice was based on the preliminary research showing that the entities were already engaged in some form of the circular transition. The definition of the circular economy applied in the study was based on the one proposed by Kircherr, Reike, and Hekkert [2017] describing a circular economy as an economic system based on business models replacing the 'end-of-life' concept with reducing, alternatively reusing, recycling, and recovering materials in production/distribution and consumption processes. The aim is to accomplish sustainable development, by creating environmental quality, economic prosperity, and social equity to the benefit of current and future generations.

The goals of the study encompassed:

- verification if there is a common understanding of what the circular economy is;
- identification and comparison of circular practices introduced by various actors;
- identification of existing incentives for circular practices and expected benefits;
- pinpointing the obstacles and barriers, both within organisations and outside.

The identified practices were also verified to support more specific goals of the circular economy, present in the literature. The findings show that current benefits of the circular transition are limited

and the actions are mostly driven by personal involvement. The lack of the support of local administration is evident, as well as the limitation of market solutions. Networking turns are to be one of the most important aspects of efficient circular practices.

Keywords: circular economy, urban economics, local economy, networking, Warsaw

JEL Classification Codes: H4, H7, H8, O2, I3, R5

Introduction

The circular economy is part of the effort to build a new economic paradigm, which would allow the growing number of human population to live in safety and prosperity, at the same time curbing the extensive use of natural resources. To achieve these goals, the institutional changes are necessary, on global, national, regional, and local levels, down to the individual organisations and their modes of operating. While it is clear that only common efforts of public and private sectors can result in the circular transition, various organisations may play different roles and meet different types of bottlenecks in the process.

The circular economy requires action at all levels: from international agreements, signed by as many countries as possible, to individual consumer behaviour. In order to be effective, the latter requires the network connecting individual actions. Hence, the local level requires a particularly good diagnosis in terms of the potential, barriers, and tools that can be applied and used.

The paper investigates the current level of involvement and achievements of eight organisations located in Warsaw, in the Mokotów district, in the Stary Mokotów (Old Mokotów) neighbourhood. They represent three sectors: public, private, and non-governmental organisations. They all have either a mission related to the circular (or sustainable) economy or circular practices are at the very core of their daily activities. The needs and hence the rationale for implementing new economic models vary according to the perspective of the main stakeholders and decision makers. At the same time formal, operational links between the actors seem insufficient and constitute one of the barriers to a wider implementation of circular economy models. That is why the knowledge and improvement of institutional mechanisms is so important. It has two important aspects:

- internal mechanisms, comprising the incentives and barriers for the circular transition within the organisation;
- external mechanisms, comprising the networks, incentives, and bottlenecks resulting from the strategies and practices at higher levels (including legislative solutions) and/or the behaviour of other stakeholders.

The definition of the circular economy applied in this study is based on the one proposed by Kircherr, Reike, and Hekkert [2017]: “A circular economy describes an economic system that is based on business models which replace the ‘end-of-life’ concept with reducing,

alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations” [Boulding, 1966].

Methodological approach and choice of the institutions

The presented results are part of the research conducted in the Mokotów district in Warsaw in summer and autumn of 2021. The assumption of the study was that the location in a specific area, physical proximity of other actors involved in circular practices can support individual practices of organisations. The goals of the study encompassed:

- verification if there is a common understanding of what the circular economy is;
- identification and comparison of circular practices introduced by various actors;
- identification of existing incentives for circular practices and expected benefits;
- pinpointing the obstacles and barriers, both within organisations and outside.

Entities meeting a total of three criteria were selected for the study:

- an entity had to have its main seat or use an important location in the studied area;
- preliminary research about the entity (strategies, missions, other published materials, marketing, etc.) led to an assumption that the entity is already engaged in some form of the circular transition.

The organisation’s activities had to be encompassed by one of the following groups:

1. education and higher education;
2. cultural institutions;
3. non-governmental organisations;
4. enterprises (business), other than trade or services (repairs, manufacturing, etc.);
5. trade and services.

The list of the identified entities encompassed 10 various organisations presented in Table 1.

Table 1. Entities identified in the studied area in the Stary Mokotów neighbourhood

Entity name	Location/website	Type/main activity	Rationale for encompassing in the study
SGH Warsaw School of Economics	Several buildings in the area between the streets: Niepodległości, Batorego, Puławska, Madalińskiego, www.sgh.waw.pl	University (education)	Social responsibility of the university expressed in its mission; dissemination of good practices through the learning process but also through the practices present at the university.
School No. 85, Benito Juarez	14 Narbutta Street, https://sp85.edupage.org	Primary school (education)	The curriculum encompassing pro-environmental education and social responsibility; relations with the local community.

cont. Table 1

Entity name	Location/website	Type/main activity	Rationale for encompassing in the study
Nowy Teatr	10/16 Madalińskiego Street, https://nowyteatr.org/pl/teatr/zielony-zespol	Theatre (cultural institution)	Social responsibility included in the mission and very strong artistic message; ambition to co-create local responsibility.
"Senior w Koronie" Foundation [Crowned Senior]	"Transit window" located at 14 Sandomierska Street (from January 2021 in the new location)	NGO supporting the elderly inhabitants of the neighbourhood	The NGO specialises in improvement of living conditions of people above 75, through gathering necessary goods and allocating them.
"Daj Herbatę" Foundation [Offer a Tea]	warehouse located at 4a Sandomierska Street, https://dajherbate.pl/	NGO supporting the homeless	The main activity of the NGO is gathering of goods (including food and clothes) for the homeless.
ADA Association	37 Puławska Street, https://adapulawska.org	NGO, an independent centre acting for the Sklotpol – Odzyskujemy Miasto Association [We Regain the City], intermediary in the exchange of unwanted goods and products	Free of charge practices based on the intermediary services between those who have spare space or products and those who need them.
Kooperatywa spożywcza (Dobrze)	88 Niepodległości Bvd, https://dobrze.waw.plSP85	NGO, a cooperative promoting the sustainable food consumption and local farming	Cooperation and promoting sustainable local production are the core activities.
Refre/Reset	36 Dąbrowskiego Street, http://www.refre.pl	Business, a store of reclaimed design and a workshop for repair and remodelling of furniture	Reclaiming, re-use, and repair are the core business activities, accompanied by the practices between art, responsible design, and business.
Mokotuff Café	92/98 Niepodległości Ave., https://www.instagram.com/mokotuff_niepodleglosci/	Business, a local cafe combining a typical restaurant with local circular ventures	Involvement in such activities as: Point of the Exchange and Adoption for Home Plants; a workshop of manufacturing soap from the used oil; a market for the local craft.
MATERIALITY	4a Sandomierska Street (until October 2021), www.materiality.pl	Business, a consulting company	Advisory services for companies seeking the circular transition are the core business of the firm.

Source: own work.

The representatives of all the entities were asked for a semi-structured interview, eight representatives agreed, two refused (the primary school and Mokotuff Cafe). The topics encompassed in the interviews were as followed:

- The definition of the circular economy and a possibility of defining it in the same (similar) way by all the entities;
- Circular practices implemented in the organisation;
- Circular practices shared with the external partners/networks, especially in the vicinity;
- The role of the digital tools in circular practices;
- Internal and external bottlenecks and barriers for the up-to date and future circular transition.

Based on the existing body of literature, the following circular practices were proposed in the interviews as possibilities:

- Reclaiming materials or goods;
- Sharing, use of the same space or goods by various users;

- Focusing on the quality and durability of the purchased goods;
- Exchanging of the goods and products between the members of the entity;
- Energy saving practices;
- Circular clauses in the contracts with suppliers or subcontractors;
- Cooperation with other entities to reach circular goals of the organisation.

The entity representatives could also propose other practices, if present in their organisation.

The interviews were conducted in October 2021 by phone or via Teams application, each interview took approx. 1 hour. The interviewees were asked to read the transcript notes of the interviews for the double-check for accuracy. The resulting findings were used for the comparative study of the organisations.

The received answers and findings were confronted with the crucial goals of the circular transition, defined by Williams [2021, pp. 103–115] as:

- Reduced resource consumption and wastage;
- Creation of the ecosystem of services;
- Reduction of greenhouse gas emissions;
- Improving resource efficiency;
- Building adaptive capacity at the social level, including local communities;
- Increasing the awareness of environmental threats;
- Health benefits;
- Social (community) benefits;
- Economic growth and job creation.

It was assessed if the practices present in the studied organisation can in fact support these elements of the circular transition and what, if any, obstacles must be overcome to improve their actions in this respect.

Circular practices at the organisational level

The first step was to verify if all the interviewed stakeholders perceive the circular economy in a similar fashion and if it can be stated that circular practices and goals constitute a common ground for them. All the interviewees agreed with the aforementioned definition of the circular economy by Kirchherr, Reike, and Hekkert [2017]. Additionally, all of them chose the same period in which they became aware of the idea of circular economy, which was from 1 to 5 years previous to the interviews. Some of them stressed, however, that they identified this period rather with more general concepts of the sustainable development or sustainability in which circular practices play only a part. Other models and concepts evoked by the interviewees encompassed sustainable consumption, re-use, and recycling.

Circular practices were described by the stakeholders as an evolving process. They rather comprise flexible actions of individuals or groups than already well-structured processes or procedures. It can be stated that more often formal aspects result from the learning-by-doing

process rather than the existing procedures stimulating actions or even enforcing them. Therefore, the word 'strategy' used in the following text describes a practical aspect more than formal documents.

The representatives of eight studied entities were asked about eight possible circular activities (one of them was an open option of 'other practices' to be detailed by the interviewees). All the answers are presented in Table 2. None of the interviewees confirmed all eight options, however, one ("Dobrze") declared the implementation of seven defined practices. In total, four entities (Nowy Teatr, "Dobrze", ADA and "Senior w Koronie") declared seven out of eight practices, one (SGH) six out of eight, two (MATERIALITY and "Daj Herbatę") declared five and one (Refre) the lowest number, three out of eight options.

All the studied entities declared that the choice of durable or high-quality products consists part of their circular strategy. However, various organisations apply this rule in different ways. For example, ADA assesses durable products and goods which might be bought as faulty or in disrepair if they can be repaired by ADA employees themselves and put efficiently in use again. Aesthetic value or high-quality materials are not considered important if the goods are durable and sturdy enough to be put to re-use. MATERIALITY is concerned more with the original high quality provided by the producer and the guarantee that such quality and also aesthetic values will be present for a long time without much effort on their part. For Refre, durability is described as the potential of the furniture which, after repairs and upgrade, can serve the clients for a long time. For SGH durability is a more serious challenge, as the products must answer to very extensive use of several groups of users, both employees and students. Aesthetic aspects were also declared as important.

Reclaiming materials and goods was declared by 7 out of 8 entities, the same number as sharing of space and goods, and clauses in contracts with suppliers or subcontractors. These practices are strongly dependent on the character of the entity. SGH is engaged in reclaiming goods, especially electronics, upgrading them and putting them to re-use. There are special procedures which allow reclaiming and re-use of the products no longer in use of the university but still functional enough for personal use. For Refre reclaiming used furniture consists of the core of the business and in fact created a basis for its business model, as one of the first businesses of this type, which later became much more numerous. Also "Senior w Koronie", acting as a non-profit venture is based on the reclaiming processes. Another path was taken by "Dobrze", who reclaim bio-waste from the products they sell to produce compost for the farmers involved.

Sharing space and goods is also tailored to the needs and potential of the organisation. Educational institutions have a long tradition of sharing, from the common spaces to libraries, exchange of books and other goods. In a close-knit community, linked by common goals and ethics such practices can be easier developed and are more under control. An important factor can also be the size of the entity: hundreds or even thousands of scholars and students as well as administration staff create a varied and large pool of possible interactions. Organisation of sharing practices in groups in which the members are less known to each other and the

possibility of control if they respect the rules is more limited and must be necessarily more difficult. Besides long traditions of book sharing and space sharing, SGH has also procedures which allow sharing of electronic devices (laptops, PCs, printers) and bikes used for campus commuting. Nowy Teatr is also engaged in sharing practices of space and equipment used during the shows. Partnership in such practices encompasses local communities, NGOs, and other cultural institutions. Smaller organisations focus on sharing practices related to the work organisation, e.g., MATERIALITY decreases the need for workspace by managing the work schedule, even as all the employees have individual workstations.

Contracting specific services or goods which conform to circular economy rules also depend on the character of the main activity of the entity. Nowy Teatr and ADA decided to offer only vegetarian and vegan food on their premises. “Dobrze” requires information about the character of production processes from their suppliers, while MATERIALITY does the same in terms of the materials used in the ordered products. Foundations “Senior w Koronie” and “Daj Herbatę” struggled with the problem of the low-quality goods offered by the public, products which, in fact, could not be re-used. Therefore, they created a stricter evaluation process to avoid gathering waste instead of the usable products.

Energy saving practices depend mostly on the use of specific light sources, heating management, purchasing energy efficient electronics, and in some cases, use of hybrid cars.

Table 2. Circular practices present in the studied entities

	SGH	Nowy Teatr	“Senior w Koronie”	“Daj Herbatę”	ADA	“Dobrze”	Refre/Reset	MATERIALITY
Reclaiming materials or goods	x	x	x	x	x	x	x	
Sharing, use of the same space or goods by various users	x	x	x	x	x	x		x
Focusing on the quality and durability of the purchased goods	x	x	x	x	x	x	x	x
Exchanging goods and products between the members of the entity	x		x		x	x		
Energy saving solutions	x	x			x	x		x
Circular clauses in the contracts with suppliers or subcontractors		x	x	x	x	x	x	x
Cooperation with other entities to reach circular goals of the organisation	x	x	x		x			
Other practices	x	x	x		x			

Source: own work.

The interviewees were also asked about the role of digital tools in implementation of these practices. The identified aspects were the following:

- Information sources of circular products or services (SGH and MATERIALITY);
- Organisation or working/teaching schedules and sharing practices (SGH and MATERIALITY);

- Electronic documents and electronic methods of communication reduces the paper consumption (SGH and Nowy Teatr);
- Communication with clients and marketing of circular practices (Refre, “Dobrze”);
- Collecting of the used goods from the public and clients (“Daj Herbatę”, “Senior w Koronie”, ADA, Refre/Reset).

Several practices are made possible by the use of digital tools (platforms, applications, mailing, etc.), especially sharing and exchanging. As Maginn, Burton, and Legacy point out, in the sharing economy there are companies such as Airbnb or Uber which cover many countries and are mainly motivated by profit, as well as local initiatives of residents whose main premise is to improve the quality of life and meet social needs, even for altruistic motivation [Gurran et al., 2020, pp. 2–6]. The use of digital tools is of a strong ‘creative destruction’ character as described by Schumpeter [1995, pp. 100–105], as it can radically change the areas of action, communication channels, scope, and information (a) symmetry, user groups, and providers of goods and services. Some of these practices use the Internet to strengthen or develop activities that were already present earlier in the off-line world, e.g., local stores and restaurants in Warsaw during the COVID-19 pandemic provided groceries and meals to their customers, often using already existing websites. They extended an existing service and the change was quantitative rather than qualitative. Similarly, the studied entities strengthened their online presence or further developed the pre-pandemic tools and in turn, supported their circular economy, e.g., by online learning or decreased mobility. However, implementation of circular practices is not an easy task, so motivation, possible barriers, and benefits constitute an important aspect of the study.

Motivation and the expected benefits

Circular practices are implemented by organisations operating at various levels and at various scales, guided by various goals. The introduction of new practices is met with different levels of acceptance from the public administration, which may limit, support, or remain neutral to the emerging markets. Legal ramifications remain the strongest tool for circular transition [European Commission, 2019]. In the last few years the European Commission has established several legislative initiatives related to the circular economy. Launched in 2015, the first Circular Economy Action Plan introduced six new directives focusing on plastics, food waste, critical raw materials, construction waste, biomass, and bioproducts. In 2020, following the announcement of EU sustainable growth strategy, the European Green Deal, the New Circular Economy Action Plan was introduced, with the objectives focusing on high resource consuming sectors, empowering consumers and public buyers, making sustainable products the EU norms, ensuring less waste and supporting labour market as well as regional and urban economies. Although the deadline for implementation of the legislation resulting from the first circular economy action plan expiring in 2020, the circular economy regulations

have not yet been implemented into Polish legislation. Therefore, the presented practices result mainly from the personal or institutional involvement based on ethical foundations, rather than the need to conform to the legal obligations. The strongest relation between the legal framework and operational (business) model is present in the case of MATERIALITY, advising the companies which must carry out the circular transition due to the forthcoming legislation. However, the choice of such a business niche was also dictated to the founders by their personal involvement in environmental issues.

The respondents emphasised that the implementation of circular practices is not carried out for short-term benefits, but results from the sense of responsibility for resources, social responsibility, and the influence of other stakeholders. The following benefits were indicated:

- the possibility of acting in accordance with one's own values and disseminating them (in the organisation, in the community, in society in general): all the organisations;
- financial savings (related to energy efficiency, secondly to decreased water consumption): all the organisations;
- reduced workload and saving time in the case of certain solutions (filtering tap water instead of ordering dispensers; electronic document workflow): Nowy Teatr, SGH;
- as a result of changing attitudes and analysis of the organisation, while implementing green practices, other activities in the organisation may also change and employees' well-being is improved (Nowy Teatr);
- image benefits (Nowy Teatr, Refre, MATERIALITY);
- employees' involvement, improvement of the relationships within the organisation (SGH, Nowy Teatr, MATERIALITY).

Some practices also proved useful during the pandemic. This mainly applies to the electronic method of communication and the circulation of documents during the period of lockdowns.

Barriers and bottlenecks

In the studied entities various types of barriers to the implementation of already used and planned circular practices were identified. Some of them were internal, resulting from the way the organisation functioned on a daily basis, others were external, related to the environment in which the entity operated. The following barriers were identified:

Internal (depending on the character of the organisation):

- general resistance to change, the preference to keep the existing habits;
- lower than expected effects of training or incentives;
- reluctance or a limited possibility of accepting additional workload related to circular practices;
- additional needs resulting from circular practices, e.g., transport (need for a car) and storage (need for a warehouse);

- tiredness of changes enforced by the COVID-19 pandemic and reluctance or inability to implement further changes, this time related to the circular transition;
- procedural restrictions.
External bottlenecks:
 - market-driven: the lack of offer or insufficient supply; barriers are related to the lack of specific products or services needed, e.g., repairs or second-hand furniture adapted to the needs of a small office; insufficient supply (e.g., difficulties with purchasing larger quantities of identical furniture for classrooms; decreased supply of used laptops); high prices of organic food;
 - market-driven: growth of the Do It Yourself (DIY) market and competitiveness in the field of refurbishment of used goods limit the effectiveness of the business models based on repairs (Refre);
 - financial: the choice of circular economy products that are more durable or in need of renovation has often been indicated as more expensive than market alternatives for new products;
 - financial: the need to raise additional funds for the development of circular operating models (including the additional workload);
 - formal and administrative (concerning public entities): the need to change rules and procedures, e.g., in order to share the equipment necessary for exhibition purposes, theatrical performances, etc. Limitations in sharing space due to the lack of formal possibilities or the need to incur a large amount of work to prepare the necessary documentation;
 - formal and administrative: the lack of local infrastructure and incentives supporting circular activities such as reuse, repair, or recycling of goods. The most common need, in terms of infrastructure, are locally situated physical space and a (possibly virtual) local network of entrepreneurs, activists, academia, and common neighbours, connecting for the exchange of ideas and goods;
 - the lack of cooperation and incentives on the part of the municipality and district authorities, difficulties caused by the Management Board of Property Management in Mokotów (in the case of commercial premises for rent) and unclear rental procedures;
 - cyber-safety: the need to ensure data security (computers with hard disks cannot be resold);
 - irresponsible public behaviours: problems with an excess amount of goods unfit for use and difficulties with their further processing or disposal.

For some entities, the lack of a cooperation network, formal or informal, supporting and complementing the activities of a given organisation might constitute a barrier. Nevertheless, some entities manage to develop such a network. An interesting example is the Nowy Teatr case, as the entity participates in city-wide activities as part of the *Culture for the climate* campaign aimed at building new standards in the network of cultural institutions [Kovacic, Strand, Völker, 2021]. The activity of the “Senior w Koronie” Foundation is also based on cooperation between organisations supporting the elderly and exchanging services for the benefit of people under their care. One organisation specialises in sourcing food and cooking

meals, another in filling prescriptions, and another in medical (physical activity) support. ADA is another example, as free meals for people in need (Dinners at ADA) are organised thanks to the cooperation with food producers and food wholesalers, as well as schools that donate spare lunches. “Dobrze” appreciates the cooperation with local organisations, such as the Stary Mokotów Partnership, or active residents from the Ferajna Group on Facebook, who supported the cooperative in their (ultimately unsuccessful) efforts to open the premises in Narbutta Street in Mokotów. The cooperative offers local residents an opportunity to participate in workshops on healthy food and organic farming.

There is a certain adjustment of the market to the expectations of customers who use circular practices. However, more opportunities result from the ‘excess economy’ and the abundance of goods and products owned by individuals or enterprises who need to get rid of them, especially used, post-leasing or older goods. There is also a demand from some enterprises, including clients of MATERIALITY, for consultancy regarding the circular transition. It results, in turn, from legal requirements, and not primarily from the market demand or the sole responsibility of entrepreneurs, although these two factors should also be taken into account. The interviewees often talked about their activities in a ‘pioneering’ spirit, as people implementing new models despite many adversities and only with limited support from those around them, inside and outside of the organisation. They all have a sense of following their principles, and putting into practice what they believe is right. It seems that without this motivation, it would not be possible to carry out the presented practices, taking into account the existing barriers and quite limited benefits.

Summary

The described practices, expected benefits and existing barriers were confronted with features of the circular economy listed before. It can be concluded that many of them were observed in the implemented practices:

- decreased consumption of resources and limiting the production of waste is one of the main motives for the implemented activities;
- shaping the new ecosystem of services is present to some extent, especially in the *Culture for the climate* action, in which Nowy Teatr participates. Additionally, the studied NGOs need a certain level of cooperation, although calling it an ecosystem might be a bit precocious, however, numerous responses indicated the need to build such an ecosystem, and its absence is a barrier to individual circular activities;
- the reduction of greenhouse gas emissions is related to various activities of the surveyed entities and is implemented directly (mainly, but not only) by limiting energy consumption for heating and/or lighting or indirectly, by decreased consumption of goods; focus on local activities and a decrease in commuting or commuting on foot and by bike also serves this goal;

- improving resource efficiency is accomplished in many ways through exchange and sharing; in this case, the flow of information contains a crucial factor;
- development of adaptive abilities in local communities is present in the effort of implementing new procedures and habits within the entities; however, there are also barriers in this respect, indicated many times by the respondents, where limited abilities and reluctance to make efforts related to circular practices still have to be overcome;
- the awareness of these threats is the basis of the analysed actions and behaviours; the value of expanding this awareness concerns not the participants of these practices in the first place, but stakeholders from their environment who can gain it through specially targeted activities (educational, cultural, marketing);
- health benefits occur as an additional effect of some practices, e.g., related to the commuting models or general well-being of the employees, including satisfaction with their working environment; yet, they are of rather limited nature, due to the lack of broader effects on the environment;
- social benefits are significantly related to the studied practices, building responsibility and cooperation; some activities are also directly focused on people in need and the circular economy contributes to the use of the existing surplus in some households to fill the shortage in others;
- economic growth and job creation; due to the limited scope of activities no direct impact on the creation of jobs was observed, in fact, circular practices seem rather to increase the workload for the employees or volunteers, as there is a lack of funds or procedures to develop the practices into separate jobs; re-use of goods and their durability might even decrease the need for production; the need to relocate the funds and jobs from the excessive production and waste treatment towards circular practices which also require workforce is one of the main findings of this study.

Circular practices are present at the local level and there is an evident need of their influence on other actors which can be involved. The lack of support from the local administration is evident, and this is also a potential which could be put to use, if there is a will of such involvement from the public sector. Limitations of the market solutions and a low level of impact on the mainstream practices was also identified. It is certain that the turning point of circular transition in the studied area has not been reached. If it is possible from the efforts of those and similar entities alone, or if there must be wider involvement either from the market (supply and demand) or from the public sector (further legislation, organisational support) remains the field of further, important studies.

Acknowledgements:

Support for this study was provided within the framework of the statutory research funded by the Ministry of Education and Science *Gospodarka cyrkularna na poziomie lokalnym*

No. KZiF/S21/53 by the decision of the Dean of Collegium of Management and Finance, SGH Warsaw School of Economics. The authors would also like to thank all the interviewees of the organisation encompassed in the study.

References:

1. Boulding, K. (1966). *The Economics of The Coming Spaceship Earth.*, (pp. 3–14). Baltimore: John Hopkins University Press Retrieved from: <https://www.semanticscholar.org/paper/The-Economics-of-the-Coming-Spaceship-Earth-Boulding/> (accessed: 20.04.2020).
2. European Commission (2019). *European Green Deal*. COM, (2019) 640 final. Retrieved from: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en (accessed: 15.11.2021).
3. Gurran et al. (2020). *Disruptive Urbanism. Implications of the “Sharing Economy” for Cities, Regions, and Urban Policy*. London: Routledge.
4. Kirchherr, J., Reike, D., Hekkert, M. (2017). Conceptualizing the Circular Economy: An analysis of 114 definitions. *Resources Conservation and Recycling*, 127.
5. Kovacic, Z. Strand, R., Völker, T. (2021). *The Circular Economy in Europe. Critical Perspectives on Policies and Imaginaries*. London: Routledge.
6. Schumpeter J.A. (1995). *Kapitalizm, socjalizm, demokracja*. Warszawa: PWN.
7. Stahel, W. (2019). *The Circular Economy. A User’s Guide*. London: Routledge.
8. Williams, J. (2021). *Circular Cities: A Revolution in Urban Sustainability*. London: Routledge.

Online resources:

1. Ellen MacArthur Foundation. <https://ellenmacarthurfoundation.org> (accessed: 17.11.2021).
2. European Circular Economy Stakeholder Platform; <https://circulareconomy.europa.eu/platform/>(accessed: 17.11.2021).
3. <https://adapulawska.org> (accessed: 10.07.2021 and 17.11.2021).
4. <https://dajherbate.pl/> (accessed: 10.07.2021 and 17.11.2021).
5. <https://dobrze.waw.plSP85> (accessed: 10.07.2021 and 17.11.2021).
6. <https://fundacjaseniorwkoronie.org> (accessed: 17.11.2021).
7. <https://nowyteatr.org/pl/teatr/zielony-zespol> (accessed: 10.07.2021 and 17.11.2021).
8. <https://sp85.edupage.org> (accessed: 10.07.2021 and 17.11.2021).
9. https://www.instagram.com/mokotuff_niepodleglosci/ (accessed: 10.07.2021).
10. <https://www.kulturadlaklimatu.pl/> (accessed: 8.03.2022).
11. <http://www.refre.pl> (accessed: 10.07.2021 and 17.11.2021).
12. www.materiality.pl (accessed: 17.11.2021).
13. www.sgh.waw.pl (accessed: 10.07.2021 and 17.11.2021).