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Emergent Research Forum (ERF)

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Abstract

Sustainable Development Goals (SDGs), set by United Nations General Assembly in 2015 and to be achieved by 2030, consist of 17 inter-dependent global goals that call for global partnership for a more sustainable planet. Achieving SDGs successfully and on time requires efforts from governments, civil societies, private sectors, individuals, and we posit, new types of digital organizations such as platform cooperatives. Enabled by digital platform technology, they are rapidly emerging and often established to tackle certain societal problems. Platform cooperatives are co-owned and democratically governed by their members. Besides creating economic value, they also focus on environmental and social value. Therefore, platform cooperatives appear to be a natural match for SDGs. This research aims to investigate how platform cooperatives contribute to SDGs. This aim is achieved by analysis and mapping of over 100 platform coops to SDGs, focusing on their products and services as well as different value creation mechanisms.

Keywords

Sustainable Development Goals, Platform Cooperatives, Cooperatives, Digital Platforms.

Introduction

Cooperatives (or coops) are autonomous organizations (companies) co-owned by their members who are united voluntarily to meet their common economic, social, and cultural needs and aspirations through co-ownership and democratic governance (ICA, 2020). Cooperatives could be for profit or non-for-profit organizations, registered as legal entities. With a wide proliferation of digital platforms, new types of cooperatives are rapidly emerging, known as platform cooperatives (Scholz, 2016A).

Prior research offers evidence that traditional cooperative organizations do contribute to SDGs (Birchall, 2004; Wanyama, 2016). By having a cooperative structure, we posit that platform cooperatives also contribute to SDGs, in yet to-be-understood ways. Considering that platform cooperatives and platform coopertivism movement are rapidly rising (Scholz, 2016A), it is important to gain an understanding on how SDGs and platform cooperatives are aligned.

This paper aims to contribute to the emerging body of knowledge on platform cooperatives by investigating their direct or indirect contributions to the 17 SDGs. Thus, this research focuses on the following research question: "*How do platform cooperatives contribute to the SDGs*?" To answer this question, we analyzed more than 100 platform cooperatives, focusing on their main products/services and stakeholders involved, and mapped them against 17 SDGs. Given that platform cooperatives are yet to be investigated by information systems (IS) researchers, we hope to draw attention of the IS community to these types of digital organizations and create interest for further interest in this area.

Literature Review

Platform Cooperatives

Platform cooperatives are new types of cooperatives which are enabled by digital platforms. Compared to other types of platform-enabled businesses, platform cooperatives are member-owned, cooperative

organizations with members having full democratic control over the platform and value created (Scholz, 2016B). Thus, platform cooperatives aim to co-create and share value created with their members on a more equitable basis (Scholz and Schneider, 2017). They initially emerged in response to the so-called platform capitalism (represented by companies such as Uber and AirBnB). In particular, they were concerned by the negative societal effects of so-called sharing economy such as exploitation of digital labor, unfair competition, increased housing prices and a proclaimed, but doubted environmental sustainability (Graham and Wood, 2016; Scholz, 2016A; Srnicek, 2017). Their primary (dual) goal is economic success combined with the social change, achieved through ethical business practice (Sandova, 2019).

In spite of their rapid growth, as evidenced by Platform Cooperativism Consortium (2020), they are poorly understood, as the related research is still scarce. Case studies are emerging around specific platform cooperatives (Pitts, 2019; Stocker and Takara, 2019; Grayer, 2020). Yet, platform cooperatives are often just briefly mentioned in research on sharing economy (Balaram, Warden and Wallace-Stephens, 2017; Ganapati and Reddick, 2018). Other researchers recognized the potential negative social impact of the sharing economy or investor-owned profit-driven platform companies, asking for more ethical alternatives towards fairer and more sustainable sharing economy (Graham and Shaw, 2017; Schor and Attwood-Charles, 2017). While information systems (IS) research does focus on gig economy and the so-called platform capitalism platforms, to the best of our knowledge there are no research studies on platform cooperatives in IS. This is an important research gap we aim to tackle with our research, by focusing on the ways platform cooperatives contribute to SDGs.

Sustainable Development Goals

SDGs evolved from The Millennium Development Goals (MDGs), which contained easy to understand set of eight goals that have measurable objectives and deadlines (Sachs, 2012). They aimed to promote and raise global awareness, political accountability and public pressures, expressing public concern regarding poverty, hunger, disease, unmet schooling, gender inequality and environmental issues. Expanding on MDGs, SDGs were set by the UN General Assembly in 2015 with a deadline at 2030. SDGs consist of 17 specific goals, with 169 targets to meet and 232 indicators to track progress (Sustainable Development, 2020). For instance, SDG 1 "No Poverty" can be summarized as "End poverty in all its forms everywhere", which includes 7 targets such as eradicate extreme poverty, reduce poverty by at least 50% and grant equal rights to ownership, basic services, technology and economic resources (The Global Goals, 2020). Another example is SDG 11 "Sustainable Cities and Communities", which states to "Make cities and human settlements inclusive, safe, resilient and sustainable" (The Global Goals, 2020). Successfully achieving all SDGs on time requires efforts from each government, civil societies, private sectors as well as individuals. Given the platform cooperatives' declared commitment to making positive social change (Platform Cooperativism Consortium, 2020), it is important to understand what this change entails. Hence our motivation to investigate how existing platform cooperatives contribute to SDGs.

Cooperatives and SDGs

Prior research on more traditional cooperatives shows SDGs have been considered in relation to their business models and the guiding cooperative principles. For example, Birchall (2006) highlighted the significant contributions of different types of cooperative business models with empirical evidence towards achieving the MDGs, such as poverty reduction, commitment towards education, providing primary healthcare and affordable housing. Wanyama (2016) considered cooperatives to be highly relevant and well positioned to contribute to the SDGs. Most importantly, cooperatives are guided by the International Cooperative Alliance (ICA)' seven cooperatives principles. As such cooperatives are naturally aligned with SDGs, since they value open membership without gender or racial discrimination, education or training for members and have genuine concern for the sustainable development of their communities (ICA, 2020).

Apart from their cooperative structure, digital platform technology employed by platform cooperatives, opens more possibilities for further contribution to SDGs. Kewell, Adams and Parry (2017) suggested that transformative blockchain technology, currently being applied in the context of profit-driven business, governments and consumers could make SGDs a practical reality. Community Cryptocurrency such as FairCoin used by platform cooperative FairCoop could be used as a tool to enable sustainable prosperity for its economy (Kasliwal, 2019). In another example, platform cooperative Moeda, a cooperative crypto-credit banking system powered by blockchain, claims to support seed projects that make an impact and link to

fulfilling UN SDGs (Moeda, 2020). Tortora et al. (2019) used practical examples to argue that Big Data combining technological innovation could help co-design a sustainable tourism experience and contributing to sustainable tourism. Peer to peer technology enabled sharing could promote sustainable development in consumption and accommodation, if habits of individual consumption, organizational governance and political regulations are aligned (Gossen, Pentzien and Peuckert, 2019). While these important case studies are emerging, we note the absence of a more systematic and overarching research into platform cooperatives as a new types of for-profit and NFP digital organizations, governed by the ICA principles and committed to making a positive social change.

Research Method

Data on platform cooperatives were collected from a global directory of platform cooperatives, initially established by the Platform Cooperativism Consortium and currently hosted on the Internet of Ownership web site, which also documents platform cooperative movement (Internet of Ownership, 2020). Initially 297 records were retrieved from its database in January 2020. Given that platform coops are constantly emerging, the list is expected to grow. However, we retrieved the records of *all* currently registered platform cooperatives. The directory also includes a brief description of each platform cooperative, the main activities of each platform cooperative engage in, their website and etc. Each record was examined in order to eliminate the organizations providing support to platforms or platform eco-systems. This process resulted in 110 platform cooperative records, which were coded as PC001 ~ PC110 in alphabetical order. For each of them we also collected additional information from their respective web sites about their products and services, nature of membership, industry, geographical location as well as the main stakeholders. Additionally, we looked at their value creation mechanisms i.e. what kind of value is created, how it is shared and co-created.

Data collected in this way were coded using open coding in an excel spreadsheet by two researchers, first independently and then through a combined effort in order to reconcile and clarify differences in understanding. At the same time, each 17 SDG was reviewed using provided factsheets and infographics (Sustainable Development, 2020) to gain a better understanding of its meaning. In order to map the platform cooperatives to SDGs, we then analyzed the resulting open codes in order to create thematic codes that corresponded to SDGs. In doing so we followed an iterative process going between the emerging thematic codes and SDGs, constantly checking and reconciling our interpretation of data and SGDs. For example, as for Goal 1 "End Poverty", which could be caused by unemployment and social exclusion, we agreed that platform cooperatives, as income-generating economic entities, could generally contribute to Goal 1 by providing decent employment opportunities for its worker type of members.

To map the platform cooperatives against SGDs, we recorded a "Y" ("Yes") for the goals that are directly relevant and the platform cooperative has a direct influence on or could contribute to. For instance, as for PC001 Aarhus Makers, which is "an Online Market Place for the Makers, Designers and Artists of Godsbanen" (Internet of Ownership, 2020), relevant stakeholders here are inferred from the variable *Class* as workers and producers. By connecting and gathering those makers, designers and artists and promoting and exhibiting their works, the platform helps to generate income for them and in a sense count as a "decent" and a more stabilized job comparing to working on their own. This lead to a "Y" under Goal 1 "No Poverty". Goal 8 "Decent Work and Economic Growth" and Goal 10 "Reduced Inequalities". The "marketplace" function of the platform cooperative served as an innovative infrastructure to match potential interested artwork buyers with corresponding artists, granting both parties increased accesses. These would lead to a "Y" under Goal 9 "Industries, Innovation and Infrastructure", since "sustained growth must include industrialization that first of all, makes opportunities accessible to all people, and two, is supported by innovation and resilient infrastructure." (Sustainable Development, 2020).

While for those goals that are indirectly relevant or there is potential that they could contribute, we recorded "P" (standing for "Potential"). For instance, as for PC036 FairCab, that wants "to build a driver-owned minicab firm and ride-hailing app that will provide an ethical, cooperative alternative to Uber", they could contribute to Goal 5 "Gender Equality" by following co-op principle 1, i.e. giving equal employment opportunities to male and female driver members. We observed that it may be easier for platform cooperatives to partner and co-operate towards achieving the SDGs, since they are more inclined to cooperate with each other and has concern over their community, according to co-op principle 6 and

principle 7. For those goals that are largely irrelevant or currently there is not enough evidence, we left the record blank, even though an economic entity could contribute to all 17 goal to some extent.

The process is repeated for each of 17 goals and after that, the same process is further repeated and iterated for the remaining platform cooperatives. During the mapping process, PC010, PC019, PC053, PC060, PC064, PC087 and PC100 were removed from the mapping table, either because we could not find available information regarding its existence or they closed at the time of mapping.

Initial Findings

An excerpt of the completed table is provided below (**Table 1**). Our findings indicate that all platform cooperatives contribute or potentially contribute to sustainable development to some extent. Almost all platform cooperatives can or could potentially contribute to Goal 1 "No Poverty", Goal 5 "Gender Equality", Goal 8 "Decent Work and Economic Growth", Goal 9 "Industries, Innovation and Infrastructure", Goal 10 "Reduced Inequalities" and finally Goal 17 "Partnership for the Goals". This is in line with our expectation, since platform cooperatives are income-generating economic entities that are enabled by innovative digital platforms and follow the ICA 7 Co-op Principles.

PC	Platform Cooperative Name	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	Total Y	Total P	Total
PC001	Aarhus Makers	Y		P	P	P			Y	Y	Y	P						P	4	5	9
PC002	Affinity.works	Y	P	P	P	P	P	P	Y	Y	Y	Y	P	P	P	P	P	P	5	12	17
PC003	Ag Pro Exchange	Y	Y	P	P	P			Y	Y	Y	P	Y	P		P		P	6	7	13
PC004	Agrilyst	Y	Y	P	P	P			Y	Y	Y	P	Y	P		P		P	6	7	13
PC005	Ampled	Y		P		P			Y	Y	Y							P	4	3	7
(PC006 ~ PC105 are omitted here due to page limit)																					
PC106	WEBTV.coop	Y			P	P			Y	Y	Y		P					P	4	4	8
PC107	WECHANGE	Y				P			Y	Y	Y			P			P	P	4	4	8
PC108	WECO	Y			P	P			Y	Y	Y							P	4	3	7
PC109	WeHelpen	Y		Y	P	P			Y	Y	Y	Y	P				Y	P	7	4	11
PC110	Wordjammers	Y				P			Y	Y	Y						P	P	4	3	7
	Total Y	103	7	8	1	0	0	4	103	103	103	51	12	2	4	4	4	1			
	Total P	0	11	27	24	103	6	6	0	0	0	19	40	33	6	13	18	102			
	Total	103	18	35	25	103	6	10	103	103	103	70	52	35	10	17	22	103			

Table 1. The Mapped Contribution of Each Platform cooperative to 17 SDGs (Excerpt)

After the initial mapping process, we looked at the possible archetypes of platform cooperatives with similar contributions towards SDGs. For example, for those platform cooperatives that provide ethical ride-sharing services, they tend to contribute to Goal 11 "Sustainable Cities and Communities" and potentially contribute towards Goal 12 "Responsible Consumption and Production" and Goal 13 "Climate Action". An interesting finding is that this particular archetype was established in response to the so-called platform capitalism, with an objective to create ethical and equitable work environments for its worker/members. The second observed archetype includes platform cooperatives that collect agricultural data from farmers and generate insight for precision or responsible agriculture, they tend to contribute to Goal 2 "Zero Hunger" and Goal 12, and potentially contribute towards Goal 3 "Good Health and Well-being", Goal 13 and Goal 15 "Life on Land". An interesting finding in relation to this archetype is yet-to-be understood and resolved issue of data ownership. We see this as an exciting opportunity for further IS research.

Conclusions, Limitations and Future Work

This research is an initial theoretical attempt to understand how platform cooperatives contribute to SDGs. Our findings indicate that these rapidly emerging digital organizations are well positioned to continue to contribute to SDGs in different ways and through different mechanisms. As such they provide exciting opportunities for IS researchers, beyond the current research on sharing economy and the shareholder-owned digital platforms that are now collectively referred to as 'platform capitalism' (Scholz, 2016A).

Our mapping and analysis used reputable data maintained by the Internet of Ownership Platform Cooperative Directory. Even though our initial understanding is limited and based on secondary data, this pilot project confirms the need and motivation for more in-depth studies. Future qualitative research including expert interviews and Delphi studies of relevant platform cooperative groups is planned to gain a much better understanding of different value co-creation and sharing mechanisms. More in-depth data will also enable us to further categorize platform cooperatives into archetypes and observe their characteristics.

Ultimately, this research is expected to lead to design and implementation of a SDG Index dashboard for platform cooperatives that aims to help platform c0-ops to understand how they would contribute to SDGs and even track their performance under SDGs. We conclude this paper with a call to other IS researchers to join our future research on platform cooperatives. Their commitment to making social impact makes them worthy of our collective attention.

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