

Towards Sharing Economy in Rural Areas

Lars-Olof Johansson
Halmstad University,
School of Information
Technology, Sweden
lars-olof.johansson@hh.se

Livia Norström
Gothenburg University,
Department of Applied IT,
Sweden
livia.norstrom@ait.gu.se

Ulrika Lundh Snis
University West, School of
Business, Economics &
IT, Sweden
ulrika.snis@hv.se

Anna Sigridur Islind
Reykjavik University,
School of Computer
Science, Iceland
islind@ru.is

1. Introduction

As autonomous cars enter our cities the potential of sharing cars with others emerges. With autonomous cars comes the potential of preserving the flexibility and comfortability of travelling in a private car, while having the possibility to work, socialize or rest during the transport, a quality which is considered by most citizens as the best aspect of public transport. However, due to advanced technology that comes with the autonomous cars, the reality that we are facing is that they will most likely be too expensive for the common households to own. Consequently, car manufacturers are trying to create business models and infrastructures that allow for several households to share a car and to make car sharing, and ride sharing more tempting to the crowd. These efforts are not only tempting from a monetary business perspective, but also from a sustainability perspective as sharing cars enables more efficient utilization of cars. For instance, an autonomous car can run without resting, it does not need to be parked as often as a manually driven car and it takes up less space in the city, enabling more space for e.g. social activities and green areas. Also, one person in each car in the morning queues, is not in the spirit of sustainability, and there is a need to look over that mobility pattern. As such, shared autonomous cars constitute an important initiative in a new sharing economy paradigm based on collaborative consumption [1] and the striving towards smart mobility, in smart cities.

As we see it, there is a huge leap from that vision, to reality. There is a lack of knowledge regarding early initiatives on attitudes and acceptance towards the sharing economy in general and towards ride sharing and car sharing in particular [2]. There is also a lack of research on car/ride sharing outside metropolitan areas. In fact, most of the research that reports on successful car and ride sharing initiatives comes from large cities, while there is a gap in the literature regarding smaller cities (around 50 000 inhabitants), a gap that needs to be explored. Accordingly, in this mini-track, we wanted to explore how sharing economy in rural areas,

such as small cities and towns could function, and how to engage the city residents in such efforts [3].

Based on that, this mini-track, which was held for the first time on HICSS 2021 was interested in papers that took an interest in sharing economy in general and digital government and sharing services for rural parts of the world in particular. The interest extended to papers that shed light on design processes, or application areas of sharing services and how sharing services align or do not align with smart city thinking and digital government strategies. Additionally, we were interested in research that explored different approaches to sharing, as well as in papers that were based on cases where sharing services have been tested, and used, independent of the type of sharing service.

2. Towards Sharing in Rural Areas

The topic of sharing with the field of information systems (IS) today is a broad interest. It does therefore not merely take on big data and grand projects that are centered around autonomous driving where car sharing is key but also extends to small cases where sharing services have been designed and used, in areas where they did not exist before. The interest also both incorporates smart city thinking and mobile services, apps, platforms or other means of sharing everyday things. As the interest grows within IS research, we encourage that research can take the point of departure from the designers' point of view, from the sharers point of view, or from the borrowers point of view, or be a mixture at the boundaries of them all. Those perspectives are the future of sharing services of the future.

Due to that, we see the future trends in IS research expanding to applications of the sharing economy in the rural parts of the world, but also see the need for papers that reflect on the difference between the urban and the rural. Research on sharing services in rural areas and future trends within that area needs to focus on everything from small apps that enable sharing in some way, to large systems and infrastructures that are embedded in smart city thinking and how these themes

relate to digital government. We see the future trends of research within the sharing economy as papers that can either be based on qualitative or quantitative methods (or even mixed method), and on a broad spectrum from empirically grounded to theoretically driven research that inspire a dialog with the growing literature on the sharing economy and digital government in general and sharing services in rural areas in particular. There is a dire need to expand the interest, as the literature on the sharing economy in large cities is growing much faster than the literature on the sharing economy in rural areas, which is still underdeveloped. The research derived from big cities is not possible to transfer to rural areas or smaller cities because the conditions look different, both in regard to infrastructure and people's needs and contextual situation. Hence, the small-scale and rural aspect is hard to scale up and make business of and the challenges related must be addressed in more detail.

3. Autonomous Vehicles & Shared Mobility

As we see it, the need for sharing services in rural areas can sometimes be much greater than in big cities due to the fact that most big cities already have a variety of services available. We would also like to argue that the challenges of IS efforts in rural areas are of different nature and smart cities thinking in rural areas likewise. In the mini-track on HICSS 2021 we accepted one paper, and as said earlier, we were hosting the track for the very first time. The paper that we accepted argues that the sharing economy and shared mobility has become a widespread trend in urban areas worldwide. However, due to lower population density, car sharing, and other shared mobility applications are generally not accessible in rural areas. The paper utilizes a Stochastic Multicriteria Acceptability Analysis (SMAA) method to assess the criteria importance in

the siting problem of rural electric vehicle sharing systems. Furthermore they use Nordic rural areas as a case study in their analysis, and they compare their feasibility to act as a pilot location for electric vehicles sharing. They show that seasonal residence, rural tourism and counterurbanization are common themes in Nordic rural areas and act as enablers for rural vehicle sharing. Based on their novel application of SMAA to this context, they found that Swedish rural areas would be most suitable for a rural electric vehicle sharing pilot. High tourism and low vehicle ownership were identified to be the most important criteria that are revealed in the paper [4].

Despite only accepting one paper to this mini-track this year, we are excited for the future of the sharing economy in rural areas, as we see great research potential in the coming years.

References

- [1] Puschmann, T. and R. Alt, Sharing economy. *Business & Information Systems Engineering*, 2016. 58(1): p. 93-99.
- [2] DriveSweden, Round Tables - Cities & Users. 2018.
- [3] Norström, Livia, Charlotte Arghavan Shahlai, Lars-Olof Johansson, Anna Sigridur Islind, and Ulrika Lundh Snis. *New Logics of Ethics in the Age of Digital Platforms: Design Fictions of Autonomous Cars*. In *Proceedings of the 17th European Conference on Computer-Supported Cooperative Work-Demos and Posters*. European Society for Socially Embedded Technologies (EUSSET), 2019.
- [4] Einolander, Johannes, Kiviaho, Annamari. *Stochastic Multicriteria Acceptability Analysis of EV Sharing in Nordic Rural Areas Affected by Seasonal Residence and Counterurbanization*. *Proceedings of the 54th Hawaii International Conference on System Sciences*, 2021.