1. Projects

28 hours per week: The mobility and energy implications of working time reduction (WTR) in Germany

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In 2018 German metal industry workers won the right to reduce their working week from 35 to 28 hours. As with similar schemes elsewhere, sustainability commentators have highlighted the potential of working time reduction not just to achieve a better work-life balance but also to reduce energy consumption by reducing overall material consumption. This research project examines the desirability and sustainability of this scheme, paying particular attention to the conditions under which reduced working hours can produce social and environmental benefits. What are the participants' aspirations? What are the impacts on their mobility and lifestyle? Is the reduction of direct and indirect energy consumption as significant as expected?

Research participants

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The principal aim of this project was to explore the attractiveness and sustainability of working time reductions (WTRs) made possible by the German union IG Metall, with a special focus on the role of mobility. Whether shorter working weeks will make a difference depends on the popularity of WTR schemes as well as the impacts of participation, so we studied both. The contribution is timely because while journalists and academics often highlight the potential social, environmental and economic benefits of WTRs in debates on the purpose and desirability of economic growth, they seldom explain how the specific conditions of WTR schemes facilitate such benefits, despite the importance of what exactly is reduced (e.g. working time, workload), who can participate (e.g. any worker, only those with dependent relatives), how wages change, etc.

In light of this, a potentially interesting type of WTR is the voluntary reduction of working hours that goes hand-in-hand with a proportional change in earnings, which promises simultaneous benefits for workers' well-being and environmental sustainability without necessarily harming the economy. If people can afford to work less, then they can use the extra time for activities that matter most to them, while lower production and consumption (especially environmentally intensive types like travel) correlate with lower resource use and emissions. Simultaneously, the cost of labour may not grow significantly. If such WTRs are widespread and significant, then they could help to keep people employed without relying on economic growth, which would be a major step towards a precautionary strategy towards sustainability. Yet there are many complexities that need to be explored on a case-by-case basis to understand actual impacts of concrete WTR schemes.

In this research we focused on the WTR schemes of IG Metall, the largest European labour union, which gave more than a million workers in Germany in 2018 the opportunity to reduce their weekly working hours to 28 ("Verkürzte Vollzeit", VV scheme), although with a proportional reduction of their wage. In addition, shift workers and employees with care obligations could choose between an annual extra payment equivalent to 6 days' wages and 8 extra days off ("Tarifliche Zusatzgeld – Wahloption", TZ scheme).

Whether and why workers wanted to participate in these schemes and the consequences on their consumption and mobility may offer lessons about WTR as a strategy to achieve the wider social, economic, and environmental goals. Social scientists have shown that decisions about work, consumption and mobility are embedded in patterns of social and economic life in different settings and at different scales ranging from the family to the company and the nation. Building on existing knowledge on the topic, our research was therefore designed to shed light on the diverse factors and contexts shaping decisions about WTR and how these influence travel patterns and related emissions. Accordingly, we conducted literature reviews on workers' WT preferences and on the relationship between WT and environmental indicators, looked at country-level indicators describing economic activities, mobility, as well as greenhouse gas emissions in Germany, and studied workers' perceptions through interviews and a survey. These investigations offer various insights as discussed below.

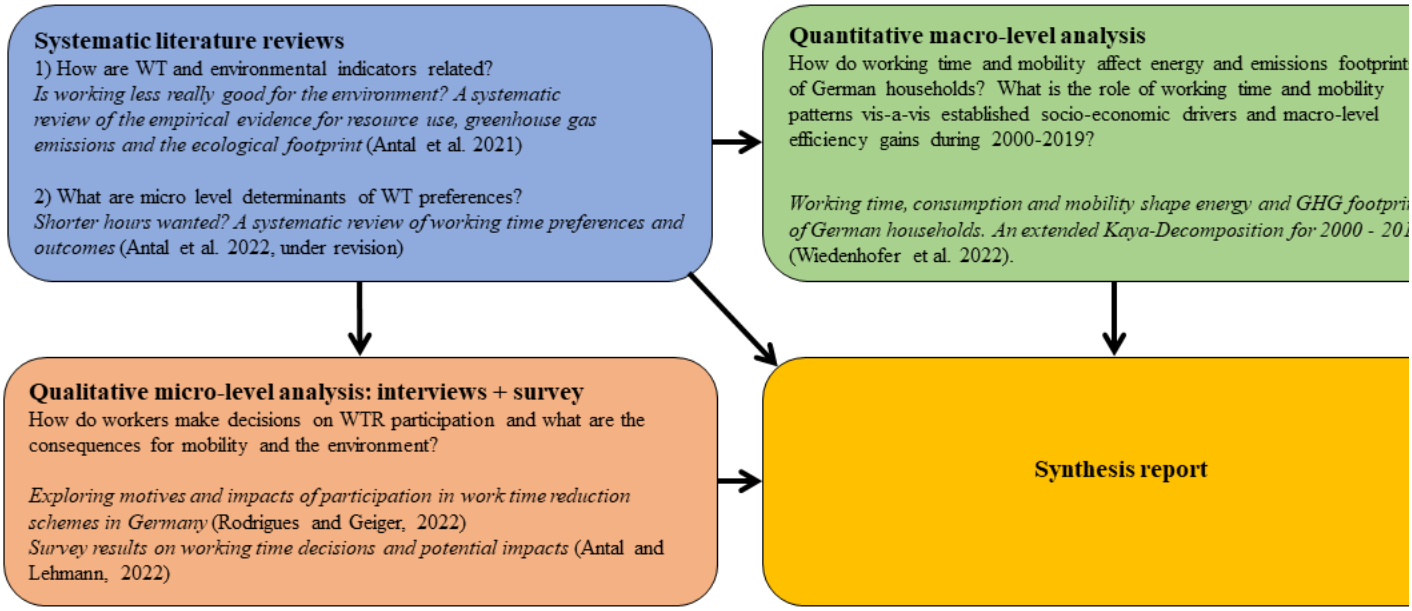

Figure 1. Work packages, research questions, and main outcomes.

The aim of the literature review on WT preferences was to give an overview of available knowledge on the topic and, in so doing, assess the merits and weaknesses of existing research [1]. This analysis allowed us to identify gaps in knowledge and improve the design of our project. The literature review confirmed that job characteristics (e.g., work schedules, job types, and job demands), family circumstances (e.g., the presence of a partner, care obligations, and the age of children), financial conditions (e.g., individual incomes, household incomes, and childcare costs), and the societal context all influence how much people want to work. It also showed that most people would not like their situation to differ substantially from the normal workday standard of the country. The literature is substantial but overly quantitative, which makes it difficult to find surprising or context-specific determinants of WT preferences. We suggest that moving towards more qualitative understandings of how preferences are formed is essential, not least to develop strategies that take into account the specific circumstances of workers performing different jobs in different sectors.

The aim of the literature review on the relationship between WTR and environmental impacts was to synthesise existing knowledge and critically engage with the literature, informing later stages of our work [2]. The only clear finding from this body of research is that higher household incomes usually result in larger environmental impacts—the more affluent a household, the greater its footprint. This is called the “income effect”. The “composition effect”, which refers to changes in the consumption structure of households, is very uncertain, not least because of the differences between WTR schemes and study contexts. We found that the reliability of country level investigations is questionable and that, overall, the literature is small and methodologically problematic. We suggest that the main way forward is to study WTRs in different settings using data from before and after the implementation of the scheme (longitudinal data collection). We also suggest that exploring good and bad examples to understand how WTR can be done in an environmentally sustainable way is perhaps more important than trying to understand how, on average, current WT values are related to environmental impacts.

The quantitative investigation focused on the long-term dynamics of WT, household consumption, mobility, and greenhouse gas footprints and provided the national context within which IG Metall’s WTR schemes take place. For the analysis we used Kaya-Identity decomposition methods. In our case study, the macro-view of the German context showed decreasing household greenhouse gas footprints, partly because of shrinking mobility footprints over 2000-2019. The main drivers of these developments are technological factors like improvements in energy intensity and the emissions intensity of energy supply. Total working hours in the country increased because of a growing number of employed people, even as average hours per worker decreased. Shorter working hours do not always reflect voluntary reductions (like in the voluntary IG Metall schemes that were launched at the end of the time period studied here), as the share of marginal employment grew.

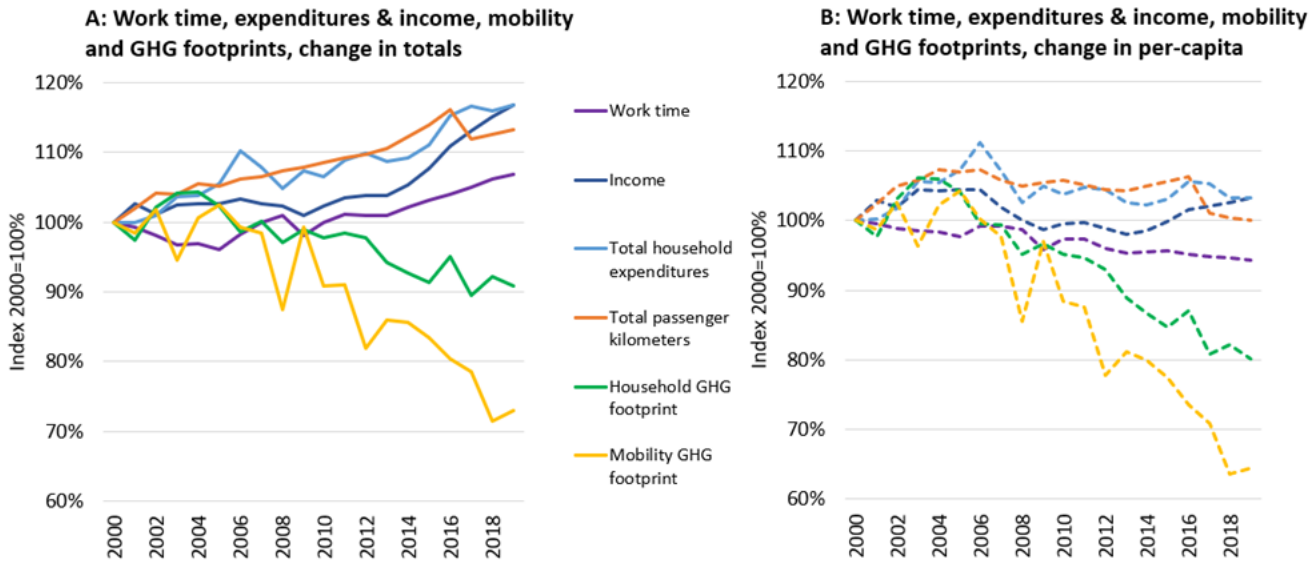

Figure 2. Overview of the major trends and dynamics regarding WT, mobility, consumption, and household footprints in Germany, 2000-2019

Mobility footprints shrank by 1.4% per year between 2000-2019, driven by a complex set of positive and negative developments. The total distance travelled increased by 13% over the 20 years. Amid increasing air, rail/road, and foot/bicycle travel (+66%, +34%, and +40%, respectively) and the sustained dominance of motorized individual mobility (74% in 2019), changes in the modal split did not significantly affect overall emissions. The largest distance travelled can be attributed to trips to work and work-related trips on the one hand (ca. 430 billion km in 2019), and leisure plus vacation travel on the other (ca. 510 billion km in 2019). Growth was most pronounced in work-related travel (+53% or 75 billion km) and vacation travel (+29% or 25 billion km). Average distances per trip increased, but substantial improvements in energy efficiency along supply chains and some progress in decarbonising mobility helped to achieve an overall drop in mobility-related CO2 emissions.

The aim of the micro-view was to gain a nuanced understanding of workers' motivations to join available WTR schemes in Germany, to illuminate the subjective meanings of WTR grounded in lived experiences, and to examine how these decisions shaped their travel. We conducted 25 semistructured interviews and an online survey (80 respondents). A first observation was that the VV option (28 working hours) was unpopular—only a few thousand people (less than 0.5% of the eligible workforce) joined. The TZ option (8 days off) was popular, with hundreds of thousands participating. We found that decisions on WT were complex, involving many private and workplace factors, but the relationship between time and money offered a useful way to gain a preliminary understanding. As many workers concentrated on the financial loss associated with WTR through the VV scheme, they never seriously considered participation in it. The TZ scheme was more financially attractive and was framed as forgone income, which is much less undesirable than an outright loss. This is interesting because the effects of the way in which the argument for WTR is built and communicated—the way it is framed—and the financial conditions under which WTR is unattractive to most workers have not received much attention in the literature so far.

We found that workers who chose a shorter workweek almost always enjoyed financial security and were motivated more by private reasons than by work-related stress. While impacts on well-being were generally positive, environmental implications of planned post-lockdown time uses varied greatly between households. We found that for some workers, decreasing total consumption definitely reduces environmental impacts while the composition of consumption hardly changes. For others, increased mobility in the form of (planned) leisure travel would be responsible for significant environmental impacts, which may overcompensate emission reductions stemming from lower consumption and less work-related mobility. We suggest that as the scientific literature on the WT-environment relationship gives little guidance on the impacts of concrete types of WTR, various case studies conducted on this relationship could add useful insights for a more informed discussion.

The role of mobility in WT decisions and impacts deserves substantially more attention than it currently receives in the literature. Although few people in our samples mentioned commuting as a separate reason to reduce WT, the tendency to use WTR in the form of fewer days per week instead of fewer hours per day suggests that it may play a role. The hypothesis that mobility is a key aspect when it comes to the impacts of WTR in terms of people's well-being as well as environmental sustainability is supported by our findings. We confirm that motivations for WTR matter for environmental impacts, while pointing out that activities which may look benign from an environmental perspective—such as meeting family members or doing sports—often create significant travel demands. We suggest that studying how the composition of consumption changes due to mobility patterns in different social groups could help to determine which complementary policies are appropriate to make WTR policies environmentally effective. Given that in current public discussions WTRs are widely assumed to be sustainable without robust evidence, pointing out the necessity of fine-tuned research, especially regarding mobility, and identifying ways in which such research could be done, is an important step forward.

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Final report

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MA: Lead author: project proposal, literature reviews, micro-view: survey, final report.
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VG: Contributing author: micro-view - interviews.
BL: Contributing author: micro-view - survey.

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Notes

1 Antal, M., Lehmann, B., Rodrigues, T.G., Halmos, A., Lukács, B., 2022. « Shorter hours wanted? A systematic review of working time preferences and outcomes », research paper under revision.

2 Antal, M., Plank, B., Mokos, J., Wiedenhofer, D., 2021. « Is working less really good for the environment? A systematic review of the empirical evidence for resource use, greenhouse gas emissions and the ecological footprint», Environ. Res. Lett. 16, 013002. https://doi.org/10.1088/1748-9326/abceec

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x

Lockdown

The lockdown measures implemented throughout 2020 in the context of the Covid-19 crisis, while varying from one country to the next, implied a major restriction on people's freedom of movement for a given period. Presented as a solution to the spread of the virus, the lockdown impacted local, interregional and international travel. By transforming the spatial and temporal dimensions of people's lifestyles, the lockdown accelerated a whole series of pre-existing trends, such as the rise of teleworking and teleshopping and the increase in walking and cycling, while also interrupting of long-distance mobility. The ambivalent experiences of the lockdown pave the way for a possible transformation of lifestyles in the future.

En savoir plus x

Associated Thematics :

Lifestyles

- Aspirations
- Diversity of lifestyles
- Futures
- Leisure & tourism
- Rhythms of everyday life
- Work

Policies

- Time policies
- Ecological transition

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