When "made in Europe" is more important than money: Investigating the role of community benefit schemes on community acceptance of wind energy in Switzerland

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Overview

In 2015, countries around the world took the pledge to increase the use of renewable energy sources to support the decarbonization of the power sector, thereby adopting new measures to mitigate climate change (IPCC, 2011; The Paris Agreement, 2015). Within this context, wind power plays a crucial role in strengthening renewable energy deployment, reducing dependency on fossil-fuel consumption, and meeting climate goals (IPCC, 2011; IRENA, 2021). In Switzerland, wind energy deployment remains scarce despite political support and technological readiness. According to Hälg (2025, p. 6), Switzerland ranks 25th out of 28 European countries in wind electricity production. Adaptation rates are oftentimes obstructed by local community opposition to the construction of wind turbines. A dynamic perspective is thus required to examine which instruments positively influence community acceptance.

It is widely recognized that distributive justice may help to increase community acceptance. Specifically, distributive justice concerns the fair allocation of costs and benefits of a wind energy project between the project developer and the local community (Wüstenhagen et al., 2007). This concept is often induced through financial participation mechanisms. Knauf and le Maître (2023) find two main forms: community benefit schemes and citizen investment mechanisms. This paper focuses on community benefit schemes that provide fixed payments from wind project developers to the community located nearby, independent of a project's profitability. More specifically, the paper uses a wind resource tax as a practical mechanism for implementing distributive justice through community benefit schemes.

Findings on how community benefit schemes influence community acceptance remain mixed. In addition, most papers rely on national samples, not capturing the specificities needed to understand the local, site-specific attitudes (e.g., Knauf, 2022; Vuichard et al., 2019, 2022). My study addresses this gap through a representative local survey targeting exclusively people who live in the city of St. Gallen or in one of the 28 municipalities located within a 10-kilometre radius of the hypothetical wind park site, which is located in St.Gallen (N=322). Within the survey, the role of a wind resource tax in shaping community acceptance is examined through a discrete choice experiment (DCE) about a hypothetical but realistic wind park. In addition to well-established attributes in the social acceptance literature (e.g., local ownership, number of wind turbines), this study also explores previously unexamined attributes. These include the origin of the wind turbine manufacturer and the tower material. The novel attributes reflect emerging policy concerns about the reliability of global supply chains, geopolitical tendencies, but also material circularity and visual perception of wind turbine designs. Results show high community acceptance of the hypothetical wind park, with acceptance primarily driven by the wind turbine manufacturer's origin and tower material. The wind resource tax has a smaller but positive effect. With the findings, new policy recommendations can be issued.

Methods

This paper is based on an online survey including a DCE with a choice-based conjoint (CBC) design. CBC is a widely applied technique for mimicking real-life decisions in which respondents choose from predefined alternatives. The method elicits citizen preferences for factors influencing community acceptance of wind energy projects. Data was collected in October 2025 from N=322 respondents recruited via a professional B2C online panel. The survey reproduced a municipal vote on a realistic but hypothetical wind project within the city boundaries of St.Gallen. A hypothetical setting was chosen to ensure that existing, site-specific projects within the Canton of St.Gallen would not be influenced.

The experimental design included six attributes with three levels each, reflecting realistic and relevant project characteristics:

1) Wind turbine manufacturer's origin
2) Tower material
3) Ownership structure
4) Number of turbines installed
5) Wind resource tax level
6) Recipients of the wind resource tax

Each participant completed eight choice tasks consisting of three hypothetical wind energy projects with randomly varied attribute levels. This resulted in 2'576 experimental choices that were used for the Hierarchical Bayes (HB) estimation of attribute importances and the average of individual part-worth utilities per attribute.

Results

Overall, 75.4% of respondents indicated that they would vote in favour of the hypothetical wind project (45.3% "Yes" and 30.1% "Somewhat Yes"), indicating a high level of community acceptance. This local support is also evident at the municipal level: all four neighbouring municipalities show majority support, and the same holds for 15 out of the 29 municipalities with more than five respondents in the sample. A majority is defined as the combined share of "Yes" and "Rather Yes" exceeding 50%.

With regards to the influence of community benefit schemes on community acceptance, results show that the wind resource tax was well received by respondents, but its effect was smaller than that of other attributes. More precisely, the wind turbine manufacturer's origin had the greatest influence on the probability of accepting the wind park. In terms of individual part-worth utilities, wind turbines from a Danish manufacturer made the project significantly more popular than wind turbines from a U.S. or Chinese manufacturer. Hence, results indicate a "made in Europe" preference. The tower material ranked second in terms of attribute importance. When comparing the three materials proposed, concrete towers decreased the probability of accepting proposed wind parks, whereas steel and wooden towers increased project support. Thus, the perceived environmental friendliness of materials matters for local acceptance. Further, ownership also played a positive role with diversified ownership structures, involving not only the citizens' commune, but also a bank and a national energy utility.

Conclusions

While a local wind resource tax, as a practical implementation of community benefit schemes, has a positive influence on community acceptance, the origin of the wind turbine manufacturer and tower material have a more important influence. With the two newly tested attributes in social acceptance research being the most important ones, these results can provide new insights into policymaking. First, as the origin of the wind turbine manufacturer was the most important attribute in terms of community acceptance, "made in Europe" considerations could be relevant for new procurement guidelines. This is especially important in light of recent geopolitical tensions and supply-chain reliability. Second, the tower material also significantly shapes community acceptance. Tower materials such as steel or wood might be perceived as more environmentally friendly or visually less intrusive than concrete. This result suggests that the design and material choices should be integrated into the communication of the wind project developer and could also be included in regulatory designs. Third, even though a wind resource tax is valued in terms of attribute importances, it becomes secondary when tower design and manufacturer origin are also included. Policymakers could encourage project developers to factor a wind resource tax into their project design. However, they should also make it clear that this tool is only one part of a comprehensive package of measures aimed at improving community acceptance.

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