But Keep your Customers Closer: The Value of Regionality in Electronic Commerce

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BUT KEEP YOUR CUSTOMERS CLOSER: THE VALUE OF REGIONALITY IN ELECTRONIC COMMERCE

Research in Progress

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Abstract

Green IS research addresses the pressing challenge of climate change. In particular, leading IS scholars have called for research on the design of IS solutions that support decision making for more sustainable practices. In this sense, our research explores how ICT artifacts should be designed to support consumer decision making in favor of regional products and services. We employ hedonic price regressions to analyze consumer preferences for regional products and services based on actual market data from an online price comparison platform. We find that consumers are willing to pay mark-ups for regional providers as long as those are both 1) based in close proximity to consumers (geographic regionality) and 2) strongly connected with and within the region (entrepreneurial regionality). We contribute to the Green IS debate by deriving tangible implications for the design of different types of user interfaces such as websites and comparison platforms.

Keywords: Green IS, Interface Design, Platform Economics, Hedonic Pricing

1 Introduction

Climate change is one of – if not the – greatest challenges humanity faces today. While the coronavirus pandemic captures much of the political, business, and academic attention, climate change has not lost its actuality and urgency. In the Information Systems (IS) community, leading scholars have shaped the field Green IS to address climate change through information and communication technology (ICT) (e.g., Dedrick 2010; Melville 2010; Watson et al. 2010). In their editorial to a JAIS special issue on solutions for environmental sustainability, Gholami et al. (2016) have ascertained the fact that “too few information systems […] academics engage in impactful research that offers solutions to global warming despite the fact that climate change is one of the most critical challenges facing this generation” (p. 521). Importantly, also practical research that goes beyond theory is needed (vom Brocke et al. 2013).

According to Gholami et al. (2016), one of the areas in which the IS community could add meaningful value to the efforts against climate change is to design solutions that “support decision making for more sustainable practices” (p. 527). Addressing this call, we engage in a broader research agenda on how to design user interfaces to support more sustainable decision making. A so far mostly overlooked aspect in this realm is the “surprisingly understudied” topic of regionality (Herz and Diamantopoulos 2019, p. 44). Buying regional represents a sustainable choice in many dimensions such as biodiversity, animal welfare, governance, and resilience (Schmitt et al. 2017). With regard to other aspects such as carbon footprint, land use, energy, or water consumption, the academic debate on whether to favor regional over non-regional consumption is still undecided as outcomes depend on “a diverse range of system boundaries, produce types, varied assumptions and a multiplicity of foot printing methods” (Rothwell et al. 2016, p. 421). In this paper, we aim to provide practicable and impactful research on the design of user interfaces to support decision making in favor of regional products and services. We provide an indication for users in fact valuing regionality in online contexts. Note that this valuation can be
triggered by means of regional cues on user interfaces (Menzel and Teubner 2021a). Based on this, we seek to assess how such cues ought to be designed in view of user decision making.

Purchasing regional products is an established and still emerging trend in many offline markets, in particular in the food sector (Darby et al. 2006). Yet, the question arises whether this trend translates to electronic commerce as the Internet is considered a “window to the world” (Hongladarom 1999, p. 400) and a means to (explicitly) overcome geographic boundaries (Forman and van Zeebroeck 2018). Nevertheless, earlier work has shown that regional cues are frequently used in practice and provides evidence that such cues are used intentionally to promote regionality (Menzel and Teubner 2021b). Academia seems to be lagging behind in studying this trend. Therefore, we investigate whether consumers actually prefer regional products when buying on digital user interfaces and if so, which factors drive such preferences. This yields the following research question:

RQ: Do consumers value regionality in electronic commerce? In other words, are they willing to pay price mark-ups for regional products and services when purchasing on digital user interfaces?

To address this question, we consider actual market data from Verivox, a leading German price comparison platform for electricity and gas plans. This market provides a compelling case to study for multiple reasons. First, as electricity can (with some limitations) be considered a homogenous credence good, other product properties which could explain users’ preferences for regional sourcing can largely be ruled out (e.g., consumers may prefer regional strawberries for their higher freshness). Second, electricity is transmitted through networks, eliminating differences in transportation cost for consumers (Obstfeld and Rogoff 2000) and trade barriers (Wolf 2000). We can hence assume that any preferences for regional electricity are driven by the very idea of regionality. Note that the German electricity market is highly fragmented and hence offers a large sample of providers. In addition, the historic market genesis has led to a situation in which different types of providers operate (more on this below). Also, the fact that comparison platforms are the most important sales channel for household energy plans in the German market (YouGov 2015) ensures a certain level of robustness for the analysis. As platform providers are hesitant to share transactional data such as click streams and conversion rates, we consider publicly available price data for our analysis. Applying hedonic pricing models, we assume that providers’ pricing strategy reflect consumer preferences (to at least some degree). In other words, hedonic pricing assumes that higher prices for regional offers are related to consumer preferences for such offers. Further, we draw on the theoretical lenses of Consumer Ethnocentrism (Shimp and Sharma 1987) to describe households’ consumption patterns. We find evidence that consumers indeed prefer regional offers if a combination of criteria for regionality is met (i.e., geographic and entrepreneurial).

In the following, we illustrate related work and theory (Section 2), describe the study’s methods (Section 3), present results (Section 4), and discuss its findings, implications, and limitations (Section 5).

2 Theoretical Background and Hypotheses Development

Provider Perspective: Pricing Regionality. The Hedonic Pricing Model, going back to Rosen (1974), assumes that every aspect of a product or service that adds value to customers will – in the long run – be reflected in market prices. Based on observed prices, the model attributes “shadow prices” to product attributes, reflecting their values to consumers (Greening et al. 1997, p.183). These attributes can go beyond tangible product characteristics and include, for instance, branding or market segmentation (Baltas and Freeman 2001). Applications of the concept are wide-ranging and are applied to evaluate the (monetary) value of criteria such as the energy efficiency of refrigerators (Greening et al. 1997) or the value of accommodation amenities (Teubner et al. 2017). Most frequently, the theory is applied in the context of real estate (e.g., Gibbons 2004), public goods (e.g., van Fraag and Baarsma 2005; Cavaillès et al. 2009), and tourism (Vanslembrouck et al. 2005). While, to the best of our knowledge, hedonic pricing has not been applied to electricity, it is well-suited for assessing the intangible characteristic of regionality.

Consumer Perspective: Consumer Ethnocentrism and the Value of Regionality. The literature provides several approaches to explain consumers’ preferences for regional products and services,
including the notion of familiarity (Huberman 2001), trust toward transaction partners (Lai and Teo 2008), ambiguity aversion (Boyle et al. 2012), homeland sympathy (Morse and Shive 2011), sustainability, and support for local businesses (Darby et al. 2006). Importantly, consumers do not necessarily need to be driven by sustainability motives in order to make more sustainable decisions. In this study, we draw on the established theory of Consumer Ethnocentrism (Shimp and Sharma 1987), developing two perspectives on regionality and narrowing down this multi-faceted term in the following.

Consumer Ethnocentrism explains consumers’ preferences for regional products and services with an evolutionary psychological pattern. Throughout the early days of mankind, survival was dependent on cohesion and solidarity within a (geographically bounded) social group such as tribes and families (van den Berghe 1981). Therefore, the well-being of this group was in the center of decision-making. This pattern is hence deeply rooted within the human brain and today, still leads to ethnocentric consumer behavior (Bizumic 2019) in the sense that purchasing from the in-group (defined as the group of people with “which an individual identifies” (Shimp and Sharma 1987, p. 280)) is unconsciously preferred over buying from the out-group. Consumers perceive themselves as “center of the universe” and will therefore avoid buying non-regional products and services because “it hurts the domestic economy, causes loss of jobs, and is plainly unpatriotic” (Shimp and Sharma 1987, p. 280).

We first consider the (obvious) geographic aspect of regionality. Accordingly, geographic regionality is a preference of goods and services offered by providers in geographic proximity to consumers. Originally, Consumer Ethnocentrism posits that consumers prefer domestic over imported products, but the concept is equally applicable to the regional context (Bryła 2019). Considering an example from the food sector, Darby et al. (2006) demonstrated that consumers are willing to pay higher prices for strawberries grown nearby compared to elsewhere from (within) their country. In a recent study, one participant stated that regionality was a dominant factor when evaluating energy provider websites (Menzel and Teubner 2021a). This fosters our belief that regional preferences in the geographic sense can a) be independent of product quality such as freshness and b) translate into electronic commerce. Accordingly, we hypothesize:

**H1:** Consumer preferences for regional products and services are reflected in price mark-ups for electricity plans offered by providers in greater geographic proximity to them.

While Consumer Ethnocentrism is typically interpreted from this geographical perspective, we offer another (less obvious) interpretation of regionality in the sense that the in-group is understood as set of entities “with which a person identifies” (Shimp and Sharma 1987, p. 280). Looping back to the examples above, the preference for strawberries grown nearby would become even stronger when sold on a farmer’s market compared to a grocery store (Darby et al. 2006). In this sense, “the fact that the provider seems to be regionally embedded generates trust” (Menzel and Teubner 2021a, p. 8). Apparently, consumers not only care about where the product stems from but also from whom they buy it and prefer to buy from entities that they identify with. Hu et al. (2012) laid out how the use of a fictitious small farmer association logo on blackberry jam led to increased likelihood of purchase and willingness to pay. We capture this provider attribute by the notion of entrepreneurial regionality. A regional provider in this entrepreneurial sense is strongly connected with and within the region it operates in (e.g., as an employer, charity sponsor, investor, etc.). Typically, these providers are small or medium-sized firms, potentially in public ownership, and the majority of their operations is concentrated within their vicinity (i.e., their home turf). Accordingly, our second hypothesis reads:

**H2:** Consumer preferences for regional products and services are reflected in price mark-ups for electricity plans offered by providers with higher entrepreneurial regionality.

Note that the German electricity market is fully liberalized, and providers are free to sell their products nationwide. Therefore, entrepreneurial regionality can be assessed independently from the notion of geographic regionality as providers are free to sell their products outside of their home region too. Yet, these two concepts can be assumed to be interconnected, leading us to the third hypothesis:
**H₃:** There occurs a positive interaction between geographic and entrepreneurial regionality with regard to consumers' valuations.

### 3 Methodology and Data Set

To evaluate our hypotheses, we draw on data from the German electricity retail market. The market is fully liberalized; providers can hence offer in any location and freely vary prices across regions. Also, the market is highly fragmented leading to a large sample of providers, and platformization of the market has evolved to an extent that most providers generate a significant share of sales via comparison platforms such as Verivox (KEARNEY et al. 2019). Figure 1 summarizes our research approach.

**Step 1.** We devised a web scraper (python) that randomly selected 468 out of the roughly 8,000 German zip code areas (Figure 2). The web scraper issued queries to the Verivox website, searching for electricity plans, using the zip codes and an assumed annual consumption of 2,500 kWh (the typical consumption level for two-person households). From the search results, data on providers, products, and prices were retrieved and stored, resulting in a total of 31,785 observations from 133 distinct providers.

**Figure 2. Spatial sample distribution**

**Step 2.** Next, we retrieved each provider’s address and flagged observations as geographically regional where consumer (i.e., the queried zip code) and provider headquarter were located in the same zip code area. We excluded providers with headquarter outside of Germany, providers that offered in only one zip code area, and those without offers in the zip code of their headquarters as, for these providers, within-comparisons (with vs. without geographic regionality) are not possible. This yielded a set of 22,890 observations from 71 distinct providers. To measure the economic effect of geographic regionality, we employ a hedonic pricing approach and consider the effect of the “geographic regionality” flag on posted prices where the hypothesized valuation of geographic regionality should be reflected in price mark-ups for plans by providers based in the consumer’s region.

**Figure 3. Frequency distribution of observation groups**
Step 3. To assess the entrepreneurial interpretation of regionality, we take a closer look at provider characteristics. Again, the hypothesized valuation of entrepreneurial regionality should be reflected in price mark-ups for plans by providers with entrepreneurial regionality over plans by providers without this characteristic. While the grouping in Step 2 is dependent on a combination of zip codes of consumer and provider, this grouping builds on provider characteristics only. Providers of entrepreneurial regionality are characterized by small or medium company size, public ownership, operational focus on, and close ties to a certain region. In the German electricity market, local (i.e. municipal and regional) utilities exhibit these characteristics. Their connection with and within the region is even expressed through a reference to a city or region in the company name (e.g., “Stadtwerke Heidelberg” – that is, Municipal Utilities of Heidelberg). We exploit this circumstance and flag all observations where the company name references a city or region to be regional in the entrepreneurial sense. In addition, provider websites were consulted for all providers without clear reference to identify local utilities which may be using abbreviations or acronyms instead. Overall, 37 of the 71 providers met the criteria for entrepreneurial regionality. Note that despite of their operational focus on a specific region, local utilities are free to sell electricity nationwide. This circumstance allows us to analyze the effect of entrepreneurial regionality independent of geographic properties.

Step 4. Following Steps 2 and 3, observations are structured in four pseudo-treatment groups: Offers from providers without entrepreneurial regionality outside (NN in Figure 3) and inside (YN) the areas in which these providers are considered geographically regional (i.e., their “home turf”), and offers from providers with entrepreneurial regionality, again outside (NY) and inside (YY) of areas of geographic regionality. Note that the two observation groups with geographic regionality are markedly smaller than the other two groups. This is driven by the fact that – by definition – for each provider, only offers in one or a few of all zip code areas are considered regional in the geographic sense. Accounting for this discrepancy, we start the empirical analysis with an effect size assessment using Cohen’s d as measure for the effect’s expressiveness (Cohen 1988). Since our data offers structural similarities to an unbalanced panel (with geographic instead of time dimension), we apply a Within Fixed Effects model executed as least square dummy variable regression with geography dummies. This enables us to control for omitted spatial effects on zip code level (Wooldridge 2002) such as purchasing power, population density, and grid fees (which vary across regions and account for a significant cost component in Germany), leading to following model specification:

\[
Y_{ij} = \beta_0 + \beta_1 R_{E,i} + \beta_2 R_{G,j} + \beta_3 R_{E,i} R_{G,j} + \sum_{n=1}^{N(j)-1} \delta_n Z_n + u_{ij}
\]

In this regression equation, \(Y_{ij}\) refers to the annual price with \(i\) and \(j\) as the indices for providers and zip code areas. Whenever a provider offers an electricity plan in its own region (geographic regionality), the binary variable \(R_{G,j}\) is 1, otherwise it is 0. For the assessment of the mark-up for entrepreneurial regionality, we include \(R_{E,i}\) which captures whether provider \(i\) exhibits entrepreneurial regionality (=1) or not (=0). The model allows for the interaction of \(R_{G}\) and \(R_{E}\). Accordingly, coefficients represent mark-up for geographic regionality (\(\beta_1\)), mark-up for entrepreneurial regionality (\(\beta_2\)), and the interaction effect (\(\beta_3\)). The coefficients (\(\delta\)) and binary variables for zip code areas (\(Z\)) capture regional effects, while \(u_{ij}\) captures the residual. We performed F-tests to decide whether to prefer the panel model over ordinary least squares (OLS), which is the case for all model specifications (\(p<.001\)).

4 Results

The Value of Geographic Regionality (H1). We assess the value of geographic regionality by the price mark-ups for offers by providers headquartered in the same area as the consumer. Table 1 summarizes results of the regression analysis. Our findings confirm our initial hypothesis that consumers value geographic regionality (H1). We identify a mark-up of around 20€ regardless of controlling for entrepreneurial regionality (Model IIIa, \(\beta_1 = 20.4, p<.001\)) or not (Model I, \(\beta_1 = 19.9, p<.001\)). Effect size analysis delivers a Cohen’s d of 0.36 which is in the range between small (0.2) and a medium (0.5)
sized effects. On the first look, this effect might not appear as a major influence but considering the market’s typical profit margins of one to three percent (Dringenberg 2020), such relatively small mark-ups already have meaningful effects on profitability. Accordingly, a mark-up of around 20 € (β1) on the base price of roughly 690 € (β0) would at least double the regional provider’s profit margin.

<table>
<thead>
<tr>
<th>DV: Price (EUR), N=22,890</th>
<th>I</th>
<th>II</th>
<th>IIIa</th>
<th>IIIb</th>
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<tbody>
<tr>
<td>Constant (β0)</td>
<td>692.1***</td>
<td>692.5***</td>
<td>692.5***</td>
<td>692.6***</td>
</tr>
<tr>
<td>(14.49)</td>
<td>(14.50)</td>
<td>(14.50)</td>
<td>(14.50)</td>
<td></td>
</tr>
<tr>
<td>Geographic Regionality (β1)</td>
<td>19.94***</td>
<td>19.94***</td>
<td>H1</td>
<td>20.44***</td>
</tr>
<tr>
<td>(4.09)</td>
<td>(4.10)</td>
<td>(4.10)</td>
<td>(8.17)</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Regionality (β2)</td>
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<td>-1.381*</td>
<td>H2</td>
<td>-1.590*</td>
</tr>
<tr>
<td>(0.76)</td>
<td>(0.76)</td>
<td>(0.76)</td>
<td>(0.77)</td>
<td></td>
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<tr>
<td>Interaction (β3)</td>
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<td></td>
<td>H3</td>
<td>30.58***</td>
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<td></td>
<td></td>
<td></td>
<td>(9.43)</td>
<td></td>
</tr>
<tr>
<td>Zip Code Fixed Effects</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>F</td>
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<td>19.2***</td>
<td>19.2***</td>
<td>19.2***</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.272</td>
<td>0.271</td>
<td>0.272</td>
<td>0.272</td>
</tr>
</tbody>
</table>

Table 1. Regression results (Note: *** p<.001; ** p<.01; * p<.05; + p<0.1)

The Value of Entrepreneurial Regionality (H2). For the assessment of consumers’ valuation of entrepreneurial regionality, we obtain a Cohen’s d of 0.02 and no (or only weakly) significant coefficients in the regression models (Model II: β2=€-1.12, n.s.; Model IIIa: β2=€-1.38, p<.01). This suggests this aspect on its own is negligible both statistically and economically.

Interaction of the two Interpretations of Regionality (H3). Considering the interaction of geographic and entrepreneurial regionality, the interaction model (IIIb) adds a relevant perspective. When adding the interaction term, both β1 and β2 (denoting the effects of geographic/entrepreneurial regionality in the absence of the respective other) are either statistically insignificant (β1=€-2.47, n.s.) or economically irrelevant (β2=€-1.59, p<.05) while the interaction between them is even larger than the individual mark-ups in the previous models (β3=€30.6, p<.01).

In essence, these findings suggest that household consumers indeed value regionality in the electricity market under the condition that the provider exhibits both geographic and entrepreneurial regionality (Figure 4). The absolute price estimate fluctuates noticeably across zip code areas as outlined in Figure 5 (displaying estimates and standard errors (SE)), justifying the inclusion of zip code dummies into the models. For robustness, we have tested further control variables such as share of renewable electricity in the offered products and providers’ user ratings. This does not alter the coefficients in terms of magnitude, sign, or significance and has a negligible effect on the R² values.

![Figure 4. Overall price estimates (Error bars indicate standard errors)](image)

![Figure 5. Dummy effect estimates and SE across zip codes](image)

5 Discussion and Concluding Remarks

Key Findings. Our analysis provides some indication that consumers indeed value regionality. More precisely, they are willing to pay price mark-ups for regional products and services when purchasing through digital user interfaces. In particular, this preference pertains to the geographic interpretation of regionality, that is, proximity of consumer and provider (H1). In contrast, we did not identify consumer
preferences for entrepreneurial regionality per se ($H_2$). However, the two types of regionality interact in the sense that only geographically regional providers with entrepreneurial regionality are able to achieve mark-ups. Apparently, consumers value providers as long as they are both 1) based in close proximity to consumers (geographic regionality) and 2) strongly connected with and within the region (entrepreneurial regionality). Accordingly, consumers seem to value providers which are located in, owned by, operationally focused on, and tied to their region. To further explore these findings, we sought out conversations with municipal utility employees and industry experts. All interviewees assured that providers indeed consider regionality as a key product characteristic that affects their pricing strategies.

**Practical Implications for Design of User Interfaces.** These findings carry implications for our above outlined research aim to provide practicable and impactful research on the design of IS solutions to “support decision making for more sustainable practices” (Gholami et al. 2016, p. 527). Also, we answer calls for IS-driven contributions fostering environmental sustainability (Malhotra et al. 2013; Gholami et al. 2016) and impactful IS research to counter global warming (vom Brocke et al. 2013). In the following, we describe practical implications for the design of two types of user interfaces – direct sales channels (e.g., provider websites) and platforms (e.g., comparison platforms).

For user interfaces with direct customer interaction (e.g., websites), our findings suggest that providers should emphasize regionality when applicable – especially if they are attributed with entrepreneurial regionality. In this context, regional trust cues provide a powerful means to signal regionality which in turn increases trust in the provider and purchase intentions on user interfaces (Menzel and Teubner 2021a). In contrast to these insights, recent studies of regional energy provider websites unveiled that merely 25% of the providers used pictorial (Menzel and Teubner 2021c) and only 33% applied textual cues to promote regionality of their products (Menzel and Teubner 2021b). This is little surprising as those providers often lack the skill or resources to properly optimize their interfaces to the customer. According to our findings, there is a massive optimization opportunity for these entities. Moreover, the study results indicate that the potential of using regional trust cues on user interfaces heavily depends on the geographic position of the user. If a request to a provider’s user interface is issued from an area in which this provider is based, regional cues should affect consumer valuation to a larger degree than otherwise. This raises the questions of how to tailor the design of user interfaces in view of user location. Most critically, providers need to capture the users’ geographic location in order to adjust their interface design accordingly. Identifying the IP address, the use of cookies, or the processing of user profile and transactional data could be routes to further explore in this regard.

For user interfaces of platform business models (e.g., comparison platforms), our study yields design insights for platform operators to enhance user experience. As per our findings, users prefer regional products and services over non-regional offers. Therefore, providing information on the regionality of offers to consumers could substantiate a competitive advantage over other platforms. To support the decision making of regionality-aware consumers, multiple design elements are conceivable:

- **Filters:** Platform operators may build filters to sort offers by regional and non-regional providers. Note that users are prompted to provide their zip code on all major comparison platforms which makes dealing with filtering by geographic regionality an easy fix. Moreover, platform operators could also assess entrepreneurial regionality and offer filters for this property. Most importantly, a combination of filters should be feasible as our findings suggest an interaction of both effects.

- **Icons/Labels:** In similar fashion, platforms could implement icons or labels to signal the above described attributes to consumers.

- **Text/Pictorial Cues:** Implementing slots on the platform in which providers can outline their (products’) regionality via text or images will further enhance the user experience.

Note that these design elements not only improve user experience, they could also develop new income streams for platform operators. Platform operators could skim off some of the mark-ups generated by regional offers through providing sellers the possibility to purchase regional icons, labels, space for regional messaging, or the appearance in certain filters.

Since the beginning of this research project, we have observed how several platforms have implemented some of the above-mentioned measures. **Verivox,** for instance, has introduced a filter for geographic
regionality. When applied, only providers based within a 100 km range from the user’s address are displayed. Also, the platform created a label to highlight providers with entrepreneurial regionality that needs to be purchased by the seller.

**Theoretical Implications.** In terms of theoretical implications, Consumer Ethnocentrism assumes consumer preferences based on geographic match of consumers with product origin. We offer a new interpretation of the in-group, in other words the set of entities “with which a person identifies” (Shimp and Sharma 1987, p. 280), in the sense that the entrepreneurial regionality of a provider may serve as an identity-establishing feature as well. Referring back to the farmer’s market example, this would mean that consumers go and purchase there not only because they consider the farmer *someone from here* but also *one of us*. This perspective appears reasonable in view of the evolutionary psychological roots of this theory according to which cohesion of and solidarity within a (geographically bounded) social group was critical to survival (van den Berghe 1981). Our findings suggest that the notion of “us versus them” (Klein 2002, p. 1) not only applies in the geographic context but also in the sense of common people (which includes small, regionally focused businesses) against the large corporates. Nevertheless, following this study’s results, this entrepreneurial interpretation of regionality does not exist on its own and necessarily needs to be considered in the geographic context.

**Implications for Power Sector Sustainabilization.** While we chose electricity as subject of this study mainly for its properties (homogenous good, transported in networks, etc.), the power sector also features a pressing need for solutions to support consumers in pro-regional decision making. With the aim of carbon neutrality, the sector is currently undergoing a drastic transformation in terms of decarbonization, digitization, and decentralization (di Silvestre et al. 2018). Our findings could support this transition in two ways. First, local utilities (i.e., companies with high entrepreneurial regionality) are considered key drivers for the transition of the power sector in their region (Berlo and Wagner 2011), because they operate decentral renewable generation units such as solar and wind parks, manage heat district concepts, provide energy management solutions (Richter 2013), and organize local energy markets (Weinhardt et al. 2019). Therefore, nudging consumers into the direction of these companies will accelerate the sector’s sustainabilization. Second, the sectors sustainabilization could be substantially accelerated by its ongoing platformization (Menzel and Teubner 2021d). However, well-designed user interfaces are a perquisite for the swift adoption of platform business models. We suggest that insights gained here on comparison platforms can (with some constraints) be brought to good use also for other platform types in the energy sector and hence contribute substantially to the sectors’ overall platformization and, in turn, sustainabilization.

**Limitations and Work in Progress.** Alike any study, this one is not without limitations. First, the hedonic pricing regression builds on the assumption that consumer preferences are reflected in providers’ pricing strategies which may only partly be true in many cases. To strengthen our analyses, we plan to expand our data model by adding secondary data in the spatial dimension (e.g., purchase power, population density, grid fees, etc.) and on company level (e.g., ownership structure, employees, turnover, etc.). Further, we seek to validate this assumption through collaboration with a comparison platform and analysis of actual purchase data (e.g., click rates, conversion rates) rather than just pricing data. Second, we acknowledge that data clusters of geographic regionality are comparatively small. To some degree this is unavoidable, as each provider has only one home region but is free to offer in all other territories. Still, we are in the process of geocoding provider and customer locations which will enable the measuring of geographic regionality as a continuous variable and allow for more fine-tuned assessments. Third, regional providers do not necessarily generate electricity in their region – even though this is increasingly the case for green technology such as wind, solar, or biomass. Accounting for this aspect, for instance, through adding the share of regionally produced energy into the model, will further strengthen the link between consumers’ valuation of regional energy providers and the energy sector’s sustainabilization.

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References


