

## Article

# Challenging and Interlinking Quality of Life with Social Sustainability in European Cross-Border Suburban Regions: An Empirical Survey in Bratislava-Lower Austria and Burgenland, and Salzburg-Bavaria

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**Abstract:** The relatively dynamic population growth in suburban municipalities in some European border regions caused by cross-border suburbanization poses challenges for maintaining and promoting the quality of life of residents and the social sustainability of municipalities. The aim of this paper is to provide insights into these issues based on our own empirical research conducted in the border regions of Lower Austria, Burgenland, and Bavaria, which are affected by the cross-border suburbanization of Bratislava and Salzburg. Empirical results illustrate a “cherry-picking strategy” of a high proportion of residents, i.e., choosing selectively the best options of both worlds to improve or maintain their quality of life. These strategies refer to housing decisions, satisfaction with the social neighborhood and the environment, functional patterns of daily activities, and local engagement. Although most respondents rated community relations positively, the coexistence of different social groups would benefit from their deeper integration into the community life. Residential satisfaction in terms of quality of life can foster a sense of belonging and thus contribute to the social sustainability of cross-border suburban regions.

**Keywords:** quality of life; social sustainability; cross-border suburbanization; border regions; Austria; Germany; Salzburg; Bratislava



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## 1. Introduction

As far as the notion of “sustainable development” is embedded into capitalist market economies, attempts to define it requires dealing with the fundamental tension given between the two words “sustainable” and “development”. While the latter is associated with change, movement, growth, or progress, sustainability considers preservation, path-dependency, or long-term continuity as its constituent elements. Economic development strongly correlates with growth and is expressed, for example, in measures such as (increasing) GDP, (high) employability of the workforce, or (low) public debts. Similarly, social development is meant to improve social mobility through extensive education, to promote health and housing conditions preferably for all people, or to enhance the inclusion of different minorities. Both domains represent highly dynamic patterns of past and ongoing changes and claim the global validity of their principles.

Thus, development remains prevalent in “sustainable” development, too, and sustainability requirements must align with development goals. Although the framing criteria of development goals—most prominently represented as “targets” in the United Nations’ Sustainable Development Goals [1]—are diverse and heterogeneous, they determine the coping strategies with sustainability. Developmental core principles encompass the capital accumulation, commodification of marketable goods, and territorial competition (most

evidently between nation-states) of the global neoliberal economic paradigm [2], as well as the social classes, lifestyle inequities, and competition of norms and attitudes of the likewise global late-modern society [3,4].

Against this background, it is not surprising that approaches that attempt to define and conceptualize sustainability in general, and social sustainability in particular, are struggling to elaborate a coherent and concise understanding of them. In a similar vein, the conceptualization of quality of life requires dialectic approaches. Quality of life permanently seeks to improve one's current situation on the one hand. Yet, simultaneously, it defends the achieved level as much as possible, depending on different sorts of capital. Struggling with change and steadiness in both "quality of life" and "social sustainability" domains is, therefore, challenging to meet the other sustainability criteria. Due to these dialectic patterns, interlinking both domains is meant to be a relevant scientific and political endeavor since it reveals potential asymmetries or contradictions between them.

Based on this epistemological framing, the paper intends to examine attitudes toward social sustainability in light of residents' quality-of-life aspirations in two suburban cross-border regions. One is located in Austria and Slovakia (Lower Austria and Burgenland, and Bratislava) and the other in Germany and Austria (Bavaria and Salzburg). The empirical setting is characterized by an online survey disseminated in the two suburban regions. Quality of life is challenged by social sustainability in many different ways. We associate this tension in the fields of housing conditions, social infrastructure facilities, neighborhood relationships, and local participation.

In the next Section, we provide a theoretical overview of quality-of-life domains that are challenged by social sustainability efforts. Section 3 outlines characteristics of the two study regions, which is followed by a brief delineation of our methodology in Section 4. Section 5 discusses relevant empirical results, and Section 6 offers some concluding remarks.

## 2. Theoretical Background

The research topics we are interested in were inspired by the theoretical approaches explicated, among others, by Šveda [5], Cao [6], Dempsey et al. [7], McCrea et al. [8], Messer and Dillman [9], Oktay and Rustemli [10], and Lovejoy et al. [11].

Šveda [5] conducted a case study of the social environment of a small suburban town in the Slovak hinterland of Bratislava, Stupava, with a focus on the social integration, participation, cohesion, and everyday life of old settlers and new settlers. Our research of residents' motives for the decision to live in a particular municipality was inspired by his questionnaire. Oktay and Rustemli [10] carried out a study on the quality of urban life in Famagusta, Northern Cyprus. The findings of the survey dealt with, among other topics, the overall quality of life, neighborhood satisfaction and assessments of neighborhood social attributes (such as neighborhood attachment or social ties). Similarly, McCrea et al. [8] carried out research in subjective quality of urban life (QOUL) in Queensland, Australia, regarding the overall subjective QOUL, as well as four attributes of urban environments—access to services and facilities, noise pollution, incivilities, and social capital. Messer and Dillman [9] examined the differences in subjective quality of life between urban and rural residents on the example of Washington State. The research of Lovejoy et al. [11] explored the differences in neighborhood satisfaction among residents of traditional vs. suburban neighborhoods in California and looked for features statistically connected to the higher level of satisfaction in respective groups. Cao [6] studied the effect of neighborhood design on life satisfaction in the Minneapolis–St. Paul metropolitan area with an adaptation of the so-called Campbell's model and applying a structural equations modeling approach. Dempsey et al. [7] discussed the concept of social sustainability within the urban context, with a focus on its two main dimensions, social equity and the sustainability of the community. The measure of social equity, accessibility, as well as five dimensions of sustainability of community (social interaction/social networks in the community; participation in collective groups and networks in the community; community

stability; pride/sense of place; and safety and security), stated by these authors were considered and covered in questions in both of our surveys.

### 2.1. Understanding the “Why” of Residential Decisions to Suburban Regions

Suburban migrants have various reasons for deciding to move to municipalities in the vicinity of a big(ger) city. Witten et al. [12] claim that a household’s residential location is affected, among other things, by housing affordability, family history, and employment opportunities. Šveda [5] (pp. 152–153) highlights that “the decision to change residence is a significant event in everyone’s life and is often the result of several factors that on the one hand ‘push’ people out of their original location (e.g., poor quality of housing, crime, etc.), on the other hand ‘attract’ them to a new location (proximity to nature, more space for family, safe neighbourhood, etc.)”.

McCrea et al. [8] report that the tendency of residents to be satisfied with the location of their housing depends on a variety of psychological reasons. Subjective urban quality of life and housing site selection are not only important in terms of residents’ perceptions of satisfaction but also have economic, social, and environmental implications, e.g., impact on migration flows, economic growth, and the environmental sustainability of communities and regions, or, more broadly, the impact on climate change [11,13]. Parkes et al. [14] (p. 2417) explain, “neighbourhood satisfaction may also be affected by people’s expectations of their neighbourhood and the extent to which it can meet their needs. These expectations will reflect their degree of choice in neighbourhood location as well as their own particular lifestyle”. A “home” (such as a house, neighborhood, or locality) is, like other places, made up of social relations that lead to varying degrees of belonging [12]. Housing choice in the form of self-selection also affects residents’ social interactions, as Wang et al. [15] (p. 654) point out: “people with similar preferences and social class could choose to live in the same locality for their shared preference of housing type and may thus increase the likelihood of interacting with each other”.

The selective literature reference illustrates a strong motivation of suburban residents to “development” and “maintenance” sustainability but misses an explicit consideration of “bridge” sustainability [16]. Social needs and cultural continuity prevail over incorporating ecosystem goals.

### 2.2. Residents’ Satisfaction

Potential determinants of residential satisfaction include, for example, attributes of residents’ physical, socio-cultural, and economic environments, the availability of facilities and services, and the characteristics and personality traits of the residents themselves [11]. According to Bayulken and Huisingh [17], the conditions of the residential and local environment influence the subjective well-being of an individual based on the physical characteristics of the place of residence, its location, level of connectivity, proximity to facilities, availability of goods and services, and the aesthetic and technological attributes of the environment, as well as the community within which the individual lives and socializes.

Abass and Tucker [18] state the following factors as determinants of residential satisfaction and neighborhood satisfaction: (a) socio-demographic characteristics (e.g., length of residence, age, household income, household size, and highest level of education attained by residents); (b) psychosocial factors (e.g., sense of safety, social connections and support between neighbors, and level of attachment); (c) physical characteristics of the neighborhood (e.g., accessibility of facilities, better pedestrian environment, quality and provision of green spaces, traffic volume and safety, and maintenance of outdoor spaces).

The physical environment and its quality, such as the presence of clean green spaces and unpolluted air and water, play an important role in the context of both quality of life and sustainability [19]. Moser [20] characterizes individual quality of life in the context of sustainability in terms of the congruity between humans and the environment. Sustainability represents those satisfactory living conditions that enable people to positively identify with the environment in which they live [20]. According to this author, a sustainable quality

of life can only be achieved when people treat their environment with respect and, at the same time, when the environment does not limit or threaten their quality of life. Abass and Tucker [18] (p. 62) found out that “(1) neighbourhood satisfaction associated with physical characteristics can increase social stability, determine resident location preferences and improve quality of life; (2) social interaction could be facilitated through suburban planning; and (3) vital environments can meet the goal of community sustainability”.

In his study about forecasting urban futures, Mitchell [21] points to two distinct aspects of the consequences of successful urban development: “Towns and cities have acted as major centres of economic activity, political decision-making and cultural creativity. But they have also been the seats of many of the most severe social and environmental problems generated by demographic and economic growth.” [21] (p. 99). Quick and extensive urban growth brings about environmental damage, economic unsustainability, and social dislocation [22]. Some of the problems are the rising demand for goods and services stemming from the concentration of population, or environmental concerns regarding air quality, noise, housing standards, water management, or the quality of the built environment [21]. With people moving to the vicinity of big cities in the process of suburbanization, resulting in population growth of the respective municipalities, our assumption is that similar problematic issues may be expected to occur in suburban regions, too.

### *2.3. Functional Patterns of Periodic Activities*

Movement to suburban areas does not necessarily comply with a comprehensive supply of social services needed or wanted nearby, which gives rise to complex mobility patterns, most notably in cross-border regions. Some residents may tend to use social services in their former places of residence, while others appreciate the available services in their new neighborhood. Restrictions in the first case might be language barriers or different cultural backgrounds (e.g., visiting a doctor). In the latter case, new residents might be interested in using services and facilities because they were one of the reasons why they decided to move. An example for cross-border effects would be parents who are interested in letting their children growing up in a foreign language. This has been found in a survey of Slovak residents who emigrated to the Austrian border region in the hinterland of Bratislava [23].

A lack of social services can, however, also be caused by a growing population in suburban regions [24]. Accessibility is considered a fundamental measure of social equity, which is one of the two underlying concepts of social sustainability (besides sustainability of community) [7]. In the case of the absence or insufficient capacity of local services and facilities, inhabitants need to travel to other locations, which results in higher—and avoidable—costs in time and money and traffic volume. Local planning strategies that keep pace with the demographic development quantitatively and qualitatively are thus needed to meet residents’ needs and to deal with efforts of social and ecological sustainability.

Accessibility of basic facilities and services can also have an impact on social relations in municipalities, especially for people who tend to spend most of the day in their place of residence. As Witten et al. [25] (p. 323) argue, “service and amenity access not only makes the tasks of daily life more achievable but can also influence residents’ propensity to walk in local streets thereby increasing opportunity for the serendipitous contacts with neighbours that underpin social relations”. Indeed, places and opportunities where residents can meet, such as public spaces (squares, parks, and bus stops), service facilities (schools, shops, pubs, and sports clubs), or local events, constitute so-called bridging components [26].

In the context of cross-border suburbanization, the availability of basic facilities and services has another important aspect, which is referred to as transmigration [27], elastic migration [28], regionauts [29], or border surfers [30]. These notions circumscribe the activities of migrants who regularly and deliberately cross borders to enjoy “the best of both worlds”. Residents of metropolitan areas have in general proper access to “central goods”, which is less a given for residents of suburban regions. Utilizing “the best of both worlds” may have a positive or negative impact on social and ecological sustainability, as it

depends on the concrete availability and affordability of different transportation systems and a (subjective) trade-off of costs.

#### 2.4. Community and Local Engagement

Cross-border suburbanization influences municipalities also in changes of the population structure, which challenges community life because of the different lifestyles of immigrants, which in turn affects the social sustainability of these municipalities. According to Šveda and Podolák [24], new suburban (and formerly urban) migrants with different socioeconomic characteristics introduce urban lifestyles and customs to the municipalities, where they can stimulate both the productive development of the community and the concurrent conflicts between old and new inhabitants. Špačková and Ouředníček [26] point out that although new residents bring many contacts and information from external social groups to the municipality, it is important how they are used for local development. In their study of residents of suburban Prague, they found out that suburbanites contribute to the development of local communities by rehabilitating or founding facilities such as kindergartens, schools, and childcare centers, or engaging in leisure activities, and civic and political life.

However, as Dallhammer et al. [31] (p. 16) point out, through suburbanization “people are living in the vicinity of a city but are still connected to the life in the city through friendship, the use of cultural or educational institutions in the city and other social networks”. Bernard [32], in his research on the social integration of immigrants from the city to rural municipalities in the Czech Republic and Austria, found that if immigrants were interested and actively tried to participate in the public life of the municipality and establish relationships with other inhabitants, social integration was easier for them. Social integration thus demands mutual willingness and an opportunity to accept social differences.

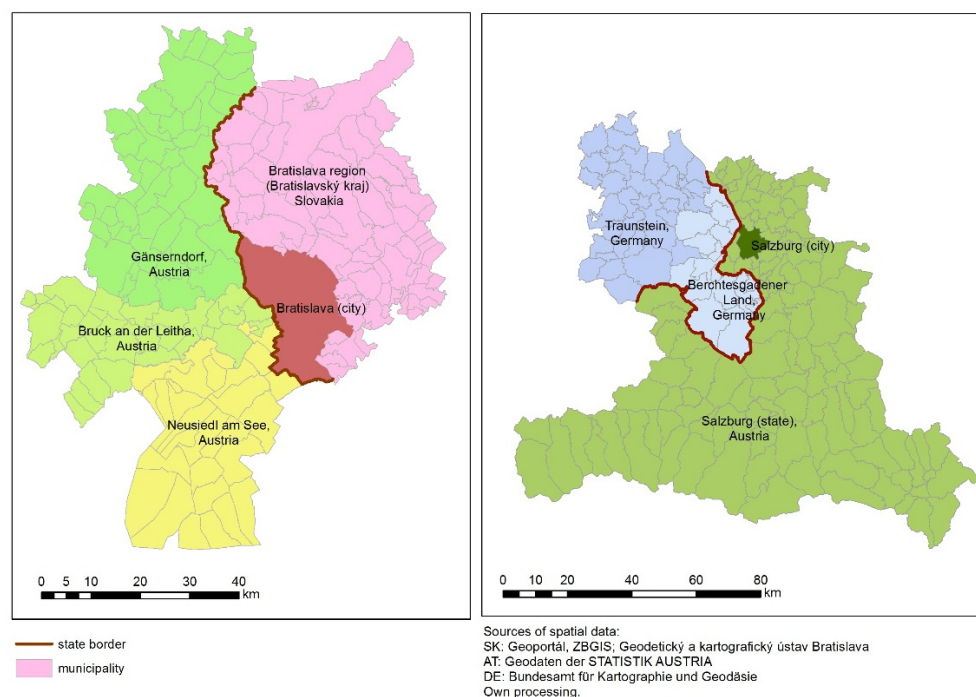
Perceived isolation is mentioned by Špačková and Ouředníček [26] as one of the problematic factors in the cohabitation of old and new settlers, which could hinder the formation of mutual social ties. In their view, isolation can be spatial (segregation) or social (classes), but it usually disappears with an increasing length of stay and the deepening integration of new settlers into the life of the community.

In general, social cohesion “refers to the institutions and norms that keep society together” [33] (p. 132) and represents “a collective, ecological dimension of a society, a bottom-up rather than top-down phenomenon that is commonly referred to as ‘social glue’” [25] (p. 323). The sustainability of social cohesion in a suburban location is related to its residential stability, which is reinforced by the predominantly private ownership of real estate or children’s friendships in schools, which is based on the interest of suburban migrants in living in these locations in the long term [26].

### 3. Suburban Cross-Border Regions of Bratislava and Salzburg

Bratislava and Salzburg are two medium-sized cities whose suburban environments sprawl across national borders—to Austria in the first case and to Germany in the latter (Figure 1). The intensity and extent of cross-national suburbanization is influenced by different conditions, such as legal constraints, tax regulations, labor or housing market restrictions, but also competitive “cherry-picking” in the provision of goods and services [34–36]. Although the three countries involved in the empirical investigation are all EU member states, their residents have to comply with these political and economic circumstances differently.





**Figure 1.** Maps of the municipalities and districts of the cross-border regions of interest. Different colors represent different political districts in both regions, or the cities of Bratislava and Salzburg. On the **left**: Austrian border region of Bratislava. On the **right**: German border region of Salzburg. Source of data: [37–39] (own processing).

### 3.1. Suburban Cross-Border Region of Bratislava

Until 1989, Slovakia (as part of Czechoslovakia) and Austria were divided by the Iron Curtain, and cross-border development between the two countries was limited. This situation changed because of the altered political situation at the beginning of the 21st century [40]. Three major milestones contributed to the revised meaning of the national border: first and foremost, Slovakia's accession to the European Union in 2004 was meant to be the starting point for a deep economic and political integration into Western Europe. Second, Slovakia's accession to the Schengen Agreement in 2007 paved the way to the free movement of persons, capital, goods, and services across borders within the EU. Equally important was the year 2011 (May 1), when the septennial transitional period ended and still-existing legal barriers were lifted, giving Slovak citizens full access to the Austrian labor market [41]. These political and economic milestones initiated both increasing integration of Slovak citizens into the Austrian labor market and a process of growing Bratislava's cross-border suburbanization, not least because of the lower land and housing prices in Austria.

According to Balizs and Bajmócy [36], the spread of Bratislava's suburban zone to the territory of Austria and Hungary is influenced by "new opportunities" in "still untouched" municipalities, since many of the domestic municipalities are significantly saturated with densely built-up areas and are perceived as socially problematic places.

The Austrian border region of Bratislava is characterized by relatively good transportation infrastructure. Bratislava and Vienna are well-connected by road and railway, making commuting in this part of the cross-border region relatively easy [42]. The extension of the railway line from Kittsee to Bratislava-Petržalka in 1998 and later the introduction of a public transportation line to Hainburg an der Donau helped to improve cross-border accessibility [40].

At present, there are approximately 272,000 inhabitants in the three Austrian political districts adjacent to the border of Bratislava (Bruck an der Leitha, Gänserndorf, and Neusiedl am See), of which ca. 9000 (3%) are of Slovak nationality [43]. Between 2011

and 2021, the highest growth rates were experienced by those municipalities that lie directly on or near the border to Bratislava, such as Kittsee (165.4%), Wolfsthal (135.5%), Bad Deutsch-Altenburg (132.7%), or Edelstal (127.2%). Other “popular” municipalities for Slovak migrants are, for example, Berg (122%) and Hainburg an der Donau (117.4%) [43] (own calculations).

### 3.2. Suburban Cross-Border Region of Salzburg

In comparison to the Slovak–Austrian cross-border region of Bratislava, the German–Austrian cross-border region of Salzburg has not experienced such rapid changes in recent decades. Their territories were not separated by the rigid Iron Curtain, and their common political history as fellow members of the European Union and the Schengen Area is a bit longer—since 1995 and 1997, respectively. However, as Svensson [44] (p. 5) points out, due to the migration crisis in 2015, the German–Austrian border “was under high stress compared to other [internal] borders” of the Schengen Agreement. As a result, the border controls had to be reintroduced. Nevertheless, the cross-border city region of Salzburg is, similarly to the case of Bratislava, also subject to cross-border commuting and cross-border suburbanization.

To foster cross-border cooperation, a voluntary association named “EUREGIO Salzburg—Berchtesgadener Land—Traunstein” was established in 1995 [45]. Currently, its members are municipalities on both sides of the border, two German political districts, the Salzburg chambers of commerce, labor, and agriculture, and a private person [46]. Currently, about 284,000 inhabitants live in the German border region of EUREGIO Salzburg [47].

An asymmetric commuting pattern from the suburban zone to the city of Salzburg is a given for the long term [48]. Between 2011 and 2020, the growth rates of selected municipalities located at or close to the border are as follows (Table 1):

**Table 1.** Growth rates of selected municipalities in the German border region of Salzburg.

| Municipality         | Positive Growth Rate 2011–2020 (%) | Municipality             | Negative Growth Rate 2011–2020 (%) |
|----------------------|------------------------------------|--------------------------|------------------------------------|
| Laufen               | 110.4                              | Markt Berchtesgaden      | 99.8                               |
| Freilassing          | 107.5                              | Ainring                  | 99.8                               |
| Bad Reichenhall      | 105.8                              | Bayerisch Gmain          | 99.5                               |
| Saaldorf-Surheim     | 105.5                              | Markt Marktschellenberg  | 97.8                               |
| Schönau am Königssee | 104.8                              | Bischofswiesen           | 95.8                               |
| Anger                | 104.1                              | Ramsau bei Berchtesgaden | 94.4                               |
| Piding               | 103.6                              | Schneizlreuth            | 92.5                               |

Source: [47] (own calculations).

As Table 1 highlights, the population growth in the German suburban area is less dynamic than in the other study region and depends significantly on good accessibility of public transportation and the distance to the city of Salzburg.

## 4. Methodology

Data for this study were gathered through separate surveys in both cross-border suburban zones and are part of a bigger research project dedicated to exploring residential satisfaction, quality of life, and social sustainability in cross-border regions. The aim of the surveys was to obtain data on the opinions, perceptions, and attitudes of respondents on questions and statements related to four main themes: (1) housing and mobility, (2) attractiveness of environment and housing satisfaction, (3) neighborhood relations and community life in the municipality, and (4) life in a border region. Since we were interested in respondents’ subjective evaluations that would more directly reflect the issues of quality of life, residential satisfaction, and social sustainability in cross-border suburban regions,

we chose a survey method among residents instead of the Delphi method traditionally carried out by a panel of experts.

Both surveys took the form of a mostly structured questionnaire with a few open-ended questions that allowed respondents to express their subjective views and attitudes on certain topics in more detail. The two surveys were identical in terms of questions, but for some of the closed questions the possible answers differed as they were adapted to the local geographical specificities of the two border regions. In total, the survey contained 55 questions for the Austrian border region of Bratislava, and 65 questions for the German border region of Salzburg (the larger number of questions in the second survey is related to the technical split of several compact questions from the identical first survey into several shorter ones for better readability). For the purpose of exploration of the link between quality of life and sustainable development in this paper, only selected questions were analyzed and grouped into four themes—namely motives for the residential decisions, residents' satisfaction, functional patterns of periodic activities, and community and local engagement—and are presented in Section 5. The questionnaire was pilot tested before its official dissemination.

An anonymous online questionnaire in German, Slovak, and English was used in both surveys because COVID-19 measures inhibited face-to-face correspondence and time and cost restrictions made lengthy traveling impossible. We are aware of the bias in the data that is due to the online approach. The target groups were the inhabitants of the suburban areas in both regions. While the Austrian suburban region encompasses two political districts of Lower Austria (Bruck an der Leitha and Gänserndorf) and one of Burgenland (Neusiedl am See), the German suburban region is composed of two political districts of Bavaria (Berchtesgadener Land and Traunstein). These areas cover the most relevant suburban zones according to our research topics.

To reach as many inhabitants as possible, we applied different dissemination strategies, such as social media opportunities for sharing the link to the online questionnaire in local and regional groups on social networks, and a newsletter of the platform “BAUM” (in the Slovak–Austrian region) and “EUREGIO Salzburg-Berchtesgadener Land-Traunstein” (in the Austrian–German region). Any resident over the 15 years of age was invited to participate in the survey. The survey in the Austrian border region of Bratislava took place in January 2021, and the survey in the German border region of Salzburg was conducted in June 2021. The questionnaire was open for participation for three weeks. As we were interested in the different domains of social sustainability, COVID-19 measures did not play an explicit role, though we were aware that respondents could not completely disentangle from this crisis.

A total of 353 inhabitants from both regions participated in the survey. After an exploratory evaluation, four incomplete cases were removed. This left 205 participants in the Bratislava case study and 144 in the Salzburg case study. Table 2 presents the sample characteristics. As the participation of respondents in either of the surveys was voluntary and random, the sample is not completely representative, and the results do not allow a full generalization of the conclusions. The sample is not evenly distributed spatially; the most represented municipalities in the first study area are Hainburg an der Donau (38.5%) and Kittsee (25.4%), while in the latter case it is Freilassing (42.4%). Other municipalities were represented to a much lesser extent. Table 3 presents the geographical overview of the respondents' representation.

Concepts of quality of life and social sustainability were investigated through various factors and measures. Quality of life in terms of housing issues was investigated through subjective evaluation of respondents' satisfaction with selected social and ecological attributes of the residential environment, as well as the accessibility of basic facilities and services. Respondents were asked to express their responses using a Likert-type scale with options ranging from “very dissatisfied” to “very satisfied”. Regarding the concept of social sustainability, we focused on exploring community life in the municipality also through subjective evaluation by the respondents. Through a Likert-type scale, they were



able to express their level of agreement or disagreement with several statements regarding community relations and the sense of belonging. In addition, we analyzed the respondents' answers with respect to their decisions about participation in community life, housing, and mobility in the cross-border region to see if we can observe cherry-picking for quality-of-life improvements with implications for social sustainability.

**Table 2.** The sample characteristics.

| Category         | Description | German Border Region of Salzburg |                   | Austrian Border Region of Bratislava |                   |
|------------------|-------------|----------------------------------|-------------------|--------------------------------------|-------------------|
|                  |             | Respondents (N)                  | Respondents (%)   | Respondents (N)                      | Respondents (%)   |
| Gender           | Men         | 31                               | 21.5%             | 69                                   | 33.7%             |
|                  | Women       | 113                              | 78.5%             | 136                                  | 66.3%             |
| Age              | 15–19       | 3                                | 2.1%              | -                                    | -                 |
|                  | 20–29       | 24                               | 16.6%             | 31                                   | 15.1%             |
|                  | 30–39       | 40                               | 27.8%             | 72                                   | 35.1%             |
|                  | 40–49       | 47                               | 32.7%             | 57                                   | 27.8%             |
|                  | 50–59       | 24                               | 16.6%             | 29                                   | 14.1%             |
|                  | ≥60         | 6                                | 4.2%              | 16                                   | 7.8%              |
| Income (€/month) | ≤999 €      | 2                                | 1.4%              | 4                                    | 2.0%              |
|                  | 1000–1999 € | 10                               | 6.9%              | 32                                   | 15.6%             |
|                  | 2000–2999 € | 33                               | 22.9%             | 45                                   | 22.0%             |
|                  | 3000–3999 € | 41                               | 28.5%             | 37                                   | 18.0%             |
|                  | ≥4000 €     | 47                               | 32.6%             | 71                                   | 34.6%             |
| Household size   |             | 2.96 (mean)                      | 1.393 (std. dev.) | 3.07 (mean)                          | 1.304 (std. dev.) |

Source: Own results.

**Table 3.** The residences of the survey participants.

| Category                                                 | Political District   | Respondents (N) | % of N (N = 349) |
|----------------------------------------------------------|----------------------|-----------------|------------------|
| Political districts in Austria<br>("politische Bezirke") | Bruck an der Leitha  | 110             | 31.5%            |
|                                                          | Gänserndorf          | 14              | 4.0%             |
|                                                          | Neusiedl am See      | 81              | 23.2%            |
| Administrative districts in Germany<br>("Landkreise")    | Berchtesgadener Land | 110             | 31.5%            |
|                                                          | Traunstein           | 34              | 9.7%             |

Source: Own results.

For the analysis of the collected questionnaire data, we used the methods of descriptive statistics and cross-tabulations, as well as Spearman's correlation coefficient and Cramér's V. Given that the type of responses represents mostly ordinal data, we could only conduct the analysis through non-parametric statistics. The results are presented by means of graphs and tables, which also allow a comparison of the values between the Austrian border region of Bratislava and the German border region of Salzburg.

## 5. Results and Discussion

With the empirical study we wish to explore the role of quality of life in everyday life of residents of cross-border suburban regions in general and the potential or factual impact social sustainability may have on everyday suburban life in this type of region.

We first present the motives of residents for living in the two suburban regions. Knowing their preferences can give us clues about their initial ideas and images of their (future) places of residence, and whether social or environmental conditions played an important role in their decision-making processes. Second, we analyze the respondents' subjective ratings of satisfaction with selected social and ecological/environmental aspects of living in their municipality or neighborhood. Next, we provide an overview of the functional patterns of residents' regular activities and commuting patterns and assessments of accessibility of basic services and facilities. The aim of this section is to find out how they move

around in the cross-border region and whether the presence of the border influences the pattern of their daily activities. Finally, we will try to answer the question of the respondents' sense of belonging to their social and geographical environment by means of their local community engagement. Understanding relationships and embeddedness in community life will give us more insights into aspects of social sustainability in dynamically changing cross-border regions. Finally, we will analyze the links between social sustainability and quality of life.

### *5.1. Understanding the “Why”: Residential Decisions*

Knowing the reasons why people living in the Austrian border region of Bratislava and the German border region of Salzburg chose to live in municipalities in these regions allows us to analyze whether their decisions also have an impact on social and ecological sustainability.

First, we were interested in where they came from. About one-quarter of the respondents from the German border region of Salzburg had lived in their respective municipalities since birth. Together with respondents who were born in the municipality, moved away, and then returned, the share of respondents with a historical connection to their current place of residence is around one-third. Approximately half of the respondents immigrated from another municipality in Germany, and the rest lived previously in Austria or in another country. As for the survey participants from the Austrian border region of Bratislava, almost two-thirds had immigrated from Slovakia and around one-quarter from another municipality in Austria, while one-tenth had lived in their municipality since birth, and the rest came from other countries. We assumed that the results on the residential decisions of the Bratislava–Austrian sample would differ from the Salzburg–German sample because in the first case the survey participants are mostly foreign nationals, whereas in the latter the majority is from the home country.

The topic of housing decisions was addressed in the surveys with the question, “Why did you decide to live in this municipality?”, which offered a range of 18 predefined responses and one open-ended response, with respondents able to select more than one response. In this study, we grouped the reasons into six categories: “childhood”, “personal”, “social”, “environmental/ecological”, “infrastructural”, and “other”. The response categories were the same in both surveys, except that the option “I inherited a house/apartment/land” was missing in the Bratislava survey, and the option “Education of children in German” was missing in the Salzburg survey for obvious reasons.

In the case of the German border region of Salzburg, the results show that for about one-third of people the environmental/ecological aspect of their surroundings is important (quiet rural environment and proximity to nature; Table 4). This is followed by motives related to favorable infrastructure, such as proximity to Salzburg or good transport links to work, and then social motives, in particular the expectation of a higher quality of life, the offer of facilities and amenities, and the safety of the environment. The situation is similar for the Austrian border region of Bratislava, where for at least 30% of respondents or more, living in a quiet (rural) environment, proximity to nature, and a higher quality of life were very important motives (Table 4). Even if we divide the sample into native-born Austrians and immigrant Slovaks, these remain among the most frequently expressed choices. In addition to these, suburban migrants from Slovakia highly valued the affordable real estate offer and the proximity to Bratislava, two factors that did not play a significant role for the Austrian respondents.

**Table 4.** Motives for the decision to live in a particular municipality.

| Category                 | Motives                                                            | German Border Region of Salzburg<br>(% of Respondents) | Austrian Border Region of Bratislava<br>(% of Respondents) |
|--------------------------|--------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------|
| Childhood                | I have lived here since I was born                                 | 32                                                     | 12                                                         |
| Personal                 | I have inherited house/apartment/land                              | 7                                                      | x *                                                        |
|                          | I wanted to live in Germany/Austria                                | 6                                                      | 28                                                         |
|                          | I moved in with family or friends                                  | 18                                                     | 9                                                          |
|                          | I just wanted to change my place of residence                      | 4                                                      | 12                                                         |
| Social                   | Safe environment                                                   | 20                                                     | 25                                                         |
|                          | Feeling of privacy                                                 | 13                                                     | 19                                                         |
|                          | Good infrastructure of preschool and school facilities             | 15                                                     | 13                                                         |
|                          | Good range of facilities such as shops,<br>post office, bank, etc. | 18                                                     | 16                                                         |
|                          | Health and social system in Germany/Austria                        | 9                                                      | 18                                                         |
|                          | Education of children in German                                    | x *                                                    | 25                                                         |
| Environmental/Ecological | Higher quality of life                                             | 24                                                     | 37                                                         |
|                          | Quiet (rural) environment                                          | 36                                                     | 41                                                         |
|                          | Aesthetics of the environment                                      | 22                                                     | 22                                                         |
|                          | Proximity to nature and opportunities for recreation               | 35                                                     | 31                                                         |
| Infrastructural          | Affordable real estate offer (house, apartment, land)              | 13                                                     | 36                                                         |
|                          | Proximity to Salzburg/Bratislava                                   | 27                                                     | 43                                                         |
|                          | Proximity and good transport links to the place of employment      | 22                                                     | 30                                                         |
|                          | Good connection of the municipality to the public transport        | 9                                                      | 26                                                         |
| Other                    | Other personal motives                                             | 19                                                     | 6                                                          |

\* No data—this motive did not appear in the respective survey. In both surveys, multiple answers were possible. Source: Own results.

The prevailing motives in the residential decisions of respondents from both border regions suggest that the ecological aspects of the residential environment generally played a slightly more important role than social and infrastructural factors. However, the “cherry-picking” aspect of cross-border suburbanization related to the use of “the best of both worlds” is evident. Residents of suburban regions value the opportunity to live in a more peaceful and safer environment in comparison with living in the big city, but they also like living in proximity to a metropolis with a good transport link to the workplace and other opportunities city life offers. Suburban regions in this respect represent very attractive places where residents try to fulfil their needs for a higher quality of life, while their individual motives are very subjective. Therefore, development sustainability is at the forefront in the topic of social sustainability, and the issues of ecological sustainability, such as dealing with emissions from commuting, have yet to be considered. The attractiveness of suburban border regions serve as a pull factor for residents, encouraging migration flows and putting more demands on providing bridge sustainability. On the other hand, because of self-selection of housing location in a pleasant environment and possible attempts to build social networks by residents, we assume a growing sense of belonging and attachment to the community, resulting in support for both social sustainability and quality of life to maintain the positive and attractive status quo over time.

### 5.2. Residents' Satisfaction

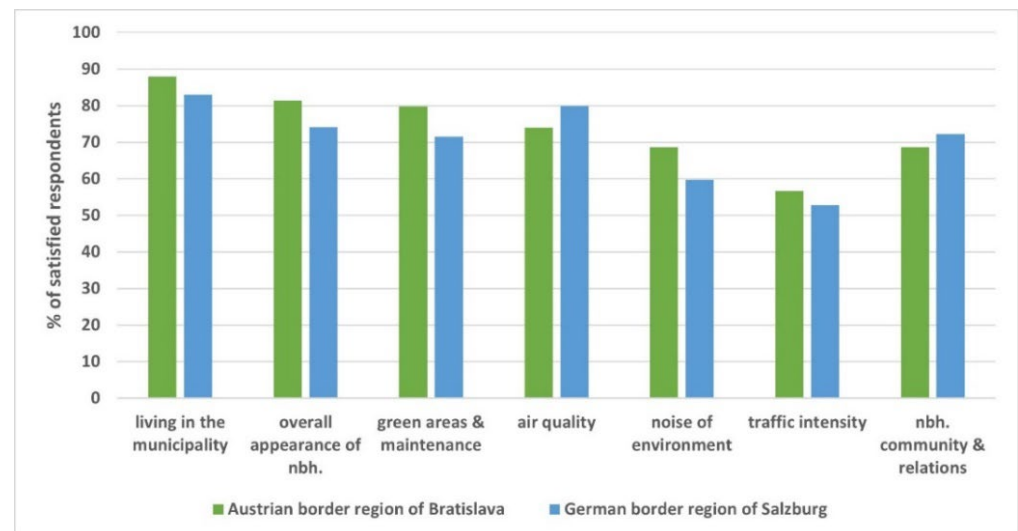
We further analyzed residents' satisfaction ratings with neighborhood community and relations, but especially with environmental factors, such as the overall appearance of the neighborhood, green areas and their maintenance, air quality, noise of the environment, and traffic intensity. Expressing satisfaction with these factors tells us about residents' subjective attitudes toward them and points to possible problematic issues that need to be improved to promote higher quality of life, as well as social sustainability.

People were generally satisfied with the overall appearance of their neighborhood, green areas and their maintenance, and air quality. However, they were not as satisfied with the noise level of the environment or the traffic volume (Figure 2). We assume that these conditions have been strongly influenced by suburbanization (in cross-border regions) and the increase in traffic, which is also related to environmental noise and possibly to air pollution, too. It should be noted that noise may not only come from traffic, but from other sources as well. For example, while some residents of the Austrian border region of Bratislava complained about the increase in transit traffic after Slovakia's accession to the Schengen Area, residents of the neighboring German municipalities of Salzburg complained about noise from the airport or some industrial sites. For most of the monitored factors, a higher proportion of satisfied respondents from the Austrian border region of Bratislava compared to those from the German border region of Salzburg was found, with the exception of air quality and neighborhood relations. Living in a quiet rural environment and close to nature, i.e., in a healthier and quieter environment than the city, was the dream of many suburban dwellers. It can be argued that the more people seek to fulfil such a dream by moving to suburban regions, the less this dream becomes truly achievable for overall communities and may also affect the social sustainability of these regions. For example, the presented psychosocial factors and physical characteristics of the neighborhood are some of the potential determinants of residential satisfaction and quality of life, which in turn influence the identification of inhabitants with the place where they live, thus affecting social sustainability.

In addition, we analyzed the relationships of satisfaction levels of selected characteristics with income classes and household classes through cross-tabulations.

Table 5 illustrates the relationships between income and satisfaction of selected natural environmental characteristics (rows above) and compares it with the social environmental characteristic of community life (rows below). Comparing the two income classes across both study regions shows a higher satisfaction level of all environmental characteristics for the highest income class (upper lines represent the German part of Salzburg's suburban

region and lower lines (in italics) the Austrian part of Bratislava's suburban region). Furthermore, both income classes feel more satisfied in Bratislava's Austrian suburban region than Salzburg's German suburban region, except for air quality (although both suburban regions lie to the west of the urban centers). Another related result is that the lower income class is far less satisfied with all the environmental properties than the highest income class in the Salzburg suburban region. Though not statistically significant, these differences are notable (the Cramér's Vs express mostly weak effects and the Spearman correlation coefficients are all below 0.2).



**Figure 2.** Social and ecological/environmental satisfaction assessments. nbh. = neighborhood. Share of respondents who expressed some positive level of satisfaction (“very satisfied” or “rather satisfied”). Source: Own results.

**Table 5.** Relationships between income classes and satisfaction levels of selected characteristics.

|                   | Green Areas  |           | Air Quality  |           | Noise        |           | Traffic      |           |
|-------------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
|                   | Dissatisfied | Satisfied | Dissatisfied | Satisfied | Dissatisfied | Satisfied | Dissatisfied | Satisfied |
| Lower income *    | 10.0         | 40.0      | 10.0         | 70.0      | 20.0         | 50.0      | 10.0         | 30.0      |
|                   | 9.4          | 81.0      | 0.0          | 78.2      | 3.1          | 75.0      | 25.9         | 51.7      |
| Highest income ** | 6.4          | 83.0      | 4.2          | 85.1      | 17.0         | 68.1      | 21.3         | 57.4      |
|                   | 5.6          | 85.9      | 5.6          | 76.0      | 5.6          | 76.1      | 12.6         | 66.2      |
| Community Life    |              |           |              |           |              |           |              |           |
|                   | Dissatisfied | Satisfied |              |           |              |           |              |           |
| Lower income *    | 10.0         | 40.0      |              |           |              |           |              |           |
|                   | 15.6         | 59.4      |              |           |              |           |              |           |
| Highest income ** | 10.6         | 80.8      |              |           |              |           |              |           |
|                   | 9.8          | 77.5      |              |           |              |           |              |           |

\* Lower income = EUR 1000–1999; \*\* Highest income = EUR 4000 and more. Values in italics represent the Austrian part of Bratislava's suburban region. Source: Own results.

On the other hand, the differences in the Bratislava suburban region are less significant across all environmental properties. Moreover, the lower income classes in both regions are less satisfied with their social environment (indicated by “community life”) than the highest classes; in Salzburg's suburban region, this is only half of it. These results can partly be explained by different mobility patterns between the two income classes, as respondents from the highest income class travel less often to Bratislava than those from the lower income class (in Salzburg's German suburban region, there is no significant difference



between the two income classes). Overall, the highest income class performs better in satisfying their environmental and social needs and would thus be able to cope with social sustainability more suitably.

If environmental and social characteristics are related to the household size, the patterns are less clear (Table 6). Differences between the three types of household sizes across both regions are relatively small and statistically not significant for most properties. “Traffic” satisfaction performs better for medium and large households in Salzburg’s study area, while “green areas” do so for small and large households in Bratislava’s study region. Only large households in Bratislava’s suburban area have a remarkably higher satisfaction level with their social environment than those in Salzburg’s case. Furthermore, the household size does not distinguish mobility behavior patterns in both study areas.

**Table 6.** Relationships between household classes and satisfaction levels of selected characteristics.

|                       | Green Areas  |              | Air Quality  |              | Noise        |              | Traffic      |              |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                       | Dissatisfied | Satisfied    | Dissatisfied | Satisfied    | Dissatisfied | Satisfied    | Dissatisfied | Satisfied    |
| Small house *         | 13.1<br>1.4  | 64.0<br>85.8 | 6.5<br>1.4   | 78.7<br>78.9 | 16.4<br>4.2  | 59.0<br>71.8 | 21.3<br>22.9 | 54.1<br>55.7 |
| Medium house **       | 4.0<br>11.0  | 76.7<br>75.4 | 4.0<br>9.9   | 82.7<br>72.0 | 17.3<br>12.7 | 72.7<br>69.5 | 21.4<br>20.4 | 50.6<br>39.9 |
| Large house ***       | 12.5<br>0.0  | 62.5<br>86.7 | 0.0<br>6.7   | 62.5<br>66.7 | 0.0<br>20.0  | 37.5<br>46.6 | 25.0<br>26.6 | 62.5<br>40.0 |
| <b>Community Life</b> |              |              |              |              |              |              |              |              |
|                       | Dissatisfied | Satisfied    |              |              |              |              |              |              |
| Small house *         | 14.8<br>9.9  | 65.5<br>63.4 |              |              |              |              |              |              |
| Medium house **       | 8.0<br>11.0  | 78.7<br>70.4 |              |              |              |              |              |              |
| Large house ***       | 25.0<br>6.7  | 62.5<br>80.0 |              |              |              |              |              |              |

\* Small house = small households (1–2 persons); \*\* medium house = medium-sized households (3–5 persons); \*\*\* large house = large households (6 and more persons). Values in italics represent the Austrian part of Bratislava’s suburban region. Source: Own results.

### 5.3. Functional Pattern of Periodic Activities

This section presents, first, the mobility patterns of the suburban inhabitants with respect to four basic periodic activities: work activities, higher education, and children’s education at school and at kindergarten. These mobility patterns fundamentally influence social sustainability. Second, we present some results of irregular mobility behavior, and third, we analyze the satisfaction of respondents with the accessibility of several basic services, facilities, or amenities.

Almost half of the respondents from the German border region of Salzburg worked in their place of residence, and around one-third commuted to another German municipality within 45 min (Table 7). As regards respondents from the Austrian border region, one-third reported working in Bratislava, Slovakia, and almost all the rest worked in Austria—whether in the municipality of residence, the nearby metropolis of Vienna, or another municipality in Austria (Table 8). Comparing the proportions of respondents from both border regions who commuted to a large city on the other side of the border, it appears that a larger proportion of respondents from the Austrian border region commuted to Bratislava for work compared to respondents from the German border region who commuted to Salzburg for work. However, this difference may be due to the relatively high proportion of respondents of Slovak nationality in the research sample who live in Austrian municipalities in the immediate suburban zone of Bratislava, and we assume that many of them commute

to Slovakia for work, given the job opportunities that the capital city offers, as well as various personal ties. In the case of respondents from the German border region of Salzburg, the phenomenon of commuting to the neighboring country, Austria, is not as pronounced, which may be due to the structure of the sample, but also to the linguistic, cultural, and economic similarities between the two countries, or due to sufficient job opportunities in the home region.

**Table 7.** Places of carrying out periodic activities of respondents from the German border region of Salzburg.

|                                    | <i>n</i> * | Option 1 (%) | Option 2 (%) | Option 3 (%) | Option 4 (%) | Option 5 (%) | Option 6 (%) | Option 7 (%) |
|------------------------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Employment/work activities         | 135        | <b>47</b>    | 35           | 4            | 16           | 4            | 2            | 1            |
| Study (college, university)        | 43         | 5            | 14           | <b>51</b>    | 30           | 0            | 7            | 7            |
| Education of children—school       | 77         | <b>78</b>    | 19           | 5            | 21           | 1            | 1            | 0            |
| Education of children—kindergarten | 73         | <b>95</b>    | 3            | 1            | 1            | 0            | 0            | 0            |

\* Number of respondents who answered the question. Some activities were not relevant for all (e.g., pensioners who no longer work, people without young children, etc.). The highest values in each row are highlighted in bold. In the case of the survey in the German border region of Salzburg, respondents could indicate more than one option; therefore, the results do not show a final value of 100% in their case. Option 1: At the place of residence; Option 2: In another municipality in Germany (ca. 45 min. distance, e.g., up to Rosenheim); Option 3: In another municipality in Germany (more than 45 min. distance, e.g., Munich); Option 4: In the city of Salzburg; Option 5: In the state of Salzburg (Land); Option 6: In another municipality in Austria; and Option 7: Abroad (except Austria). Source: Own results.

**Table 8.** Places of carrying out periodic activities of respondents from the Austrian border region of Bratislava.

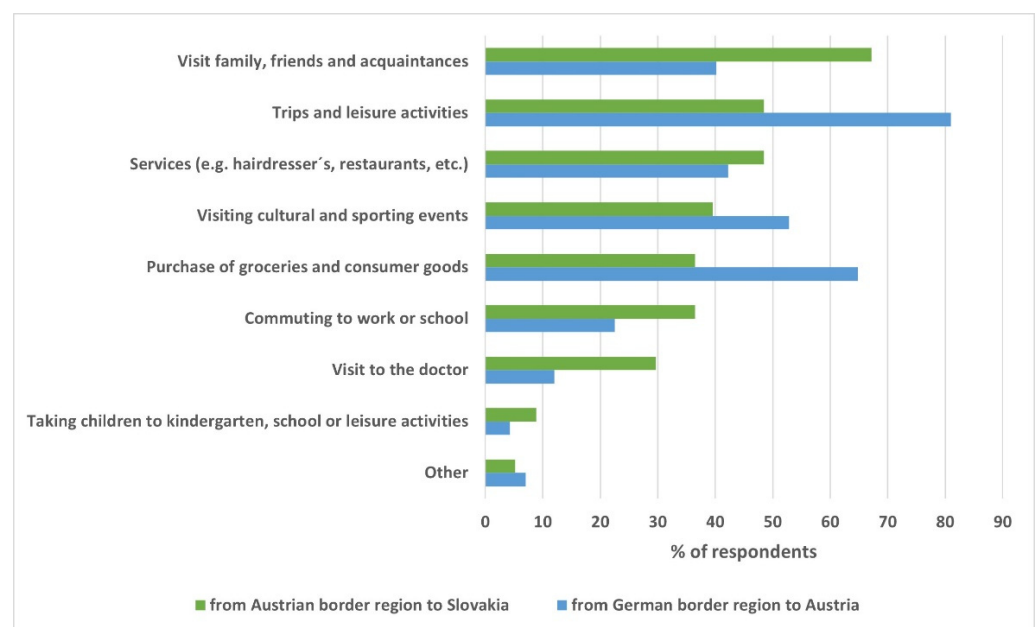
|                                    | <i>n</i> * | Option 1 (%) | Option 2 (%) | Option 3 (%) | Option 4 (%) | Option 5 (%) | Option 6 (%) |
|------------------------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Employment/work activities         | 191        | 24           | 23           | 18           | <b>35</b>    | 1            | 1            |
| Study (college, university)        | 50         | 6            | <b>44</b>    | 4            | 34           | 4            | 8            |
| Education of children—school       | 98         | <b>60</b>    | 3            | 19           | 14           | 1            | 2            |
| Education of children—kindergarten | 97         | <b>87</b>    | 0            | 3            | 7            | 1            | 2            |

\* Number of respondents who answered the question. Some activities were not relevant for all (e.g., pensioners who no longer work, people without young children, etc.). The highest values in each row are highlighted in bold. In the case of the survey in the Austrian border region of Bratislava, respondents could only indicate one option—the most frequent place where a given periodic activity takes place. Option 1: At the place of residence; Option 2: In Vienna; Option 3: In another municipality in Austria (except Vienna); Option 4: In Bratislava; Option 5: In another municipality in Slovakia (except Bratislava); and Option 6: Abroad (except Slovakia). Source: Own results.

Approximately half of respondents or their household members studied at universities or colleges in their country of residence (e.g., Munich or Vienna), but about one-third also commuted to a neighboring state (e.g., Salzburg or Bratislava) for higher education. In both the German and Austrian border regions of our study, the children of respondents usually attended schools or kindergartens in the municipality where they live (in kindergarten 95

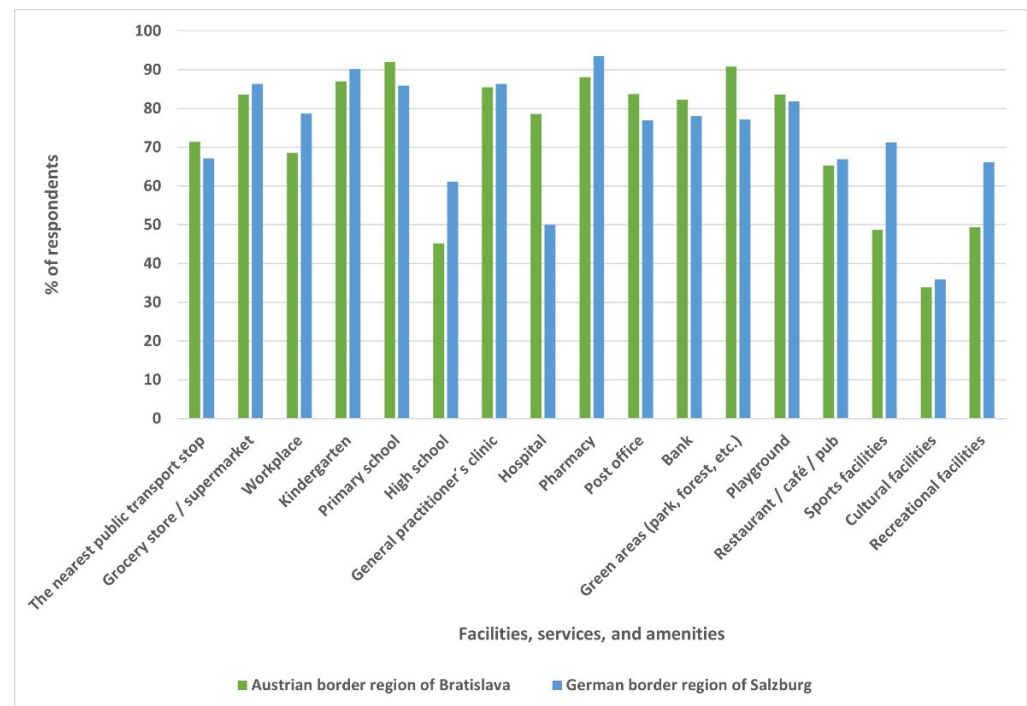
and 87%, respectively, and in school 78 and 60%, respectively; Tables 7 and 8). However, some also attended a school in another municipality, especially older children who attended a higher level or a certain type of institution that may not be located in their municipality. In the case of the Austrian border region of Bratislava, some children attended school in Slovakia. This may be due to a language barrier or perhaps simply to household convenience, where parents who commute to Slovakia for work take their children with them as part of their travel arrangements. In any case, educating children in the German language was one of the important residential decisions for Slovak suburban migrants, so not all Slovak children living in the Austrian border region would attend schools in Slovakia; quite the opposite.

In addition to analyzing the mobility patterns of general regular activities, we wanted to find out what the cross-border commuting patterns of residents are. In the surveys, we asked the questions, “How often do you travel from Germany to Austria // from Austria to Slovakia?” and “What are the reasons for your trips to Austria // to Slovakia?” Approximately one-third of the respondents in both study areas travel daily or several times a week to the neighboring country. Around one-third of the respondents from the Austrian border region and two-fifths from the German border region travel several times a month. The most frequently cited reasons for traveling to the neighboring country included trips for leisure activities, visits to family and friends, services, and shopping (Figure 3). In the case of respondents from the Austrian border region of Bratislava, this was mainly for traveling to visit family and friends, trips, and the use of services. In the case of respondents from the German border region of Salzburg, the most frequently cited reasons were trips and leisure activities, shopping for groceries and consumer goods, and attending cultural and sporting events. The results partly confirm our thesis that residents wish to take the advantage of the “best of both worlds” by “cherry-picking” the opportunities that the regions on both sides of the border offer.



**Figure 3.** Reasons of respondents from the Austrian border region of Bratislava and the German border region of Salzburg for traveling to neighboring states, Slovakia and Austria, respectively. Note: In both surveys, respondents could indicate more than one option; therefore, the results do not show a final value of maximum 100%. Inhabitants of the Austrian border region of Bratislava, N = 202; state as of January 2021. Inhabitants of the German border region of Salzburg, N = 144; state as of June 2021. Source: Own results.

The empirical survey also measured respondents' satisfaction with the accessibility of 17 basic services, facilities, or amenities that structurally contribute to social sustainability, as well as to the quality of life of inhabitants (Figure 4).



**Figure 4.** Level of satisfaction of respondents from the Austrian border region of Bratislava (January 2021) and the German border region of Salzburg (June 2021) with the accessibility (distance/time) of facilities, services, and amenities used by respondents or their household members. Note: Percentages of “very satisfied” or “rather satisfied” responses for respondents who expressed satisfaction on a Likert-type scale with responses ranging from “very satisfied” to “very dissatisfied”. Respondents who answered “It doesn’t apply to me” were excluded from the analysis. Source: Own results.

Not surprisingly, most respondents are satisfied with the accessibility of facilities, services, and amenities that are typically available locally (Figure 4). These facilities include, for example, a grocery store, kindergarten, primary school, post office, or pharmacy. Depending on the number of inhabitants or the geographical size of the municipality, there are sometimes more than one of these facilities. On the other hand, respondents of both surveys were less satisfied with the accessibility of facilities such as high schools, hospitals, or cultural facilities. These facilities depend on a larger population to operate and are thus regional in nature. Therefore, the low(er) satisfaction rates are not surprising. However, the satisfaction rates cannot be compared between the respondents from the two regions of this study in a general way, since the respondents came from different municipalities, and the local conditions affect their subjective assessments of accessibility of particular amenities.

Accessibility as a measure of social equity within the concept of social sustainability affects social relationships in communities by enabling random contacts of residents. For this reason, good access to grocery stores, post offices, or kindergartens and schools supports the idea of social sustainability. However, the mere physical presence of basic facilities and services does not automatically mean they would be utilized by all residents. In cross-border suburban regions, the aspect of enjoying “the best of both worlds” in the process of transmigration plays a significant role, as was shown in the analysis of functional patterns of traveling of respondents from the border regions. To meet the conditions of social sustainability, a sufficiently developed cross-border public transportation system is necessary. This includes a unified ticket system, coordinated timetables of different mobility systems, and information platforms.

#### 5.4. Community and Local Engagement

Finally, we examined community life and relationships in the municipalities in the context of social sustainability. The aim was to determine how residents value their relationships and the level of their community's integration. In addition, they were asked to express their sense of belonging to the municipality. The statements represent varying degrees of community relations and belongingness, ranging from the mundane to the more deeply rooted (Table 9). Across all statements asked, at least two-fifths, and in some cases even more than half, of respondents chose the "I rather agree" option, which indicates an overall realistic assessment to the degree of social embeddedness and thus social sustainability. Interestingly, 11 and 21% of respondents of the Austrian and German border region, respectively, were unsure whether new settlers were sufficiently integrated in the community or even disagreed (32 and 15%, respectively) with this statement. On the other hand, as much as approximately three-quarters of residents of both regions described themselves as proud residents of their communities and do feel a sense of belonging with other residents.

One aspect of social sustainability that can inform about the nature of residents' integration into community life is their local involvement in public tasks and activities. We were interested in whether respondents attend local culture and sports events, assuming that such participation allows them to spend more leisure time with their local communities and meet other inhabitants. In this respect, residents of both study areas express a surprisingly high engagement, as 54% in the German border region of Salzburg and 60% in the Austrian border region of Bratislava engage in local activities. This was surprising because suburban residents have many other choices of social, cultural, and sports activities in the respective cities—which are Salzburg, Vienna, and Bratislava in our study regions.

A more active integration into local community life can be observed through their willingness to engage in associations, political parties, or other voluntary activities. These forms of engagement require more personal involvement (in time and money units); thus, we assume lower levels of participation than in the activities discussed before. This assumption turned out to be true, since only 20% of respondents from the German border region of Salzburg confirmed their active engagement in various public service roles, and 23% of respondents from the same region have been carrying out voluntary activities. From the Austrian border region of Bratislava, 24% of respondents stated that they are involved in public service activities in their place of residence (e.g., volunteering within an association or unpaid public function in a municipality, church, association, etc.). These results do not indicate a general lack of active involvement, as we are interested in local suburban engagement.



**Table 9.** Community relations and sense of belonging as evaluated by respondents.

|                                                                                    | <i>n</i>          | <b>I Completely Agree (%)</b> | <b>I Rather Agree (%)</b> | <b>I Rather Disagree (%)</b> | <b>I Completely Disagree (%)</b> | <b>I Do Not Know (%)</b> |
|------------------------------------------------------------------------------------|-------------------|-------------------------------|---------------------------|------------------------------|----------------------------------|--------------------------|
| Residents of the municipality have good interpersonal relationships                | 144<br><i>199</i> | 11.8<br><i>12.6</i>           | 55.6<br><i>63.3</i>       | 13.2<br><i>15.6</i>          | 2.8<br><i>2.0</i>                | 16.7<br><i>6.5</i>       |
| Residents of the municipality are willing to help the neighbors                    | 139<br><i>196</i> | 24.5<br><i>15.3</i>           | 56.1<br><i>66.8</i>       | 5.8<br><i>7.7</i>            | 4.3<br><i>3.1</i>                | 9.4<br><i>7.1</i>        |
| Residents of the municipality are willing to participate in solving public affairs | 138<br><i>191</i> | 5.8<br><i>16.2</i>            | 49.3<br><i>51.8</i>       | 18.1<br><i>15.7</i>          | 5.1<br><i>1.6</i>                | 21.7<br><i>14.7</i>      |
| New settlers are integrated into the municipality life                             | 138<br><i>195</i> | 5.1<br><i>5.1</i>             | 52.9<br><i>43.6</i>       | 15.2<br><i>32.3</i>          | 5.8<br><i>7.7</i>                | 21.0<br><i>11.3</i>      |
| I feel a sense of belonging to the inhabitants of the municipality                 | 137<br><i>195</i> | 24.8<br><i>21.0</i>           | 50.4<br><i>51.3</i>       | 13.1<br><i>13.8</i>          | 5.1<br><i>3.1</i>                | 6.6<br><i>10.8</i>       |
| I am a proud inhabitant of the municipality                                        | 133<br><i>189</i> | 25.6<br><i>30.7</i>           | 42.1<br><i>43.4</i>       | 13.5<br><i>10.1</i>          | 7.5<br><i>2.1</i>                | 11.3<br><i>13.8</i>      |

Values in the first lines of rows represent the German border region of Salzburg; values in italics represent the Austrian border region of Bratislava. Source: Own results.

## 6. Conclusions

The presented study addressed issues of social sustainability and quality of life in two European cross-border suburban regions. The aim of the study was to investigate how characteristics of quality of life (in our study represented by the concept of residential satisfaction from the housing perspective) struggle with desired requirements of social sustainability. In so doing, we specifically focused on four themes: the motives for living in suburban regions, the sources of residents' satisfaction, the functional patterns of periodic activities, and the potential opportunities of local community engagement.

Not surprisingly, quality of life is affected comprehensively by environmental factors (e.g., proximity to nature and a peaceful rural environment), social aspects (e.g., safe environment), and issues of accessibility (e.g., workplace, cultural amenities). However, the occasionally dynamic transformation of the population in (cross-border) suburban municipalities creates certain challenges for their social (and ecological) sustainability and the preservation of their desired level of quality of life. Satisfaction with housing characteristics promotes a higher quality of life assessment and, at the same time, helps residents to positively identify with the environment where they live. This in turn promotes a high(er) sense of belonging—and therefore a higher degree of social sustainability. In other words, personal quality of life prevails over ecological sensitivity in a neutral manner and social sustainability in a positive feedback relation.

In the process of cross-border suburbanization, residents are likely able to take the opportunity of trans-border benefits. We considered such benefits as “cherry-picking”. Cherry-picking can be observed in the functional relations of inhabitants' daily activities. Living in transnational cross-border regions (especially within the Schengen area) provides possibilities to work, study, recreate, or consume services and facilities according to the residents' comparatively valued amenities. It thus improves the personal quality of life of inhabitants. On the other hand, it imposes a certain hindrance to the social sustainability of cross-border suburban communities, as “cherry-pickers” may spend more time outside their residential communities and do not have enough opportunities for building community relationships at home. Local residential social sustainability is thus in a competitive tension with the relational geography of activities at other places.

One of the most significant consequences of cross-border suburbanization is its impact on community life in the suburban municipalities. The coexistence of different groups of inhabitants (old settlers vs. new settlers, “native” inhabitants vs. “immigrants” from a neighboring country, etc.) challenges local social sustainability in terms of interpersonal relations, the creation of social capital and social cohesion, if their social interactions are temporarily limited. A more comprehensive community life and social integration can be enhanced by supporting inter-group participation opportunities. The empirical results show that a feeling of embeddedness into the local community is generally high, which promotes the assumption of a sufficiently high degree of social sustainability. However, this result is influenced by the type of participation: passive participation (visiting local cultural or sports events) is twice as high as active participation (being a member of an association). Surprisingly, the degree of involvement does not induce a different sense of belonging.

The results illustrate that the concepts of quality of life and social sustainability in cross-border regions are significantly interrelated, with many overlapping needs and goals. Despite the fact that quality of life is rooted in subjective preferences and social sustainability in collective structures, improving the one can benefit the other. Planners and local policy makers are thus advised to consider these complex interrelations of quality of life and social sustainability. Even though the former enjoys high reputation at the individual level, the latter remains a core ingredient to nourish.

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