International Society for Quality-of-Life Studies

Working Paper No. 18

DOI:

https://doi.org/10.5281/zenodo.20481607

People or places? Perceived left-behindness and subjective well-being in Italy

May 2026

Crhistian Joel González-Cuatianquis, Giulia Urso, & Paolo Bottero

People or places? Perceived left-behindness and subjective well-being in Italy

Crhistian Joel González-Cuatianquis[1], Giulia Urso[1], Paolo Bottero[1]

[1] Social Sciences Area, Gran Sasso Science Institute, L'Aquila, Italy

Abstract

This paper examines the relationship between perceived left-behindness and subjective well-being (SWB) in Italy, distinguishing between personal and territorial dimensions. Using original survey data collected in 2025, we estimate ordered logit and multilevel models to analyse how these perceptions relate to life satisfaction, happiness, motivation, depression, and loneliness. The findings reveal that personal left-behindness is strongly and consistently associated with lower SWB across all dimensions, with particularly large effects on negative affect, where individuals report more than twice the odds of depression and loneliness. By contrast, territorial left-behindness shows weaker, less stable associations that largely disappear after controlling for individual characteristics and subjective perceptions. Notably, residence in structurally disadvantaged "inner areas" is not negatively associated with well-being. The results suggest that perceived relative position, rather than objective territorial disadvantage, plays a central role in shaping well-being outcomes.

1. Introduction

The relationship between place, disadvantage, and individual well-being has become one of the defining questions of contemporary political economy and regional science. Since the global financial crisis of 2008, a growing body of research has documented the emergence of widespread political and social discontent across advanced democracies, appearing in the rise of populism, the erosion of institutional trust and the growing electoral success of anti-establishment movements (Norris & Inglehart, 2019; Rodríguez-Pose, 2018). At the heart of this debate lies the concept of being "left behind", defined here as the perception that individuals or their communities have been marginalised by economic restructuring, globalisation, and the selective geography of public investment and policy attention (MacKinnon et al., 2022; McCann, 2020; Rodríguez-Pose et al., 2023).

The left-behind literature has developed along two main axes, in which one strand focuses on individuals, people characterised by low incomes, job insecurity, limited education, or downward mobility, and examines how personal trajectories of economic decline shape grievances and political behaviour (Lindholm & Rapeli, 2023; Ravazzini & Chávez-Juárez, 2018). A second strand emphasises places, focusing on territories that have experienced long-run decline in economic activity, demographic shrinkage, and deterioration in the provision of essential services, and where structural disadvantage shapes collective narratives of neglect and abandonment (MacKinnon et al., 2022; Panori et al., 2025; Phelps et al., 2025). The Italian case is particularly instructive in this regard, given the well-studied North-South divide and concerns about the so-called "inner areas", characterised by remoteness from basic services, demographic decline, and persistent perceptions of institutional neglect (Bolzoni et al., 2026; Modica et al., 2021).

In this debate, feelings of being left behind are often used, implicitly or explicitly, as a proxy for low subjective well-being (SWB), under the assumption that perceiving oneself or one's area as marginalised reflects a broader deterioration in quality of life (Lenzi & Perucca, 2024; MacKinnon et al., 2024). Yet this equivalence is not self-evident and remains insufficiently tested. First, SWB is a multidimensional construct encompassing distinct cognitive and affective components, which may respond differently to perceptions of relative disadvantage (Diener et al., 1999; Mahoney, 2023). Second, the distinction between personal and territorial forms of left-behindness introduces an additional layer of complexity. A person, in fact, may feel that their area is neglected by public policy without necessarily experiencing a decline in their own life satisfaction or emotional well-being, and vice versa. Third, existing research has not yet fully clarified whether left-behindness is more closely associated with evaluative well-being, positive affect, or negative affect.

Building on these considerations, this paper examines the relationship between personal and territorial left-behindness and multiple dimensions of SWB in Italy. Drawing on an original survey of 2,527 individuals administered in July 2025, we estimate ordered logit and multilevel models that relate perceptions of personal and territorial left-behindness to five SWB outcomes: life satisfaction, momentary happiness, motivation, depression, and loneliness. Our empirical strategy controls for individual sociodemographic characteristics, subjective perceptions of inequality, and

institutional trust, as well as macro-regional fixed effects, and tests for interaction effects between the two forms of left-behindness and between each form and inner-area residence.

The theoretical framing draws on three bodies of literature. First, we build on the multidimensional SWB framework (Diener et al., 1999; Pavot & Diener, 1993), which distinguishes between the cognitive evaluation of life satisfaction and the affective dimensions of positive and negative emotions. Second, we integrate insights from social comparison theory (Clark et al., 2008; Ferrer-i-Carbonell, 2005; Festinger, 1954), arguing that perceptions of relative disadvantage, whether personal or territorial, may translate into well-being outcomes through comparison processes. Third, we situate our analysis within the Affective Political Economy (APE) framework, which emphasises the role of sustained emotional responses in linking structural and economic grievances to political discontent, and positions emotional well-being as a potential mechanism linking felt disadvantage to broader political attitudes.

Our results reveal that personal left-behindness is consistently and strongly associated with lower SWB across all dimensions, with particularly pronounced effects on negative affect; in this sense, individuals who feel personally left behind report more than twice the odds of experiencing depression and loneliness compared to those who do not. However, while life satisfaction shows a robust negative association with personal left-behindness, the effects on positive affect (momentary happiness and motivation) are moderate. Territorial left-behindness presents a more differentiated profile, in which it remains robustly associated with lower life satisfaction across specifications, while its associations with positive affect are weaker and less stable once individual characteristics and subjective perceptions are controlled for. Residence in an inner area is not systematically associated with lower well-being, suggesting that structural territorial disadvantage does not automatically translate into lower SWB. The interaction between personal and territorial left-behindness is not statistically significant, indicating that the two forms might operate additively rather than multiplicatively.

The paper is arranged as follows. Section 2 develops the conceptual framework, reviewing literature on SWB, the concept of left-behindness and the APE framework. Section 3 describes the Italian context, the data and the empirical strategy. Section 4 presents the results, and Section 5 concludes with a brief discussion about their theoretical and policy implications.

2. Theoretical framework: subjective well-being, left-behindness, and affective political economy

The global financial crisis exposed important limitations in how social progress and economic performance were traditionally assessed, particularly the reliance on aggregate indicators such as GDP (Brezzi et al., 2016). In this context, the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) recommended the use of indicators of subjective well-being (SWB), arguing that individuals' evaluations of their lives, their emotional conditions and their sense of purpose constitute essential dimensions of social progress (Stiglitz et al., 2009). Although SWB had already been explored in earlier academic research (Diener et al., 1999; Kahneman & Krueger, 2006), the crisis reinforced the need to complement conventional measures of economic performance with an understanding of how people experience economic conditions in their daily lives (Das et al., 2020).

In this sense, SWB has increasingly been recognised as a central, multidimensional indicator of overall well-being, capturing both the cognitive and affective evaluations that individuals make of their lives (Mahoney, 2023). Rather than focusing exclusively on material conditions, SWB encompasses how people assess their life as a whole and how they experience emotions in their daily lives. In contrast to objective indicators, this approach explicitly engages with subjective experiences and perceptions that shape feelings of fulfilment, according to the respondent rather than the judgement of an outside researcher (Rojas, 2004). SWB therefore offers a broader perspective, recognising that well-being is shaped by the interaction between income, resources, perceptions, values, and aspirations within broader social and economic contexts (Veneri & Edzes, 2017).

Empirical research has identified a wide range of individual-level determinants of SWB, including personal income, health status, education, social relationships, household composition, and gender, among others (Ballas & Thanis,

2022; Easterlin & O'Connor, 2022; Faggian et al., 2012). This perspective suggests that improvements in objective living conditions do not automatically translate into higher levels of perceived well-being. Conceptually, the literature commonly distinguishes different components of SWB. Life satisfaction reflects a cognitive and evaluative judgement about one's overall life and is often strongly influenced by economic and material conditions (Diener et al., 1999; Pavot & Diener, 1993). Affective well-being, by contrast, captures emotions and moods that are typically more immediate and short-term. This affective dimension includes both positive affects, such as momentary happiness and motivation, and negative emotional states, such as loneliness, anxiety, and depression, which signal deficits in emotional and social well-being (Mahoney, 2023). Although these concepts are related, their determinants and distributions can differ substantially across individuals, social groups, and places, suggesting that they capture distinct yet complementary aspects of well-being. For instance, the literature on unemployment has consistently shown that becoming unemployed tends to produce substantial declines in life satisfaction, reflecting a deterioration in individuals' broader cognitive evaluation of their lives, while the effects on affective well-being are often weaker or less consistent, particularly in relation to everyday emotional experiences (Clark & Oswald, 1994; Knabe et al., 2010). Similarly, research on subjective well-being increasingly emphasises that eudaimonic well-being, which relates to meaning, purpose, and self-realisation, may evolve differently from both life satisfaction and emotional states, reinforcing the idea that these dimensions capture distinct aspects of human well-being rather than interchangeable outcomes (Ryan & Deci, 2001).

Beyond individual characteristics, a growing body of research highlights the importance of territorial and contextual factors in shaping SWB. Spatial disparities in economic opportunities, access to services (Okulicz-Kozaryn & Valente, 2019), environmental quality (Abed Al Ahad, 2024; Martínez-Bravo et al., 2019), and social cohesion systematically influences how people evaluate their lives (Castells-Quintana, 2017; Glaeser et al., 2016; Nijman & Wei, 2020). Also, regional labour market conditions, urban form, and territorial characteristics affect daily experiences, social comparisons, and perceived opportunities, thereby shaping SWB outcomes (Ballas, 2013; Faggian et al., 2024; Vijayakumar & Sangeetha, 2021). In this sense, place-based inequalities and socioeconomic conditions can generate persistent gaps in life satisfaction that are not fully explained by individual socioeconomic characteristics alone (González-Cuatianquis et al., 2025; Lenzi & Perucca, 2019; Morrison, 2021).

Recent literature in social sciences has explored the relationship between SWB and political as well as socioeconomic behaviour, for example, several studies show that lower levels of life satisfaction are associated with stronger support for populist or anti-establishment parties, lower institutional trust, and broader forms of political dissatisfaction (Ward et al., 2021). Related work has also linked subjective well-being to migration intentions and mobility decisions, suggesting that individuals' subjective evaluations of their lives can shape important political and socioeconomic outcomes beyond objective indicators such as income or employment status (Deole & Huang, 2024). Additionally, the literature on left-behindness has extended this view, developing a line of research around the distinction between people and places left behind. Across many advanced democracies, support for populist parties has often been interpreted as evidence that populations are "left behind" by economic restructuring, globalisation, and government policies (Panori et al., 2025; Phelps et al., 2025). Within this perspective, voting for populist options has often been treated as a behavioural manifestation of deeper grievances, encompassing economic insecurity, perceived unfairness, and a lack of political voice (McCann, 2020; Rodríguez-Pose, 2018). This has fuelled an extensive debate about *who is left behind?:* 1) whether discontent primarily reflects the experiences of specific individuals, characterised by low income, job insecurity, or downward mobility (Lindholm & Rapeli, 2023; Ravazzini & Chávez-Juárez, 2018), or 2) whether it is rooted in places that have experienced long-term economic decline, demographic shrinkage, or reduced access to services (MacKinnon et al., 2022; Rodríguez-Pose et al., 2023). The resulting distinction between "people left behind" and "places left behind" has become central to contemporary political economy and regional studies (Koeppen et al., 2021; Lenzi & Perucca, 2021; McKay, 2019).

As mentioned, feelings of being left behind are often used as a proxy for low SWB (Lenzi & Perucca, 2024; Rodríguez-Pose et al., 2023), under the assumption that dissatisfaction with economic and political systems reflects a poorer quality of life (MacKinnon et al., 2024). However, this equivalence is not necessarily self-evident. SWB is a broad

and multidimensional construct that may respond differently to perceptions of disadvantage (Lenzi & Perucca, 2019; Mahoney, 2023). In contrast, feeling left behind may affect some dimensions of well-being more strongly than others, and these effects may vary depending on whether left-behindness is experienced as a personal condition or as a territorial attribute.

Equating feelings of being left behind with low SWB, therefore, risks mixing distinct psychological mechanisms; for example, at its core, the notion of being left behind is inherently comparative, implying an evaluation of one's position relative to relevant others, like social groups or other territories (as regions or national trajectories). This logic aligns with social comparison theory, which posits that individuals assess their well-being not in absolute terms but relative to reference groups (Festinger, 1954). From this perspective, perceptions of disadvantage emerge through upward comparisons with those perceived as better off. However, such comparisons do not mechanically translate into lower life satisfaction because their consequences depend on the interpretative frame, the perceived fairness of inequalities, and the individual's perceived capacity for mobility or change.

A large body of research on relative income and well-being confirms that comparison processes shape subjective evaluations of life (Clark et al., 2008; Faggian et al., 2023; Ferrer-i-Carbonell, 2005). Yet the direction of this relationship is not uniform. Upward comparisons may generate frustration and envy, thereby lowering well-being, but they may also serve as informational cues or motivational signals (Buunk & Gibbons, 2007; Fligstein et al., 2017). When individuals perceive inequality as unjust and immutable, social comparisons can undermine self-esteem and life satisfaction (Ravazzini & Chávez-Juárez, 2018). Conversely, when inequality is interpreted as reflecting opportunity structures or as temporary, upward comparisons can stimulate ambition and reinforce future-oriented aspirations (Genicot & Ray, 2017; Lippmann et al., 2005).

In this sense, social comparison processes operate at multiple spatial scales, where individuals can compare themselves not only to neighbours or peers but also to other regions and imagined national standards. Territorial forms of left-behindness may therefore activate collective comparison mechanisms, in which residents evaluate their region's trajectory relative to other places (Lenzi & Perucca, 2021), thereby promoting common grievances without necessarily depressing individual life satisfaction. Social psychological literature suggests that when disadvantage is externalised, for example, attributed to structural or territorial neglect instead of personal failure, its impact on personal well-being may be attenuated (Pettigrew, 2002). A person may be satisfied with family life, health and social relationships while simultaneously believing that "people like me" or "places like mine" are unfairly disadvantaged.

The multidimensional nature of SWB provides an important lens for understanding why perceptions of left-behindness may generate heterogeneous effects across different dimensions of well-being, particularly because the mechanisms underlying cognitive evaluations of life and emotional experiences are not necessarily the same. While life satisfaction is generally conceptualised as a broader cognitive assessment of one's life circumstances and overall trajectory, affective well-being captures the emotional experiences that individuals face in their everyday lives (Clark, 2018; Diener et al., 1999; Mahoney, 2023). In this sense, perceiving oneself or one's region as left behind may not immediately translate into lower evaluations of life as a whole, especially when individuals continue to perceive stability in other relevant domains of life, such as family relations, employment, or material conditions, but it may nevertheless intensify negative emotional states associated with uncertainty, exclusion, relative deprivation, or lack of recognition. At the same time, these perceptions may weaken positive affective states associated with optimism, motivation, or a sense of belonging, thereby shaping everyday emotional experiences even when broader life evaluations remain relatively resilient. This distinction becomes particularly relevant given that the literature on well-being consistently argues that positive and negative affect should not be interpreted as opposite ends of a single continuum, but rather as partially independent dimensions that may coexist and evolve differently across individuals and contexts (Watson et al., 1988).

Taken together, this literature highlights why feeling left behind does not automatically equate to low SWB because left-behindness, as a relational perception, depends on how comparisons are interpreted; therefore, it may depress well-being, leave it unchanged, or even stimulate agency and aspiration. This ambiguity emphasises the need to

empirically disentangle the links between personal and territorial comparisons and the different dimensions of SWB. If feelings of being left behind are conceptually and analytically distinct from SWB, it becomes necessary to examine their relationship explicitly rather than assuming equivalence (Lenzi & Perucca, 2025). In particular, it remains unclear whether personal and territorial forms of left-behindness affect SWB in similar ways, which dimensions of well-being are most sensitive to these perceptions, and whether political discontent captures the same underlying experiences as emotional or cognitive evaluations of life.

A promising theoretical lens for addressing these questions is the Affective Political Economy (APE) framework (Rhodes-Purdy et al., 2023), which proposes that economic and structural grievances do not translate directly into political behaviour. Instead, they operate through an emotional intermediary where structural disadvantage generates sustained negative emotional states, particularly anxiety and anger, which in turn prepare individuals to embrace culturally and politically discontented narratives. In other words, the pathway from economic hardship to political discontent runs through affect; therefore, if perceptions of personal or territorial disadvantage generate negative emotional responses, then SWB is not merely a parallel outcome of left-behindness but rather a mechanism through which structural grievances are translated into political attitudes and behaviour. From this perspective, emotional well-being may function as a bridge connecting feelings of being left behind to broader forms of democratic discontent, including distrust of institutions, anti-elite attitudes, and support for populist alternatives.

This reframing has two important consequences for the present study. First, it elevates SWB from a dependent variable of intrinsic interest to a theoretically central mediating construct in the chain linking left-behindness to political discontent. Second, it suggests that the distinction between the affective and cognitive dimensions of SWB identified above is not merely a measurement question but a substantive one: if left-behindness primarily operates through emotional channels as APE predicts, its effects should be most visible in the affective components of SWB rather than in the more stable cognitive evaluation of life satisfaction. Addressing these questions is therefore essential not only for advancing theoretical clarity but also for informing policies aimed at reducing both social discontent and inequalities in well-being.

3. Empirical analysis

The Italian context

In Italy, research on how perceptions of left-behindness relate to subjective well-being is still emerging. The Italian case is of interest given its pronounced territorial inequalities and long-standing socioeconomic and institutional divides across the country. Alongside the classic North/South dualism, more extensively studied in the Italian well-being literature (Calcagnini & Perugini, 2019; D'Urso et al., 2022; Ferrara & Nisticò, 2015), a crucial dimension of Italy's territorial structure concerns low-density, mountainous, and rural areas, often marked by demographic decline, population ageing, and a shrinking local provision of services. These territorial-embedded dynamics can foster perceptions of a place's "negative trajectory" and reinforce feelings of neglect, limited public attention, or distance from decision-making centres. In this framework, however, it is important to distinguish between objective territorial conditions and subjective interpretations of those conditions because, as mentioned before, structurally similar territories may generate different perceptions depending on expectations, perceived opportunities, local narratives, and trust in institutions. In this sense, Italy's inner areas can be understood as contexts in which processes of peripheralisation and declining opportunities gradually sustain narratives and perceptions of territorial marginality (Bolzoni et al., 2026).

To operationalise territorial disadvantage in a comparable and policy-relevant way, our analysis draws on the conceptual framework of inner areas developed by the National Strategy for Inner Areas (SNAI). The SNAI identifies as "inner" those areas located at a significant distance from the main centres providing essential services, especially education, mobility/transport, and socio-health services (Barca et al., 2012). This framework is particularly valuable empirically because it defines peripherality not only in terms of income or productive structure, but through a criterion directly tied to everyday life. Moreover, although it originated in the policy arena, this classification is now widely used in empirical research on Italian inner areas and has become a key reference for studies on territorial left-

behindness (Modica et al., 2021). In this direction, recent works on Italian inner areas highlight the value of complementing structural indicators of peripherality with subjective measures of quality of life and well-being (Capecchi et al., 2025).

In this study, in line with the SNAI classification, we define as inner areas the municipalities belonging to classes D (intermediate), E (peripheral), and F (ultra-peripheral), while the remaining municipalities are classified as centres (non-inner areas). This choice allows us to distinguish between a structural, observable dimension of territorial disadvantage (remoteness/accessibility) and subjective measures of left-behindness.

Analytically, the SNAI architecture enables us to link individual-level microdata to a standardised and widely recognised territorial classification, while retaining the possibility to control for macro-regional heterogeneity (North-West, North-East, Centre, South, Islands), which reflects long-run historical and institutional differences. This makes it possible to disentangle structural disadvantage related to accessibility from individual perceptions of "being left behind", and to assess how these two levels are differently associated with the evaluative and affective components of subjective well-being.

Data

The data used in this study come from an original survey administered in July 2025 using a CAWI (Computer-Assisted Web Interviewing) design. The target population is the adult resident population in Italy, and the sample comprises 2,527 interviews, with the unit of analysis being the individual respondent. The sample design was constructed to ensure adequate coverage of the main territorial and socio-demographic dimensions and is stratified along two axes: (i) a territorial dimension, with an explicit distinction between Centres and Inner Areas according to the SNAI classification; and (ii) stratification by macro-regions, age groups, and gender.

Regarding outcomes, the questionnaire captures multiple dimensions of subjective well-being through standard indicators. We focus on overall life satisfaction and several measures of respondents' emotional and relational states (momentary happiness, motivation, depressive feelings, and loneliness), all of which are collected using ordinal response scales.

Life satisfaction is measured through the question:

- *"Overall, how satisfied are you with the life you lead?"*

  with the following response options: *1 – Not at all satisfied;* 2 *– Not very satisfied; 3 – Fairly satisfied; 4 – Very satisfied.*

To capture more recent states referring to the previous week, the survey also includes a battery of items:

- "*In the last week, how often have you felt…*(*Lonely; Depressed; Happy; Motivated)"*

  all with the same response scale: *1 – Never; 2 – Rarely; 3 – Sometimes; 4 – Often; 5 – Always***.**

Consistent with the models estimated in the paper, we use life satisfaction as an evaluative indicator of subjective well-being, while affective indicators are divided into positive (happiness and motivation) and negative (depression and loneliness) dimensions. We used the response to each question as a separate outcome, measuring dimensions of affect (positive and negative) to avoid any particular manipulation of the data, allowing us to observe the potential relationship between the perception of left-behindness and different aspects of subjective well-being.

The survey allows us to identify two types of perceptions of left-behindness (personal and territorial). Specifically, we use the response for the following questions:

- Perception of personal left-behindness: *Do you feel that you have been personally disadvantaged compared to other citizens as a result of public policies?*
- Perception of territorial left-behindness: *Do you think your area has been neglected by public policies?*

  Both questions have the same response scale: *1 – Yes, a lot; 2 – Yes, in part; 3 – Not at all; 4 – I don't know*

We used only answers 1-3 for our model, recoding 1 and 2 as *Yes(1)* and 3 as *No(0)* to obtain our binary main regressor.

Finally, in addition to the outcome variables, the survey includes socio-demographic information (e.g., age, gender, education, employment status, and perceptions of one's economic situation), territorial variables (municipality of residence and SNAI classification), and a set of perceptual and attitudinal indicators (e.g., interpersonal and institutional trust, fairness/inequality assessments, and evaluations of public services)[1]. These variables, whose exact wording is reported in the Appendix (Table 1A), are used as controls in the more complete specifications in order to distinguish between observable territorial conditions and respondents' subjective interpretations of their context.

Baseline model

Following the work of Arrondo et al. (2021), Pontarollo et al. (2020) and Rodríguez-Pose & Maslauskaite, (2012) an ordered logit model is estimated to examine the association between feelings of personal/territorial left-behindness (LB_i) and individual levels of subjective well-being (SWB_i), proxied by the evaluative indicator (life satisfaction) and the affect indicators (positive: happiness and motivation; negative: depression and loneliness). The dependent variable is a 4 (life satisfaction) or 5-point (the rest of the variables) Likert scale, with higher values indicating higher levels.

$$SWB_i = \beta_1 LB_i + \beta_2 InnerArea_i + \beta_3 \boldsymbol{X}_i + \beta_4 \boldsymbol{P}_i + \gamma + \varepsilon_i$$

The territorial dimension is central to this research. The relevant spatial unit is the individual's area of residence, which captures the structural environment within which social comparisons and perceptions of disadvantage are formed. In particular, we focus on inner areas, defined as territorially peripheral or remote areas characterized by lower accessibility to essential services, weaker labor markets, and demographic decline. These areas represent contexts where territorial forms of left-behindness are more likely to emerge. Territorial context is incorporated into the model through a dummy variable indicating whether the individual resides in an inner area ($InnerArea_i$), allowing us to capture structural disadvantages related to remoteness and limited access to services.

The model further includes a vector of individual-level socio-demographic characteristics (gender, age, occupation, maximum level of education, and income) ($\boldsymbol{X}_i$) and subjective perception variables ($\boldsymbol{P}_i$), capturing perceived fairness of inequality and trust in institutions, which may shape individuals' social outlook and emotional well-being independently of objective territorial conditions.

We also account for broader regional heterogeneity through macro-region fixed effects (γ), which absorb unobserved differences in economic development, institutional quality, and historical trajectories across larger territorial aggregates. This multilevel territorial strategy allows us to distinguish between (i) structural territorial conditions and (ii) individual perceptions of disadvantage, while reducing omitted variable bias stemming from unobserved regional characteristics. Finally, all models are estimated with robust standard errors (ε_i), and coefficients are reported as odds ratios to facilitate interpretation.

Given the hierarchical structure of the data, where individuals are nested within territorial units, we additionally estimate a multilevel (ML) ordered logit model as a robustness check. Although the baseline specification includes macro-region fixed effects, the multilevel approach explicitly models the clustering of individuals within territories and allows for residual variation at the higher level. This is particularly relevant in our context, as subjective well-being and perceptions of left-behindness may be shaped not only by individual characteristics but also by shared contextual factors operating at the territorial level (Denti, 2022).

4. Results

Life satisfaction

[1] Although controlling for personality traits would likely provide additional insights, particularly given their well-established association with SWB, the survey employed in this study does not include information on individual personality characteristics, preventing us from accounting for these factors in the analysis.

Table 1 shows that, across specifications, feeling territorially left-behind is consistently and negatively associated with life satisfaction. In the baseline ordered logit model, the odds ratio is 0.504 and remains statistically significant at the 1% level throughout all model extensions. Although the magnitude attenuates once individual characteristics, macro-regional fixed effects, and perception variables are introduced (rising to around 0.65–0.70), the association remains stable and economically meaningful. This implies that individuals who perceive their territory as left behind exhibit substantially lower odds of reporting higher life satisfaction levels, even after controlling for socioeconomic composition and contextual heterogeneity. By contrast, residence in an inner area per se is not statistically significant, suggesting that objective territorial disadvantage does not automatically translate into lower well-being. Rather, it is the subjective perception of territorial marginalisation that appears to matter. The interaction term between territorial left-behindness and inner-area residence is not significant, indicating that the negative association does not differ systematically between peripheral and non-peripheral areas. Results remain robust in the multilevel specification, confirming that the relationship is not driven by unobserved clustering at the territorial level.

Table 1. Life satisfaction and feeling territorially left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Territorially left-behind	0.504***	0.550***	0.558***	0.667***	0.702***	0.646***
	(0.053)	(0.059)	(0.063)	(0.078)	(0.089)	(0.104)
Inner Area			1.127	1.195	1.531	1.180
			(0.126)	(0.136)	(0.408)	(0.133)
Territorially left-behind # Inner Area					0.738	
					(0.216)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Cut-point 1	0.048***	0.040***	0.036***	0.046***	0.050***	0.050***
	(0.006)	(0.012)	(0.013)	(0.023)	(0.025)	(0.026)
Cut-point 2	0.323***	0.313***	0.287***	0.382*	0.411*	0.410*
	(0.031)	(0.098)	(0.104)	(0.194)	(0.210)	(0.198)
Cut-point 3	6.531***	8.434***	7.791***	11.052***	11.886***	11.756***
	(0.697)	(2.626)	(2.824)	(5.598)	(6.073)	(5.293)
Variance (territorial random intercept)						1.000
						(0.000)
Observations	2179	2171	2171	2171	2171	2171
Pseudo R2	0.0096	0.0678	0.0700	0.0834	0.0836	
Log pseudolikelihood						-2175.293

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

A similar but even stronger pattern emerges for personal left-behindness, as shown in Table 2, where the odds ratios are consistently below 1 and highly significant across all specifications, ranging from 0.299 to 0.379 in the ordered logit models and 0.364 in the multilevel model. These magnitudes suggest a more pronounced association between personal perceptions of falling behind and lower life satisfaction compared to territorial perceptions. The inclusion of individual controls, macro-regional fixed effects, and subjective perception variables does not alter the core finding, reinforcing the robustness of the relationship. As in the territorial model, the inner-area variable and the interaction term remain statistically insignificant. Overall, the results indicate that subjective perception, particularly those related to one's personal trajectory, is more strongly linked to life satisfaction than objective territorial location. This distinction supports the interpretation that perceived relative position, rather than structural place-based disadvantage alone, plays a central role in shaping evaluative well-being.

Table 2. Life satisfaction and feeling personally left-behind (odd ratios)

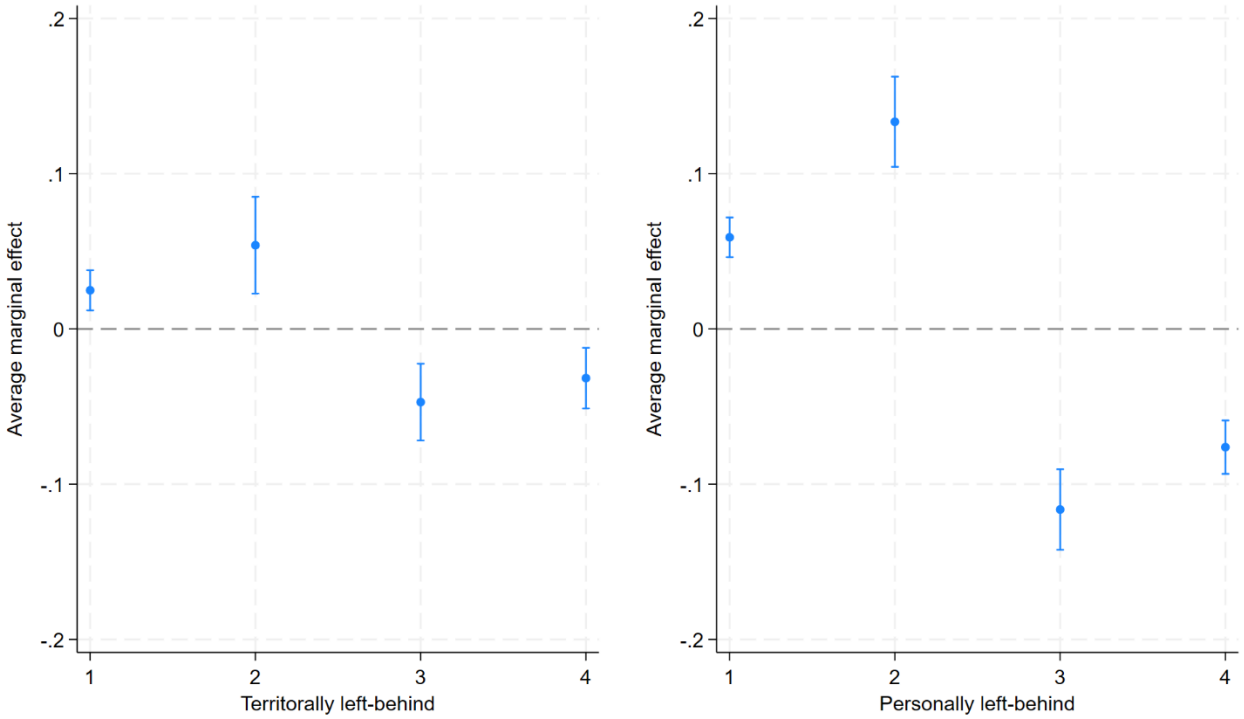
	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind	0.299***	0.337***	0.333***	0.363***	0.379***	0.364***
	(0.029)	(0.034)	(0.034)	(0.038)	(0.044)	(0.047)
Inner Area			1.109	1.192	1.368	1.203
			(0.137)	(0.148)	(0.403)	(0.155)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind # Inner Area					0.741	
					(0.226)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Cut-point 1	0.036***	0.020***	0.017***	0.019***	0.043***	0.022***
	(0.004)	(0.027)	(0.023)	(0.022)	(0.024)	(0.029)
Cut-point 2	0.244***	0.159	0.136	0.155	0.356*	0.182
	(0.020)	(0.216)	(0.180)	(0.183)	(0.200)	(0.243)
Cut-point 3	5.736***	4.910	4.227	5.134	12.410***	5.994
	(0.499)	(6.682)	(5.618)	(6.056)	(6.948)	(8.006)
Variance (territorial random intercept)						1.000
						(0.000)
Observations	1970	1964	1964	1964	1813	1964
Pseudo R2	0.0389	0.0932	0.0951	0.1083	0.1118	
Log pseudolikelihood						-1917.039

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

To gain a clearer picture of the results, Figure 1 shows the average marginal effects from ordered logit models of life satisfaction. Feeling territorially left behind increases the probability of being in the lower life satisfaction categories (1 and 2) and decreases the probability of being in the higher categories (3 and 4). The magnitude of these effects is moderate, with increases of roughly 2–5 percentage points in the lower categories and corresponding reductions in the higher ones. The pattern is more pronounced for personal left-behindness: the increase in the probability of being in lower life-satisfaction categories is larger, and the decrease in higher categories is also greater. The confidence intervals clearly exclude zero, suggesting strong statistical significance. Overall, while both territorial and personal left-behindness are associated with lower evaluative well-being, the effects are systematically stronger for personal perceptions of falling behind.

Figure 1. Average marginal effects of territorial and personal left-behindness on life satisfaction



Note: Points show average marginal effects (change in predicted probability by category). Bars indicate 95% CIs; the dashed line marks zero.

Positive emotions

The association between territorial left-behindness and momentary happiness is weaker and less stable than that for life satisfaction (Table 3). In the baseline and controlled specifications, feeling territorially left-behind is negatively and significantly associated with happiness, with odds ratios ranging from 0.669 to 0.771. However, once perceptions and broader controls are included, the coefficient becomes statistically insignificant and approaches 1 (0.932), suggesting that the initial association is largely mediated by individual characteristics and subjective perceptions. The multilevel specification confirms this attenuation, with an odds ratio of 0.914 that is not statistically significant. In contrast, residence in an inner area shows a positive and occasionally significant association with happiness, indicating that living in structurally peripheral territories does not necessarily imply lower positive affect. The interaction term is not significant, further suggesting that territorial perceptions rather than objective location drive the initial negative association.

Table 3. Momentary Happiness and feeling territorially left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Territorially left-behind	0.669***	0.737***	0.771***	0.932	0.898	0.914
	(0.061)	(0.070)	(0.076)	(0.095)	(0.098)	(0.111)
Inner Area			1.182	1.255**	1.054	1.221
			(0.125)	(0.134)	(0.246)	(0.153)
Territorially left-behind # Inner Area					1.241	
					(0.321)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.052***	0.002***	0.002***	0.001***	0.001***	0.001***
	(0.006)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Cut-point 2	0.273***	0.012***	0.011***	0.007***	0.007***	0.007***
	(0.023)	(0.004)	(0.004)	(0.003)	(0.003)	(0.006)
Cut-point 3	1.661***	0.077***	0.074***	0.051***	0.049***	0.050***
	(0.135)	(0.022)	(0.026)	(0.024)	(0.023)	(0.040)
Cut-point 4	18.114***	0.892	0.874	0.641	0.612	0.622
	(2.310)	(0.264)	(0.304)	(0.299)	(0.287)	(0.497)
Variance (territorial random intercept)						1.0929
						(0.060)
Observations	2207	2199	2199	2199	2199	2199
Pseudo R2	0.0032	0.0180	0.0253	0.0413	0.0414	
Log pseudolikelihood						-2860.904

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

For personal left-behindness, the relationship with momentary happiness is more consistent but still less pronounced than for life satisfaction (Table 4). Across all specifications, the odds ratios remain below one and statistically significant, ranging from 0.661 in the baseline model to 0.771 in the multilevel specification. Although the magnitude attenuates with the inclusion of controls and perceptions, the association remains robust, indicating that individuals who perceive themselves as personally falling behind report lower levels of happiness. Notably, the effect sizes are smaller than those observed for life satisfaction, suggesting that positive affect may be less sensitive to perceived relative position than evaluative well-being. The inner-area variable is mostly insignificant or only weakly positive, and the interaction term does not reach significance. Overall, these findings reinforce the idea that personal perceptions of disadvantage are more strongly linked to well-being outcomes than objective territorial conditions, while also showing that the emotional dimension of happiness reacts differently to perceived left-behindness than life satisfaction.

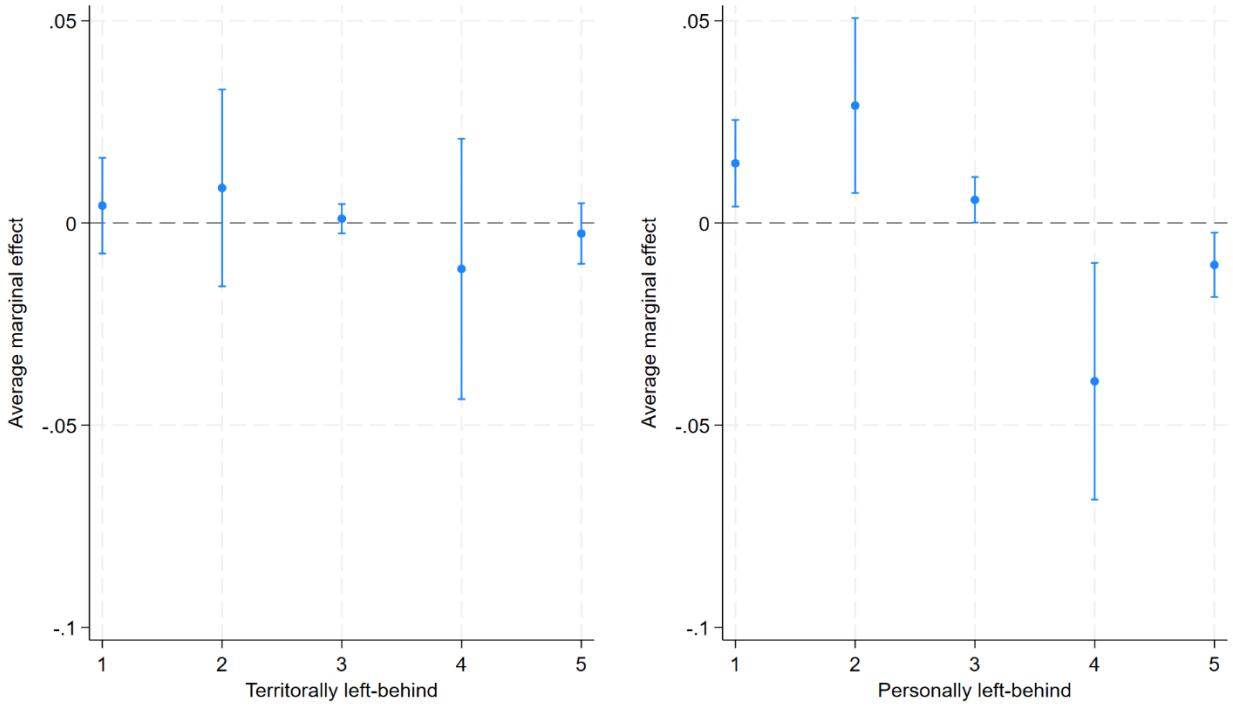
Table 4. Momentary Happiness and feeling personally left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind	0.661***	0.694***	0.705***	0.782***	0.811**	0.771*
	(0.055)	(0.060)	(0.064)	(0.073)	(0.082)	(0.109)
Inner Area			1.167	1.267**	1.055	1.224
			(0.133)	(0.147)	(0.259)	(0.172)
Personally left-behind # Inner Area					1.208	
					(0.311)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.056***	0.004***	0.004***	0.003***	0.001***	0.003***
	(0.006)	(0.008)	(0.008)	(0.005)	(0.001)	(0.003)
Cut-point 2	0.279***	0.021**	0.021**	0.016**	0.007***	0.016***
	(0.020)	(0.042)	(0.040)	(0.029)	(0.003)	(0.019)
Cut-point 3	1.647***	0.133	0.138	0.113	0.046***	0.107*
	(0.109)	(0.261)	(0.255)	(0.199)	(0.024)	(0.129)
Cut-point 4	16.722***	1.453	1.525	1.339	0.564	1.256
	(1.913)	(2.839)	(2.825)	(2.344)	(0.291)	(1.449)
Variance (territorial random intercept)						1.061
						(0.044)
Observations	1987	1981	1981	1981	1823	1981
Pseudo R2	0.0045	0.0214	0.0275	0.0464	0.0459	
Log pseudolikelihood						-2589.174

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In Figure 2, the average marginal effects on the probability of reporting each momentary happiness category are shown. There is no significant association between feeling territorially left behind and happiness; however, the pattern changes for feeling personally left behind, which increases the probability of being in lower-happiness categories and decreases the probability of higher ones. Although the overall magnitudes remain smaller than those observed for life satisfaction, we observed directional consistency.

Figure 2. Average marginal effects of territorial and personal left-behindness on momentary happiness



Note: Points show average marginal effects (change in predicted probability by category). Bars indicate 95% CIs; the dashed line marks zero.

Using motivation as an additional proxy for positive affect yields patterns largely consistent with those obtained for happiness, while also revealing some differences. For territorial left-behindness (Table 5), the baseline models show a negative and statistically significant association with motivation (odds ratios between 0.664 and 0.708), but this relationship attenuates once perceptions and full controls are introduced, becoming weaker and losing statistical significance in the multilevel specification. This mirrors the momentary happiness results, in which territorial perceptions lose explanatory power once subjective evaluations and contextual factors are accounted for.

Table 5. Motivation and feeling territorially left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Territorially left-behind	0.664***	0.703***	0.708***	0.837*	0.816*	0.822
	(0.058)	(0.063)	(0.067)	(0.080)	(0.085)	(0.125)
Inner Area			1.205*	1.283**	1.145	1.245**
			(0.127)	(0.137)	(0.235)	(0.130)
Territorially left-behind # Inner Area					1.154	
					(0.269)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.045***	0.004***	0.005***	0.004***	0.004***	0.004***
	(0.005)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Cut-point 2	0.228***	0.023***	0.025***	0.024***	0.023***	0.022***
	(0.018)	(0.006)	(0.008)	(0.011)	(0.011)	(0.011)
Cut-point 3	1.303***	0.136***	0.153***	0.155***	0.151***	0.140***
	(0.100)	(0.037)	(0.051)	(0.070)	(0.068)	(0.072)
Cut-point 4	9.207***	1.004	1.145	1.219	1.182	1.094
	(0.932)	(0.273)	(0.379)	(0.546)	(0.531)	(0.548)
Variance (territorial random intercept)						1.048*
						(0.028)
Observations	2207	2199	2199	2199	2199	2199

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Pseudo R2	0.0033	0.0181	0.0233	0.0379	0.0380	
Log pseudolikelihood						-2963.274

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In contrast, personal left-behindness remains negatively and robustly associated with motivation across all specifications, with odds ratios ranging from 0.580 to 0.694 in the ordered logit models and 0.672 in the multilevel model, closely aligning with the magnitude observed for happiness. As before, residence in an inner area is occasionally positive and significant, suggesting that structural territorial disadvantage does not systematically depress positive affect. Overall, the findings reinforce the distinction between territorial and personal perceptions: territorial left-behindness shows weaker and less stable links with positive emotions, whereas personal left-behindness exhibits a consistent negative association, although effect sizes remain more moderate than those observed for life satisfaction.

Table 6. Motivation and feeling personally left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind	0.580***	0.620***	0.612***	0.675***	0.694***	0.672***
	(0.048)	(0.053)	(0.053)	(0.060)	(0.069)	(0.090)
Inner Area			1.204	1.304**	1.159	1.245**
			(0.140)	(0.153)	(0.266)	(0.109)
Personally left-behind # Inner Area					1.058	
					(0.260)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.042***	0.009***	0.009***	0.009***	0.004***	0.009***
	(0.005)	(0.015)	(0.014)	(0.014)	(0.002)	(0.010)
Cut-point 2	0.215***	0.046*	0.046*	0.050**	0.023***	0.052***
	(0.015)	(0.077)	(0.074)	(0.076)	(0.012)	(0.055)
Cut-point 3	1.166**	0.265	0.267	0.309	0.145***	0.317
	(0.074)	(0.443)	(0.429)	(0.472)	(0.072)	(0.334)
Cut-point 4	7.994***	1.904	1.934	2.353	1.164	2.396
	(0.701)	(3.176)	(3.103)	(3.585)	(0.575)	(2.442)
Variance (territorial random intercept)						1.016*
						(0.009)
Observations	1987	1981	1981	1981	1823	1981
Pseudo R2	0.0076	0.0225	0.0260	0.0431	0.0451	
Log pseudolikelihood						-2676.893

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Negative emotions

The results for depression, as one proxy for negative affect, reveal a markedly different pattern compared to the positive emotion indicators. Territorial left-behindness (Table 7) is positively and significantly associated with higher odds of reporting depression in the baseline and partially controlled models (odds ratios between 1.204 and 1.230). Although the association weakens in the fully specified model, it remains statistically significant in the interaction and multilevel specifications (1.242 and 1.174, respectively), indicating that individuals who perceive their territory as left behind are more likely to report higher levels of depressive feelings. Interestingly, residence in an inner area is negatively associated with depression in several specifications, suggesting that structural territorial disadvantage does not automatically translate into worse emotional outcomes and may reflect unobserved contextual or social cohesion effects. The interaction term indicates that the association between territorial left-behindness and depression may be somewhat attenuated among those living in inner areas, which might be explained by social capital.

Table 7. Depression and feeling territorially left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Territorially left-behind	1.204**	1.230**	1.205**	1.146	1.242**	1.174**
	(0.109)	(0.111)	(0.114)	(0.109)	(0.133)	(0.073)
Inner Area			0.764***	0.745***	1.052	0.789
			(0.078)	(0.076)	(0.191)	(0.144)
Territorially left-behind # Inner Area					0.646**	
					(0.139)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.546***	0.346***	0.384***	0.254***	0.279***	0.229***
	(0.045)	(0.102)	(0.131)	(0.115)	(0.127)	(0.096)
Cut-point 2	1.518***	1.031	1.153	0.767	0.845	0.688
	(0.124)	(0.303)	(0.394)	(0.346)	(0.383)	(0.285)
Cut-point 3	6.257***	4.652***	5.243***	3.504***	3.867***	3.128***
	(0.564)	(1.379)	(1.805)	(1.586)	(1.760)	(1.333)
Cut-point 4	29.234***	22.766***	25.742***	17.214***	18.987***	15.349***
	(3.760)	(7.090)	(9.182)	(7.961)	(8.836)	(7.073)
Variance (territorial random intercept)						1.010
						(0.011)
Observations	2207	2199	2199	2199	2199	2199
Pseudo R2	0.0007	0.0305	0.0336	0.0355	0.0360	
Log pseudolikelihood						-3064.139

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

For personal left-behindness, the relationship with depression is substantially stronger and highly robust across all models (Table 8). This implies that individuals who perceive themselves as personally falling behind have more than twice the odds of reporting higher levels of depressive feelings compared to those who do not share this perception. The magnitude of these coefficients is considerably larger than that observed for positive emotions, reinforcing the idea that personal perceptions of relative disadvantage are particularly relevant for negative affect. While inner-area residence is sometimes negatively associated with frequency of depression, the interaction between personal left-behindness and inner-area residence is only weakly significant and does not substantially alter the core relationship. Overall, the results suggest that negative emotions are more sensitive to perceived relative disadvantage than positive affect, and that personal left-behindness constitutes a particularly strong correlate of adverse emotional well-being.

Table 8. Depression and feeling personally left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind	2.377***	2.289***	2.239***	2.189***	2.228***	2.253***
	(0.200)	(0.201)	(0.204)	(0.202)	(0.228)	(0.264)
Inner Area			0.802**	0.772**	1.027	0.827
			(0.089)	(0.086)	(0.204)	(0.114)
Personally left-behind # Inner Area					0.663*	
					(0.140)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.790***	0.976	1.004	0.776	0.210***	0.743
	(0.054)	(1.001)	(0.978)	(0.810)	(0.108)	(0.755)
Cut-point 2	2.303***	3.057	3.164	2.463	0.676	2.345
	(0.162)	(3.134)	(3.081)	(2.570)	(0.345)	(2.271)
Cut-point 3	9.391***	13.739**	14.306***	11.208**	3.143**	10.619***
	(0.793)	(14.085)	(13.925)	(11.698)	(1.609)	(9.716)
Cut-point 4	45.224***	69.169***	72.298***	56.700***	16.015***	53.598***
	(5.795)	(71.276)	(70.783)	(59.478)	(8.355)	(50.888)

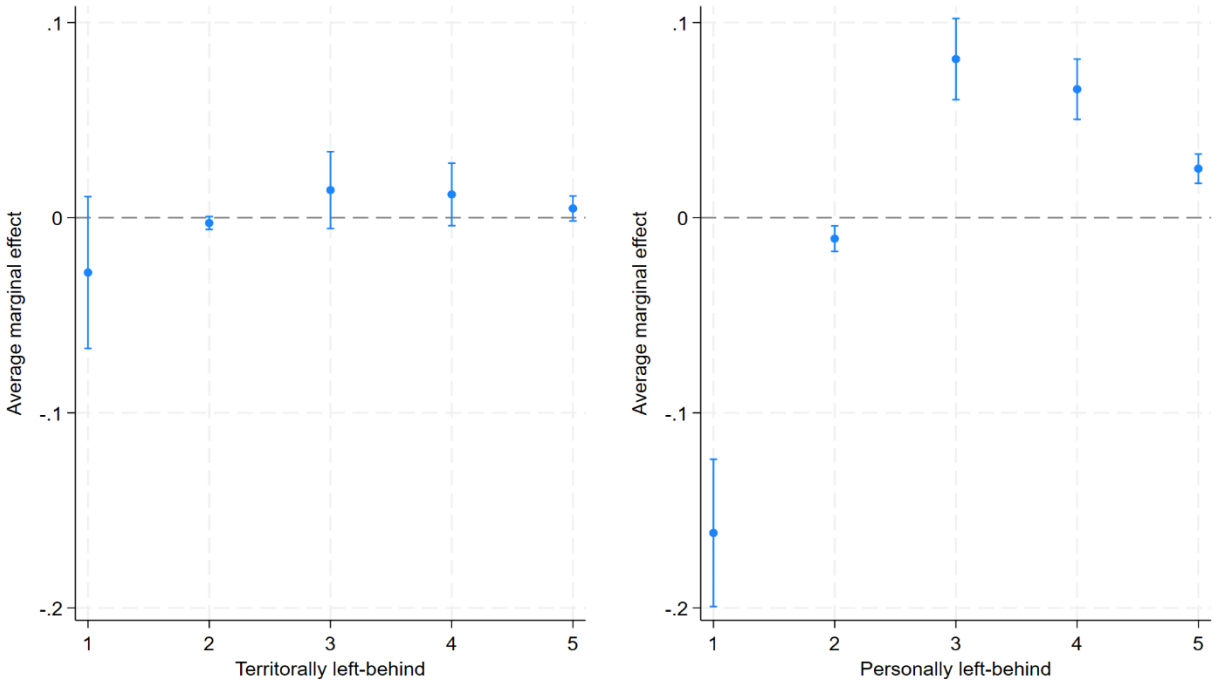
	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Variance (territorial random intercept)						1.003 (0.005)
Observations	1987	1981	1981	1981	1823	1981
Pseudo R2	0.0185	0.0492	0.0514	0.0539	0.0577	
R2						
Log pseudolikelihood						-2714.602

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 3 shows the average marginal effects on the probability of reporting each depression category. For territorial left-behindness, the pattern is not significant. In contrast, feeling personally left behind substantially reduces the probability of being in the lowest depression category and increases the probability of being in higher depression categories.

We considered loneliness as an additional proxy for negative affect, which results in highly consistent outcomes with those obtained for depression, reinforcing the stronger association between perceived left-behindness and adverse emotional outcomes. In Table 9, we can observe that territorial left-behindness is positively and robustly associated with loneliness across all specifications, with odds ratios ranging from 1.375 to 1.469, and remains significant in the multilevel specification. This pattern mirrors the findings for depression, where territorial perceptions were positively linked to negative emotions, although the magnitude for loneliness is somewhat stronger and more stable across model extensions. Residence in an inner area is consistently associated with lower odds of loneliness, again echoing the depression results and suggesting that structural territorial disadvantage does not automatically translate into social or emotional isolation.

Figure 3. Average marginal effects of territorial and personal left-behindness on depression



Note: Points show average marginal effects (change in predicted probability by category). Bars indicate 95% CIs; the dashed line marks zero.

Table 9. Loneliness and feeling territorially left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Territorially left-behind	1.409***	1.469***	1.394***	1.408***	1.375***	1.442***

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
	(0.128)	(0.137)	(0.134)	(0.139)	(0.152)	(0.118)
Inner Area			0.770**	0.760***	0.686**	0.790
			(0.080)	(0.078)	(0.126)	(0.136)
Territorially left-behind # Inner Area					1.138	
					(0.244)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.593***	0.419***	0.424**	0.289***	0.280***	0.286***
	(0.049)	(0.119)	(0.142)	(0.129)	(0.127)	(0.100)
Cut-point 2	1.600***	1.215	1.243	0.850	0.824	0.840
	(0.132)	(0.343)	(0.415)	(0.379)	(0.372)	(0.309)
Cut-point 3	6.591***	5.452***	5.651***	3.885***	3.769***	3.819***
	(0.596)	(1.546)	(1.896)	(1.729)	(1.695)	(1.511)
Cut-point 4	31.280***	27.101***	28.313***	19.488***	18.913***	19.100***
	(4.038)	(7.950)	(9.784)	(8.807)	(8.636)	(7.342)
Variance (territorial random intercept)						1.029
						(0.027)
Observations	2207	2199	2199	2199	2199	2199
Pseudo R2	0.0022	0.0330	0.0380	0.0398	0.0398	
Log pseudolikelihood						-3075.595

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

For personal left-behindness (Table 10), the association with loneliness is particularly pronounced and robust, with odds ratios consistently above 2.0, closely matching the magnitude observed for depression. Overall, as with depression, loneliness appears substantially more sensitive to personal perceptions of falling behind than to objective territorial conditions, further supporting the interpretation that negative emotions respond more strongly to perceived relative disadvantage than positive affective states.

Table 10. Loneliness and feeling personally left-behind (odd ratios)

	Ologit (Base)	Ologit (Individual)	Ologit (Territorial)	Ologit (All)	Ologit (Interaction)	Multilevel (All)
Personally left-behind	2.431***	2.349***	2.259***	2.273***	2.085***	2.350***
	(0.205)	(0.209)	(0.208)	(0.212)	(0.219)	(0.279)
Inner Area			0.746***	0.732***	0.595***	0.777
			(0.084)	(0.082)	(0.119)	(0.149)
Personally left-behind # Inner Area					1.415	
					(0.300)	
Individual characteristics	No	Yes	Yes	Yes	Yes	Yes
Macro-regions	No	No	Yes	Yes	Yes	Yes
Perceptions	No	No	No	Yes	Yes	Yes
Constant						
Cut-point 1	0.794***	1.003	0.947	0.880	0.205***	0.935
	(0.053)	(1.076)	(1.007)	(1.050)	(0.106)	(1.122)
Cut-point 2	2.169***	2.951	2.809	2.623	0.633	2.776
	(0.150)	(3.164)	(2.985)	(3.129)	(0.325)	(3.357)
Cut-point 3	9.131***	13.540**	13.019**	12.219**	2.940**	12.855**
	(0.768)	(14.508)	(13.831)	(14.566)	(1.504)	(15.115)
Cut-point 4	43.647***	67.645***	65.680***	61.735***	15.122***	64.583***
	(5.502)	(72.631)	(69.940)	(73.750)	(7.822)	(75.983)
Variance (territorial random intercept)						1.013
						(0.020)
Observations	1987	1981	1981	1981	1823	1981
Pseudo R2	0.0195	0.0509	0.0545	0.0565	0.0590	
Log pseudolikelihood						-2720.231

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Interactions between personal and territorially left-behind

The interaction between personal and territorial left-behindness is introduced to assess whether the two perceptions reinforce or moderate each other in shaping subjective well-being (Table 11). Conceptually, individuals who feel both personally and territorially left behind may experience a combined sense of disadvantage, in which individual trajectories and place-based conditions jointly shape their relative position. Alternatively, the two dimensions may operate independently, capturing distinct mechanisms of comparison (one rooted in personal mobility and individual outcomes, the other in collective or spatial narratives).

Table 11. Interaction between personally and territorially left-behind and dimensions of SWB (odd ratios)

	Life Satisfaction	Momentary Happiness	Motivation	Depression	Loneliness
Personally left-behind	0.386***	0.881	0.917	2.046***	2.168***
	(0.095)	(0.175)	(0.183)	(0.387)	(0.427)
Territorially left-behind	0.903	1.065	1.130	0.864	1.193
	(0.146)	(0.152)	(0.157)	(0.124)	(0.172)
Personally # Territorially	0.974	0.897	0.688	1.122	0.948
left-behind	(0.263)	(0.201)	(0.159)	(0.246)	(0.213)
Individual characteristics	Yes	Yes	Yes	Yes	Yes
Macro-regions	Yes	Yes	Yes	Yes	Yes
Perceptions	Yes	Yes	Yes	Yes	Yes
Cut-point 1	0.041***	0.001***	0.005***	0.181***	0.223***
	(0.023)	(0.001)	(0.003)	(0.095)	(0.118)
Cut-point 2	0.340*	0.007***	0.028***	0.580	0.690
	(0.192)	(0.004)	(0.014)	(0.305)	(0.363)
Cut-point 3	11.846***	0.051***	0.175***	2.695*	3.201**
	(6.689)	(0.027)	(0.088)	(1.420)	(1.676)
Cut-point 4		0.625	1.406	13.742***	16.451***
		(0.331)	(0.701)	(7.367)	(8.712)
Observations	1813	1823	1823	1823	1823
Pseudo R2	0.1116	0.0458	0.0456	0.0573	0.0588

Robust standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results indicate that the interaction term is not statistically significant across any dimension of SWB, suggesting that personal and territorial perceptions largely operate additively rather than multiplicatively. The main patterns observed in earlier models remain unchanged: personal left-behindness is strongly and negatively associated with life satisfaction and strongly positively associated with depression and loneliness, while its associations with momentary happiness and motivation are weaker and not statistically significant. Territorial left-behindness, in contrast, shows no significant associations across dimensions once personal perceptions are included. Compared with previous models, these findings reinforce the central role of perceived personal disadvantage in shaping both evaluative and negative affective well-being, while suggesting that territorial perceptions do not significantly change these effects when both are considered simultaneously.

5. Conclusions

This paper has examined the relationship between personal and territorial left-behindness and multiple dimensions of subjective well-being in Italy, using an original, stratified survey of around 2,000 individuals. The central finding is a systematic asymmetry between personal and territorial forms of left-behindness in their relationship with SWB. Personal left-behindness is strongly and consistently associated with lower well-being across all dimensions examined, with particularly large effects on negative affect. Individuals who feel personally left behind face more than twice the odds of reporting higher levels of depression and loneliness, even after controlling for individual sociodemographic characteristics, subjective economic situation, perceptions of inequality and institutional trust, and macro-regional heterogeneity. The association with life satisfaction is also robust and meaningful, while effects on positive emotions (happiness and motivation), though statistically significant, are more moderate. The associations of territorial left-behindness with life satisfaction and positive emotions indicate that, while significant in baseline models, they

attenuate substantially once controls are introduced and show no significant net effect on any SWB dimension when personal left-behindness is also included. Residence in an inner area is consistently non-significant or even positively associated with some emotional outcomes, confirming that objective structural disadvantage does not automatically translate into lower subjective well-being.

These findings speak to several strands of the existing literature. First, they support and empirically demonstrate the theoretical argument that feeling left behind and experiencing low SWB are conceptually and analytically distinct (Lenzi & Perucca, 2024; MacKinnon et al., 2024). The persistent conflation of the two in the left-behind literature risks misidentifying who is most affected and how. Our results show that it is specifically the personalised, comparative perception of disadvantage, rather than structural place-based marginalisation per se, that most consistently predicts worse well-being outcomes. This aligns with social comparison theory (Clark et al., 2008; Festinger, 1954), which holds that what matters is the subjective evaluation of one's position relative to others, rather than objective conditions, and that this shapes emotional states and life evaluations. Territorial perceptions, while meaningful, appear to operate more through the lens of collective identity and political grievance than through direct effects on individual well-being (Rodríguez-Pose, 2018).

Second, the asymmetry between effects on negative affect and life satisfaction is theoretically informative and consistent with the multidimensional SWB framework (Diener et al., 1999; Watson et al., 1988). The substantially stronger effects of personal left-behindness on depression and loneliness compared to life satisfaction suggest that perceived relative disadvantage operates primarily through emotional channels, while leaving cognitive life evaluations somewhat more intact, particularly when other life domains (family, health, social relationships) remain satisfactory. This is consistent with the Affective Political Economy framework, suggesting that structural and economic grievances generate sustained negative emotional responses that drive individuals toward culturally and politically discontented narratives. Our findings suggest that the affective channel is indeed active at the individual level, with personal left-behindness generating the negative emotional states as the mechanism connecting economic disadvantage to political discontent.

Third, the finding that inner-area residence does not significantly depress SWB, and is occasionally positively associated with some emotional outcomes, in accordance with a growing body of evidence suggesting that rural and peripheral communities may sustain social cohesion, place-based identity, and informal support networks that partially buffer against the emotional consequences of structural disadvantage (Rodríguez-Pose, 2018). This does not diminish the importance of addressing territorial inequalities in service provision and economic opportunity. Rather, it underscores that the well-being consequences of territorial disadvantage are mediated by how that disadvantage is perceived and interpreted at the individual level, and that policy narratives of neglect and abandonment may themselves contribute to the psychological burden of living in peripheral areas.

These results suggest that personal perceptions of disadvantage are the strongest correlates of lower SWB, suggesting that territorial development policies aimed at addressing place-based inequalities must be complemented by attention to how those inequalities are experienced and communicated at the individual level. Policies that improve objective conditions without addressing subjective narratives of neglect risk failing to improve the well-being of those most affected. Conversely, transparent and participatory policy processes that give citizens a sense of voice and recognition may have well-being returns beyond what objective improvements alone can deliver (Helliwell & Putnam, 2004; McCann, 2020).

One of the main limitations of the analysis is the cross-sectional nature of the data, which makes it difficult to provide a causal identification. Future research using longitudinal data and experimental or quasi-experimental designs would be valuable in establishing the direction of causality. Additionally, extending the analysis to include trust in institutions, populist attitudes, and political participation would allow for a more direct test of the hypothesised full left-behindness discontent chain proposed by the APE framework.

Acknowledgements

This paper is an output from the project "PULP – Place-based unfolding, localities and participation" funded by Next Generation EU, Mission 4, CUP: D53D23011240006.

References

Abed Al Ahad, M. (2024). Air Pollution Reduces the Individuals' Life Satisfaction Through Health Impairment. *Applied Research in Quality of Life*, *19*(3), 1049–1073. https://doi.org/10.1007/s11482-024-10273-5

Arrondo, R., Cárcaba, A., & González, E. (2021). Drivers of Subjective Well-Being Under Different Economic Scenarios. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.696184

Ballas, D. (2013). What makes a 'happy city'? *Cities, Current Research on Cities*, *32*, S39–S50. https://doi.org/10.1016/j.cities.2013.04.009

Ballas, D., & Thanis, I. (2022). Exploring the Geography of Subjective Happiness in Europe During the Years of the Economic Crisis: A Multilevel Modelling Approach. *Social Indicators Research*, *164*(1), 105–137. https://doi.org/10.1007/s11205-021-02874-6

Barca, F., McCann, P., & Rodríguez-Pose, A. (2012). The Case for Regional Development Intervention: Place-Based Versus Place-Neutral Approaches. *Journal of Regional Science*, *52*(1), 134–152. https://doi.org/10.1111/j.1467-9787.2011.00756.x

Bolzoni, M., Cotella, G., & Vitale Brovarone, E. (2026). Repopulating peripheral rural areas? The approach of the Italian National Strategy for Inner Areas. *Journal of Rural Studies*, *122*, 103971. https://doi.org/10.1016/j.jrurstud.2025.103971

Brezzi, M., de Mello, L., & Laurent, É. (2016). Au-delà du PIB, en-deçà du PIB. Mesurer le bien-être territorial dans l'OCDE. *Revue de l'OFCE*, *145*(1), 11–32. https://doi.org/10.3917/reof.145.0011

Buunk, A. P., & Gibbons, F. X. (2007). Social comparison: The end of a theory and the emergence of a field. *Organizational Behavior and Human Decision Processes, Special Issue on Social Comparison Processes*, *102*(1), 3–21. https://doi.org/10.1016/j.obhdp.2006.09.007

Calcagnini, G., & Perugini, F. (2019). Social capital and well-being in the Italian provinces. *Socio-Economic Planning Sciences*, *68*, 100668. https://doi.org/10.1016/j.seps.2018.11.005

Capecchi, S., Corduas, M., & Piccolo, D. (2025). Social Sustainability and Subjective Well-Being: A Study on Italian Inner Areas. *Sustainability*, *17*(5), 2078. https://doi.org/10.3390/su17052078

Castells-Quintana, D. (2017). Malthus living in a slum: Urban concentration, infrastructure and economic growth. *Journal of Urban Economics, Urbanization in Developing Countries: Past and Present*, *98*, 158–173. https://doi.org/10.1016/j.jue.2016.02.003

Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles. *Journal of Economic Literature*, *46*(1), 95–144. https://doi.org/10.1257/jel.46.1.95

Clark, A. E., & Oswald, A. J. (1994). Unhappiness and Unemployment. *The Economic Journal*, *104*(424), 648–659. https://doi.org/10.2307/2234639

Das, K. V., Jones-Harrell, C., Fan, Y., Ramaswami, A., Orlove, B., & Botchwey, N. (2020). Understanding subjective well-being: Perspectives from psychology and public health. *Public Health Reviews*, *41*(1), 25. https://doi.org/10.1186/s40985-020-00142-5

Denti, D. (2022). *Looking ahead in anger: The effects of foreign migration on youth resentment in England*. https://doi.org/10.1111/jors.12577

Deole, S. S., & Huang, Y. (2024). Suffering and prejudice: Do negative emotions predict immigration concerns? *Journal of Population Economics*, *37*(2), 54. https://doi.org/10.1007/s00148-024-01032-9

Diener, E., Suh, E., Lucas, R., & Smith, H. (1999). Subjective Well-Being: Three Decades of Progress. *Psychological Bulletin*, *125*, 276–302. https://doi.org/10.1037/0033-2909.125.2.276

D'Urso, P., Alaimo, L. S., De Giovanni, L., & Massari, R. (2022). Well-Being in the Italian Regions Over Time. *Social Indicators Research*, *161*(2), 599–627. https://doi.org/10.1007/s11205-020-02384-x

Easterlin, R. A., & O'Connor, K. J. (2022). Explaining happiness trends in Europe. *Proceedings of the National Academy of Sciences*, *119*(37), e2210639119. https://doi.org/10.1073/pnas.2210639119

Faggian, A., Michelangeli, A., & Tkach, K. (2023). Income inequality in Europe: Reality, perceptions, and hopes. *Research in Globalization*, *6*, 100118. https://doi.org/10.1016/j.resglo.2023.100118

Faggian, A., Michelangeli, A., & Tkach, K. (2024). Three types of income inequality: A comparison of left behind places and more developed regions in the EU. *Cambridge Journal of Regions, Economy and Society*, *17*(1), 87–102. https://doi.org/10.1093/cjres/rsad046

Faggian, A., Olfert, M. R., & Partridge, M. D. (2012). Inferring regional well-being from individual revealed preferences: The 'voting with your feet' approach. *Cambridge Journal of Regions, Economy and Society*, *5*(1), 163–180. https://doi.org/10.1093/cjres/rsr016

Ferrara, A. R., & Nisticò, R. (2015). Regional well-being indicators and dispersion from a multidimensional perspective: Evidence from Italy. *The Annals of Regional Science*, *55*(2), 373–420. https://doi.org/10.1007/s00168-015-0704-y

Ferrer-i-Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics*, *89*(5), 997–1019. https://doi.org/10.1016/j.jpubeco.2004.06.003

Festinger, L. (1954). A Theory of Social Comparison Processes. *Human Relations*, *7*(2), 117–140. https://doi.org/10.1177/001872675400700202

Fligstein, N., Hastings, O. P., & Goldstein, A. (2017). Keeping up with the Joneses: How Households Fared in the Era of High Income Inequality and the Housing Price Bubble, 1999–2007. *Socius*, *3*, 2378023117722330. https://doi.org/10.1177/2378023117722330

Genicot, G., & Ray, D. (2017). Aspirations and Inequality. *Econometrica*, *85*(2), 489–519. https://doi.org/10.3982/ECTA13865

Glaeser, E. L., Gottlieb, J. D., & Ziv, O. (2016). Unhappy Cities. *Journal of Labor Economics*, *34*(S2), S129–S182. https://doi.org/10.1086/684044

González-Cuatianquis, C. J., Faggian, A., & Veneri, P. (2025). Unequal cities, unhappy lives? The role of interpersonal and territorial inequalities in shaping life satisfaction in European cities. *Urban Studies*, 00420980251392160. https://doi.org/10.1177/00420980251392160

Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *359*(1449), 1435–1446. https://doi.org/10.1098/rstb.2004.1522

Kahneman, D., & Krueger, A. B. (2006). Developments in the Measurement of Subjective Well-Being. *Journal of Economic Perspectives*, *20*(1), 3–24. https://doi.org/10.1257/089533006776526030

Knabe, A., Rätzel, S., Schöb, R., & Weimann, J. (2010). Dissatisfied with Life but Having a Good Day: Time-use and Well-being of the Unemployed. *The Economic Journal*, *120*(547), 867–889. https://doi.org/10.1111/j.1468-0297.2009.02347.x

Koeppen, L., Ballas, D., Edzes, A., & Koster, S. (2021). Places that don't matter or people that don't matter? A multilevel modelling approach to the analysis of the geographies of discontent. *Regional Science Policy & Practice*, *13*(2), 221–246. https://doi.org/10.1111/rsp3.12384

Lenzi, C., & Perucca, G. (2019). Subjective Well-Being over Time and across Space. Thirty Years of Evidence from Italian Regions. *Scienze Regionali*, (Speciale/2019). https://doi.org/10.14650/94669

Lenzi, C., & Perucca, G. (2021). Not too close, not too far: Urbanisation and life satisfaction along the urban hierarchy. *Urban Studies*, *58*(13), 2742–2757. https://doi.org/10.1177/0042098020962397

Lenzi, C., & Perucca, G. (2024). Cities, Inequalities and the Geography of Societal Discontent in European Regions. *Applied Research in Quality of Life*. https://doi.org/10.1007/s11482-024-10381-2

Lenzi, C., & Perucca, G. (2025). Unravelling the geography and spatial mismatch of individual and political discontent in the UK. *Regional Science Policy & Practice*, *17*(7), 100194. https://doi.org/10.1016/j.rspp.2025.100194

Lindholm, A., & Rapeli, L. (2023). Is the unhappy citizen a populist citizen? Linking subjective well-being to populist and nativist attitudes. *European Political Science Review*, *15*(3), 465–481. https://doi.org/10.1017/S1755773922000583

Lippmann, S., Davis, A., & Aldrich, H. (2005). Entrepreneurship and Inequality. *Research in the Sociology of Work*, *15*, 3–31. https://doi.org/10.1016/S0277-2833(05)15002-X

MacKinnon, D., Béal, V., & Leibert, T. (2024). Rethinking 'left-behind' places in a context of rising spatial inequalities and political discontent. *Regional Studies*, *58*(6), 1161–1166. https://doi.org/10.1080/00343404.2023.2291581

MacKinnon, D., Kempton, L., O'Brien, P., Ormerod, E., Pike, A., & Tomaney, J. (2022). Reframing urban and regional 'development' for 'left behind' places. *Cambridge Journal of Regions, Economy and Society*, *15*(1), 39–56. https://doi.org/10.1093/cjres/rsab034

Mahoney, J. (2023). *Subjective well-being measurement: Current practice and new frontiers*. OECD. https://doi.org/10.1787/4e180f51-en

Martínez-Bravo, M. D. M., Martínez-del-Río, J., & Antolín-López, R. (2019). Trade-offs among urban sustainability, pollution and livability in European cities. *Journal of Cleaner Production*, *224*, 651–660. https://doi.org/10.1016/j.jclepro.2019.03.110

McCann, P. (2020). Perceptions of regional inequality and the geography of discontent: Insights from the UK. *Regional Studies*, *54*(2), 256–267. https://doi.org/10.1080/00343404.2019.1619928

McKay, L. (2019). Left behind' people, or places? The role of local economies in perceived community representation. *Electoral Studies*, *60*. https://doi.org/https://doi.org/10.1016/j.electstud.2019.04.010.

Modica, M., Urso, G., & Faggian, A. (2021). Do «Inner Areas» Matter? Conceptualization, Trends and Strategies for their Future Development Path. *Scienze Regionali*, (2/2021). https://doi.org/10.14650/99816

Morrison, P. S. (2021). Wellbeing and the Region. In M. M. Fischer & P. Nijkamp (Eds.), *Handbook of Regional Science* (pp. 779–798). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-60723-7_16

Nijman, J., & Wei, Y. D. (2020). Urban inequalities in the 21st century economy. *Applied Geography*, *117*, 102188. https://doi.org/10.1016/j.apgeog.2020.102188

Norris, P., & Inglehart, R. (2019). *Cultural Backlash: Trump, Brexit, and Authoritarian Populism*. Cambridge University Press. https://doi.org/10.1017/9781108595841

Okulicz-Kozaryn, A., & Valente, R. R. (2019). Livability and Subjective Well-Being Across European Cities. *Applied Research in Quality of Life*, *14*(1), 197–220. https://doi.org/10.1007/s11482-017-9587-7

Panori, A., Kalogeresis, A., Papastergiou, E., Ziogas, T., & Ballas, D. (2025). Unraveling the nexus: Subjective well-being and left-behind places. *Regional Science Policy & Practice*, 100222. https://doi.org/10.1016/j.rspp.2025.100222

Pavot, W., & Diener, E. (1993). The affective and cognitive context of self-reported measures of subjective well-being. *Social Indicators Research*, *28*(1), 1–20. https://doi.org/10.1007/BF01086714

Pettigrew, T. F. (2002). Summing up: Relative deprivation as a key social psychological concept. In *Relative deprivation: Specification, development, and integration* (pp. 351–373). Cambridge University Press.

Phelps, N. A., Atienza, M., & Arias-Loyola, M. (2025). The abandoned, the depressed, and the sacrificed: Stretching the terms of the economic geographical debate on left-behind places. *Journal of Economic Geography*, lbaf057. https://doi.org/10.1093/jeg/lbaf057

Pontarollo, N., Orellana, M., & Segovia, J. (2020). The Determinants of Subjective Well-Being in a Developing Country: The Ecuadorian Case. *Journal of Happiness Studies*, *21*(8), 3007–3035. https://doi.org/10.1007/s10902-019-00211-w

Ravazzini, L., & Chávez-Juárez, F. (2018). Which Inequality Makes People Dissatisfied with Their Lives? Evidence of the Link Between Life Satisfaction and Inequalities. *Social Indicators Research*, *137*(3), 1119–1143. https://doi.org/10.1007/s11205-017-1623-3

Rhodes-Purdy, M., Navarre, R., & Utych, S. (Eds.). (2023). The Age of Discontent. In *The Age of Discontent: Populism, Extremism, and Conspiracy Theories in Contemporary Democracies* (pp. i–ii). Cambridge University Press. https://www.cambridge.org/core/books/age-of-discontent/age-of-discontent/7EB3B479E5909976A968B86F1ABED2D4

Rodríguez-Pose, A. (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge Journal of Regions, Economy and Society*, *11*(1), 189–209. https://doi.org/10.1093/cjres/rsx024

Rodríguez-Pose, A., & Maslauskaite, K. (2012). Can policy make us happier? Individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe. *Cambridge Journal of Regions, Economy and Society*, *5*(1), 77–96. https://doi.org/10.1093/cjres/rsr038

Rodríguez-Pose, A., Terrero-Dávila, J., & Lee, N. (2023). Left-behind versus unequal places: Interpersonal inequality, economic decline and the rise of populism in the USA and Europe. *Journal of Economic Geography*, *23*(5), 951–977. https://doi.org/10.1093/jeg/lbad005

Rojas, M. (2004). *Well-being and the complexity of poverty: A subjective well-being approach*.

Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. *Annual Review of Psychology*, *52*(Volume 52, 2001), 141–166. https://doi.org/10.1146/annurev.psych.52.1.141

Stiglitz, J., Sen, A., & Fitoussi, J.-P. (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*. https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf

Veneri, P., & Edzes, A. J. E. (2017). Well-being in cities and regions: Measurement, analysis and policy practices. *REGION*, *4*(2), Article 2. https://doi.org/10.18335/region.v4i2.188

Vijayakumar, V., & Sangeetha, S. P. (2021). Urban form as a critical factor in the Quality of Life indicators – A review. *Materials Today: Proceedings, International Conference on Newer Trends and Innovation in Mechanical Engineering: Materials Science*, *37*, 877–879. https://doi.org/10.1016/j.matpr.2020.06.043

Ward, G., De Neve, J.-E., Ungar, L. H., & Eichstaedt, J. C. (2021). (Un)happiness and voting in U.S. presidential elections. *Journal of Personality and Social Psychology*, *120*(2), 370–383. https://doi.org/10.1037/pspi0000249

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070. https://doi.org/10.1037//0022-3514.54.6.1063

Appendix

Table 1A. Descriptive statistics

Variable	Observations	Mean	Std. dev.	Min	Max
Subjective well-being					
Life Satisfaction					
Not at all satisfied	2,465	0.076673	0.266127	0	1
No very satisfied	2,465	0.277891	0.44805	0	1
Satisfied enough	2,465	0.557404	0.496795	0	1
Very satisfied	2,465	0.088033	0.2834	0	1
Positive emotions					
Happiness					
Never	2,527	0.072418	0.25923	0	1
Rarely	2,527	0.202216	0.401732	0	1
Sometimes	2,527	0.420261	0.493699	0	1
Often	2,527	0.265137	0.441493	0	1
Always	2,527	0.039968	0.195924	0	1
					Motivation
Never	2,527	0.060942	0.239271	0	1
Rarely	2,527	0.178077	0.382653	0	1
Sometimes	2,527	0.405224	0.491032	0	1
Often	2,527	0.279778	0.448979	0	1
Always	2,527	0.075979	0.265018	0	1
Negative emotions					
Depression					
Never	2,527	0.325683	0.468722	0	1
Rarely	2,527	0.24258	0.428728	0	1
Sometimes	2,527	0.277008	0.447609	0	1
Often	2,527	0.116344	0.3207	0	1
Always	2,527	0.038385	0.192163	0	1
Loneliness					
Never	2,527	0.31856	0.46601	0	1
Rarely	2,527	0.229521	0.420608	0	1
Sometimes	2,527	0.287297	0.452591	0	1
Often	2,527	0.123467	0.329037	0	1
Always	2,527	0.041156	0.198689	0	1
Perceptions of left-behindness					
Territorially	2,207	0.772542	0.419286	0	1
Personally	1,987	0.607952	0.48833	0	1
Individual characteristics					
Gender					
Man	2,515	0.482704	0.4998	0	1

Variable	Observations	Mean	Std. dev.	Min	Max
Women	2,515	0.517296	0.4998	0	1
Age					
18-24	2,527	0.05738	0.232614	0	1
25-34	2,527	0.129798	0.336148	0	1
35-44	2,527	0.143253	0.3504	0	1
45-54	2,527	0.180847	0.384967	0	1
55-64	2,527	0.189157	0.391711	0	1
65 or more	2,527	0.299565	0.458158	0	1
Education					
Primary	2,527	0.021765	0.145944	0	1
Secondary	2,527	0.624456	0.484359	0	1
Tertiary	2,527	0.353779	0.478236	0	1
Occupation					
Other	2,516	0.424086	0.494302	0	1
Employed	2,516	0.575914	0.494302	0	1
Family yearly net income					
Less 10,000	2,259	0.126605	0.332603	0	1
10-20,000	2,259	0.074812	0.263146	0	1
20-35,000	2,259	0.179726	0.384044	0	1
35-50,000	2,259	0.338203	0.473203	0	1
50-75,000	2,259	0.233732	0.423297	0	1
More than 75,000	2,259	0.046923	0.211522	0	1
Territory					
SNAI					
Center	2,527	0.794222	0.404349	0	1
Internal areas	2,527	0.205778	0.404349	0	1
Macro-regions					
Alpina	2,527	0.105263	0.306953	0	1
Lombardia	2,527	0.163831	0.370195	0	1
Triveneto	2,527	0.122279	0.327673	0	1
Levante	2,527	0.071231	0.257261	0	1
Appenninica	2,527	0.079145	0.270019	0	1
Adriatica	2,527	0.048674	0.215229	0	1
Lazio	2,527	0.097349	0.296491	0	1
Emilia-Romagna	2,527	0.071231	0.257261	0	1
Ponente	2,527	0.039177	0.194054	0	1
Campania	2,527	0.092204	0.289371	0	1
Insulari	2,527	0.109616	0.312473	0	1
Perceptions					
Level of trust in national government	2,527	3.996043	2.621396	1	10
Perception of fairness of income distribution					

Variable	Observations	Mean	Std. dev.	Min	Max
Very fair	2,527	0.007123	0.084114	0	1
Fair	2,527	0.057776	0.233366	0	1
Not fair	2,527	0.300356	0.458504	0	1
Unfair	2,527	0.426593	0.49468	0	1
Very unfair	2,527	0.208152	0.406067	0	1
Perception of accessibility to essential services					
Very fair	2,527	0.036011	0.186355	0	1
Fair	2,527	0.119114	0.323986	0	1
Not fair	2,527	0.277404	0.447806	0	1
Unfair	2,527	0.366047	0.481818	0	1
Very unfair	2,527	0.201425	0.401144	0	1