The Subjective Dimension in Settlement Choices: Approaches and Tools for Detecting Preferences

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Abstract. The ongoing digital transition profoundly affects people's habits and customs, their lifestyles and also the choice related to the place to live. The choice related to the place to live is strongly conditioned by the incidence of the cost of housing (buying or renting), which is dependent on the market and income capacity. It should be noted, however, that the growing interest in the concept of well-being understood as a paradigm of quality of life may lead to new interests in residential demand effectively untying the digital transition - at least potentially - workers in the tertiary sector from the physical place of work. Based on the above, this paper aims to illustrate some results of a Project of Significant National Interest under the Ministry of Universities and Research (MUR)'s approved call No. 1409 of 14-9-2022 (PRIN 2022 PNRR) entitled "Housing mobility and digital transition. Evaluation tools and technologies for understanding current and future people's living needs, supporting territorial governance and regeneration processes." This Research project is configured as a prodromal study and investigation activity for understanding, among demographic phenomena, housing mobility, which significantly affects urbanization phenomena on which land use and protection, urban regeneration, and the protection and enhancement of agricultural activity, issues of interest to the PNRR, depend. In detail, the present work returns the results of a survey, conducted through the tool of the questionnaire, widely used in social research, aimed at investigating, with reference to the Tuscan regional territory, the subjective dimension in settlement choices, in order to identify the territorial areas that, without considering the market and objective qualification characters and therefore without objective feedback, are nevertheless more attractive.

Keywords: Land Government · Social Research · Questionnaires · Well-being · Digital Transition

1 Introduction

The ongoing digital transition profoundly affects people's habits and customs and may affect their lifestyles. With particular reference to the consideration concerning the place to live, although this choice is strongly conditioned by the incidence of the cost of housing (buying or renting), which is dependent on the market and income capacity, it should be

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noted, however, that the growing interest in the concept of well-being understood as a paradigm of quality of life can determine new interests of residential demand, effectively freeing the digital transition - at least potentially - workers in the tertiary sector, which in Italy weighs about 2/3 of total employment, from the physical place of work. Such possibilities occur for the first time in the history of modern man; those traditional "home-to-work" distance constraints that have profoundly influenced people's choice of living place since at least the 18th century onward are overcome, not having been effectively overcome even by the technological advancement of means of transportation.

However, the choice of where to live is strongly influenced by the amount of money available for housing compared to income, typically focused on rent or mortgage payments and potential borrowing for an upfront purchase. Considering this, it is believed that the digital transition may nonetheless create significant effects on the choice of living location, where, in addition to the mortgage-to-rental-income ratio and the characteristics that objectively define a place, personal expectations, ambitions, and preferences play a role, suggesting a subjective dimension that this work explores.

Based on the above, this contribution aims to illustrate some results related to the Project of Significant National Interest referred to in the Call for Proposals no. 1409 of 14-9-2022 (PRIN 2022 PNRR) approved by the Ministry of University and Research (MUR) with D.D. no. 1235 of August 1, 2023 and admitted for funding with D.D. no. 1378 of September 1, 2023, ERC SH - Social Sciences and Humanities, main ERC subfield SH7_7 Cities; urban, regional and rural studies entitled "Housing mobility and digital transition. Evaluation tools and technologies for understanding current and future people's living needs, supporting territorial governance and regeneration processes," and which therefore results among the Research projects funded by the European Union under the Next Generation EU. This research project is configured as a study and investigation activity, preliminary to understanding the demographic phenomena of housing mobility, which significantly affects urbanization and should therefore be duly considered in territorial governance activities.

In detail, this contribution returns the results of a survey, conducted through the questionnaire instrument, widely used in social research, aimed at investigating, concerning the Tuscan regional territory, the subjective dimension in settlement choices, to identify the territorial areas that, without considering the market and objective qualification characters and therefore without objective feedback, are nevertheless more attractive.

2 Preference Capture Techniques Used in Social Research: Focus on Interviews and Questionnaires

It is well established in science that one can acquire even scientific knowledge of social facts [1]. In social research, particular importance is placed on studying methods and techniques for constructing the "empirical base" of data and information to support the research activities.

Within the framework of preference detection processes associated with land governance, the use of interviews and questionnaires is predominantly observed. These instruments exhibit strong correlations, to the extent that, over time, the questionnaire in social research has evolved into an implementation tool for structured interviews,

thereby transcending the early classifications [2] that differentiated the two instruments based on the distinct outputs they offered (qualitative for interviews and quantitative for questionnaires). Currently, within the domain of social research, the questionnaire is recognized as a variant of structured interview [1, 3–7]. Below is a literature review concerning interviews and the questionnaire as conceptualized in social research.

2.1 The Interviews

Interviews serve as a fundamental survey technique for qualitative social research. Since the early developments in sociology and anthropology, they have been used to gather information. This technique facilitates direct, verbal, and rich subjective data, focusing on the interviewee's personal experiences, perceptions, and social dynamics. [7, 8] Moreover, the advent of technology has dismantled the spatial barrier, enabling interviews to be conducted not only live but also via telephone, video call, or online platforms (e.g., online, asynchronous interviews). This advancement has expanded research contexts and comparisons across different populations, even those that are very distant. Although the interview technique may appear straightforward, it necessitates specific caveats: i) it must be based on a dyadic interviewer-interviewee relationship, in which the former plays the role of asking questions and the latter of providing answers while adhering to the rules established by the researcher [9]; ii) it assumes that the interviewer possesses exceptional skills in reprocessing the data obtained.

According to a rather popular sociological approach, interviews can be classified according to different criteria:

1. The presence or absence of eye contact;
2. The distribution of power among actors;
3. The degree of freedom granted to the respondent.

The selection of the classification criterion is contingent upon the initial objectives, the nature of the research to be undertaken, and, most importantly, the specific context in which the interview is administered. Of particular significance, for ensuring the validity and authenticity of the interview results, is the level of freedom afforded to the interviewees. In this regard, interviews can be categorized as: i) unstructured; ii) semi-structured; iii) structured. The subsequent descriptions elaborate on these types of interviews, with a particular emphasis on the structured interviews that can be conducted utilizing a questionnaire.

Unstructured and Semi-structured Interviews

The unstructured interview, also known as the free interview, involves a more open and conversational format. The questions are not predetermined, and the researcher only sets the topic to be addressed. The goal of this type of interview is to explore the interviewee's point of view in depth, which is a significant advantage. The unstructured interview aims to stimulate a free narrative, which is why it develops over a fairly long time horizon (limitation), a factor that strongly influences the choice of sample size to be analyzed [9, 10]. It is mainly used in preliminary surveys, when, once the research problems have been identified, the next step is to formulate hypotheses. The difficulties of analysis are high, as there is a total lack of a basic structure, making data processing challenging.

Semi-structured interviews combine elements of structured and unstructured interviews. Again, the researcher prepares a set of questions that he or she wishes to receive answers to from the interviewee. However, criteria for flexibility are also maintained: the researcher can indeed use additional questions beyond those planned, enhancing the quantity and quality of the material produced by the interviewee [11]. Typically, this type of interview is utilized in social research where there are complex areas to analyze. In fact, rigor in the topics covered is combined with flexibility in the exchange of responses. The goal is to collect opinions and comments that may not have been captured in the preparation stages and that will significantly impact the continuation of the project [10, 12].

Advantages include flexibility in responding, interpreting, and exploring a specific theme; adaptability and responsiveness in addressing emerging issues and initiating new lines of inquiry; and greater preparation for the interviewer (alternative formulations, explanations, suggested answers to help the respondent). Disadvantages relate to the subsequent processing of the data, which can take a long time, and to possible inconsistency in responses, leading to their misinterpretation.

Structured Interviews: Implementation Through Questionnaires

Structured interviews, also referred to as standardized, have a rigid form, leaving little room for interpretation by the interviewee. The interview is characterized by the use of a standardized instrument, the same for all respondents, with very few (or no) parts that allow the respondent to freely express his or her position [13]. The respondent is required to answer a questionnaire, consisting of a set of fixed questions and predetermined answers from which to choose one, and almost no open-ended questions, i.e., questions to which he or she can answer freely, without adhering to a range of possible answers provided by the researcher/interviewer [9]. This type of interview is therefore used in social research contexts where there is a need to collect standardized and easily comparable data; moreover, it can be somewhat traced back to a quantitative interview. The advantages of this approach lie in certain factors such as standardization, efficiency, and collection of specific data linked to specific variables. Limitations include limited depth regarding the topics covered and less flexibility in respondents' answers.

The questionnaire represents perhaps the most widely used survey instrument in social research: it serves as a formal (more or less structured) stimulus. Although it is sometimes noted in the scientific literature that face-to-face interviews and surveys (including those conducted by telephone or in a computerized manner) are also considered forms of questionnaires, in this case, we will refer to an instrument of information gathering, primarily in written form, containing multiple questions to be answered by the subject to whom it is administered. In this sense, the questionnaire is understood to differ from the survey in the amount of information required. This social research instrument is therefore linked to self-completion [14, 15]. This raises two issues to address: constructing questionnaires suitable for self-completion and establishing a connection between the questionnaire and the subject to whom it is administered. Regarding the specific characteristics of a questionnaire suitable for self-completion, it should be noted that, in the absence of an interviewer who asks the questions and records the answers, there may be a lack of support for guidance and explanations on the correct interpretation of

the task to be performed. Therefore, the questionnaire, along with an essential accompanying explanation sheet, needs to be self-sufficient and should not result in difficulties of interpretation or ambiguity in cases of self-completion. As a general rule, it is preferable not to demand excessive effort from respondents and to avoid lengthy and complex questionnaires that could result in non-cooperation or loss of attention when formulating reasoned responses. Open-ended questions should also be minimized because they require expressing one's thoughts-a far more challenging task than choosing from a list of prepackaged answers. It may be useful to adequately motivate the respondent by accompanying the questionnaire with a cover letter that explains the purpose of the survey and appeals to a sense of responsibility, the social relevance of the issue addressed, or the importance of obtaining certain information. Conversely, the task becomes easier if the questionnaire is aimed at a specific target audience, as in this case, it is sometimes possible to invoke, through proper illustration, concrete "category interests" of which the respondent may be aware and therefore find credible.

2.2 Considerations on the Choice of Technique

After carefully analyzing the survey instruments, it is considered beneficial for achieving the objectives of this paper to utilize structured interviews conducted through the questionnaire (survey).

Unstructured or semi-structured interviews have certain limitations when used for the intended survey, such as the reliability of responses and the time required for implementation. Social research has always focused on the interaction between the interviewer and interviewee; this relationship can pose a risk of reducing "subjectivity" in the interviewee's response if not managed properly. Therefore, the data may not be entirely reliable, compromising the study's results. Additionally, conducting interviews with large samples of individuals presents practical limitations related to monetary and time resources: the data requiring reprocessing is time-consuming and necessitates specialized subjects.

The survey technique, on the other hand, serves as a solid analytical tool for the research project's topic on housing mobility issues. Studies detect a close correlation between residential satisfaction and economic, social, and psychological factors [16], and in this contribution, we aim to investigate it precisely. The use of the survey enables the collection of representative data, validated through statistical techniques that ensure the analysis's robustness. For collecting data, surveys are employed—a systematic method useful for gathering information from a sample of individuals to construct quantitative descriptors of the attributes of the larger population of which these entities are members [5]. Surveys allow for the gathering of both quantitative and qualitative data and are particularly useful for understanding complex phenomena such as housing mobility, a central theme of PRIN research.

3 The Construction of the Questionnaire

The structure of the questionnaire follows the methodological guidelines for constructing reliable and validated survey instruments [4]. It is divided into four sections, and in particular it is oriented to more general questions in the first part and moves to more

specific questions in the subsequent parts, in order not to influence the respondent's answers [6]. Specifically, the sections are:

1. Introduction and instructions
2. Sociodemographic framework
3. Well-being and general satisfaction
4. Future Perspectives

The following is a brief description of the structure of the questionnaire.

3.1 Introduction and Instructions

The questionnaire must be completed in the absence of a supervisor since it is administered to respondents through an electronic form; therefore, an initial part introducing the research topic and providing solid instructions for completion is necessary [6]. Clarity of instructions and the purpose of the research are essential to ensure reliable and comparable responses, reducing free interpretation by respondents.

3.2 Sociodemographic Framework

This section collects demographic information and consists of multiple-choice, closed-ended questions that define clusters of respondents, providing a more complete understanding of the sample [17]. The questions include: i) age, classified into six bands (<18 to >60); ii) current place of residence; iii) length of residence in current dwelling (less than one year, 1–5 years, 6–10 years, more than 10 years, forever); iv) housing situation (home owned with or without mortgage, renting, host, other); v) household composition (family of origin, with partner, alone, with roommates, other); vi) occupation (primary sector, secondary sector, tertiary sector, student, not employed).

3.3 Well-Being and General Satisfaction

This section explores participants' opinions about the quality of life in their current place of residence. The questions include both open-ended and closed-ended responses on a Likert scale (1 to 10) [18], a widely used measurement in social research that defines the directionality of respondents' answers. To ensure clarity in the compilation, the meaning assigned to the numbers from 1 to 10 is explicitly stated, where 1 = Not at all satisfied and 10 = Completely satisfied. Furthermore, several questions are formulated in open form, requiring short answers, which allows for deeper qualitative information, although they are more complex to rework. The questions in this section are: i) How satisfied are you with your current life? (from 1 to 10); ii) How satisfied are you with your current city of residence? (1 to 10); iii) What aspects do you appreciate most about your current city? (open answer, keywords); iv) What aspects do you like least about your current city? (open answer, keywords);

3.4 Future Perspectives

The last section of the questionnaire investigates future life expectations, specifically asking respondents to answer questions regarding: (i) the frequency with which they have thought about relocating (frequently, sometimes, rarely, never); (ii) the possibility of relocating to another city or country (yes, no); (iii) preferred destinations for possible relocation (open-ended response); (iv) the motivations that would prompt relocation (career opportunities, cost of living, climate conditions, family motivations, study); (v) the factors that might deter relocation (economic difficulties, family ties, job uncertainty, difficulty in adapting); and (vi) the ideal place to live without restrictions (open answer). For the purposes of the research and concerning the topic discussed, this part focuses more on potential future developments regarding housing mobility. This section allows for the mapping of hypothetical movements of individuals. Therefore, a tool such as surveys, when appropriately combined with further studies, can be an invaluable resource for administrations, urban planners, policymakers, and others. Furthermore, this section is crucial for understanding the subjective determinants of housing mobility and for identifying recurring patterns in respondents' residential behavior [19].

4 Results

The survey questionnaire was submitted to a significant sample of 130 individuals from diverse social groups representing a range of urban and rural backgrounds. Most respondents came from large urban centers, such as Florence (24%) and Pisa (12%), while the remainder were evenly distributed among medium-sized cities and suburbs (Fig. 1).

Socio-demographically, the surveyed sample is divided by age into six groups (Fig. 2). Individuals in the <18 (8%) and >60 (9%) categories represent a smaller percentage of the sample than the other age groups. Regarding family composition (Fig. 2), the sample analysis shows that 29% live with their family of origin, 38% with their partner(s), 21% alone, and the remaining 12% live with roommates or in other housing situations, indicating that more living situations with two or more cohabitants are present. Employment status indicates that about 40% of respondents are employed in the tertiary sector, followed by 21% in the secondary sector. The unemployed—both those in education and those not working—account for 13% of the sample. On the other hand, concerning housing situation, the distribution appears to be balanced among homeowners (with and without a mortgage) and renters, who account for 31%, 34%, and 31% of respondents, respectively. In fact, the data align with Italian averages.

In the second section, in agreement with the expected results, it is confirmed that individuals are not fully satisfied with the place where they live. When asked to assign a score from 1 to 10 regarding general living well-being, about 45 percent of respondents consider themselves fully satisfied; however, this percentage drops when referring to their place of residence, where most respondents agreed on a score between 5 and 6. Interweaving the data, it is possible to note that individuals with lower satisfaction scores predominantly reside in urban centers (Florence, Pisa, Prato), suggesting a negative impact on quality of life and housing conditions. In contrast, smaller towns and rural areas report higher levels of place satisfaction. In the following questions, focusing on

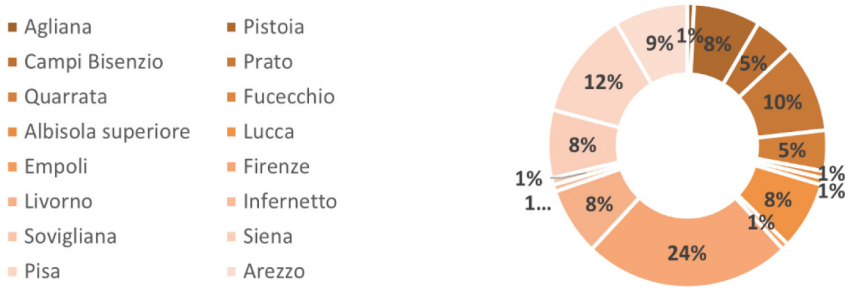

Fig. 1. Origin of the sample of respondents

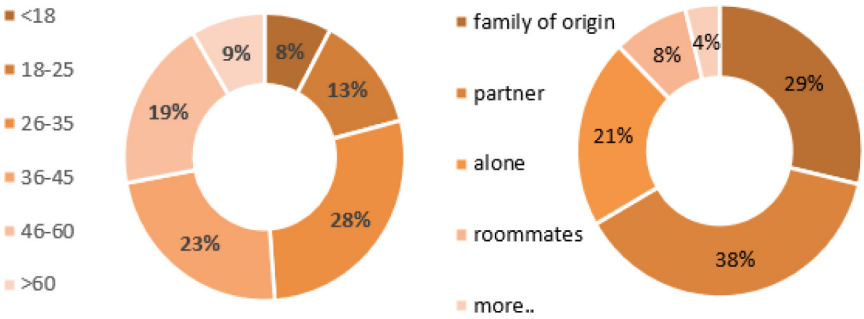

Fig. 2. Percentages by age of respondent sample, Percentages by household composition (from left to right)

the motivations for living place satisfaction/satisfaction (open-ended question), recurring keywords are found, presented in the following graphs (Fig. 3 and Fig. 4).

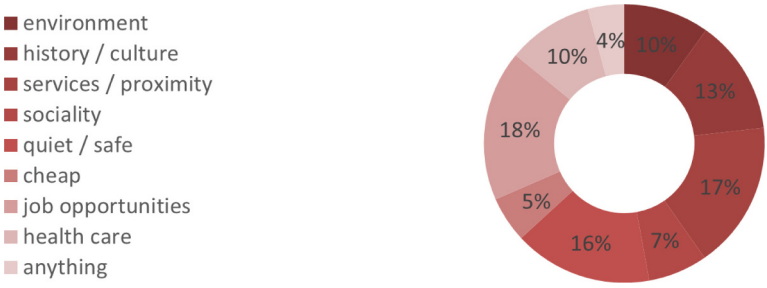

Fig. 3. Positive impacting factors

The most impactful factors for well-being (Fig. 3) include: environment (10%), history/culture (13%), and neighborhood services (17%). Conversely, negative factors (Fig. 4) pertain to issues related to poor infrastructure management (14%)—many expressed discomfort due to inadequate road maintenance or water services—compared to traffic and general confusion (10%) and the cost of living (15%). The data indicates a

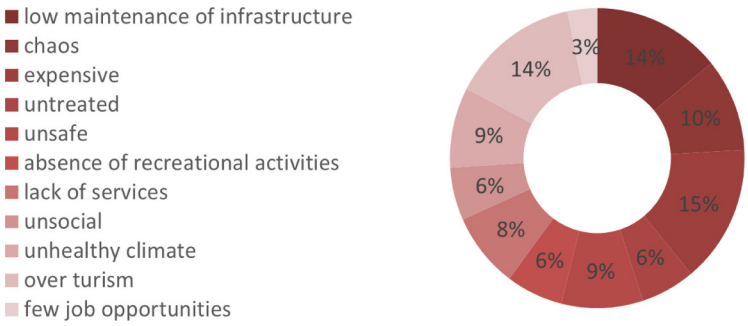

Fig. 4. Negative impacting factors

trend of growing dissatisfaction in large urban centers, primarily due to increasing economic pressures, with high housing costs exacerbated by the tourism market. In contrast, rural areas appear generally more livable regarding environmental quality; however, they lack services and infrastructure maintenance. This overarching dissatisfaction is reflected in the data from the third section, where more than 50% of respondents indicated a desire to relocate. Consequently, the possibilities of relocation, any limitations, and the directions of potential moves were explored more thoroughly in this final section. Our data reveals that although a significant percentage of individuals are willing to relocate, as many as 54% lack the feasibility to do so. The reasons are illustrated in the graph (Fig. 5).

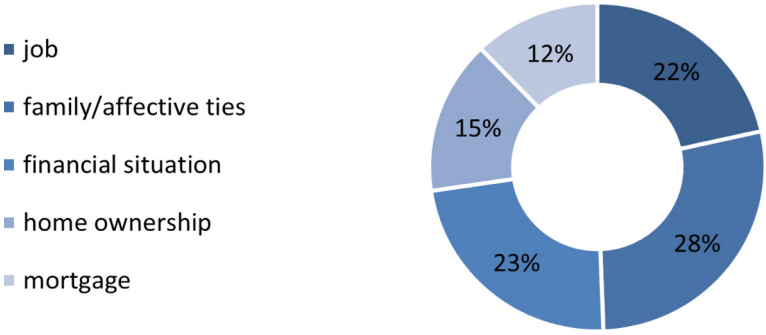

Fig. 5. Limiting factors for transfer

The sphere of affections and financial situations, in addition to work, particularly affects this limitation, suggesting additional factors related to housing mobility. Next, to define a mapping of hypothetical moves, respondents are asked what type of place they would like to move to and whether there is a willingness to relocate. In this case, the majority of the sample of respondents expressed interest in moving to small towns and villages (31%) or to a rural/natural area (24 percent). Few expressed an intention to move to large cities (9%). Generally speaking, relocations would take place within the Tuscan region, with only a small percentage moving abroad (12%) (Fig. 6).

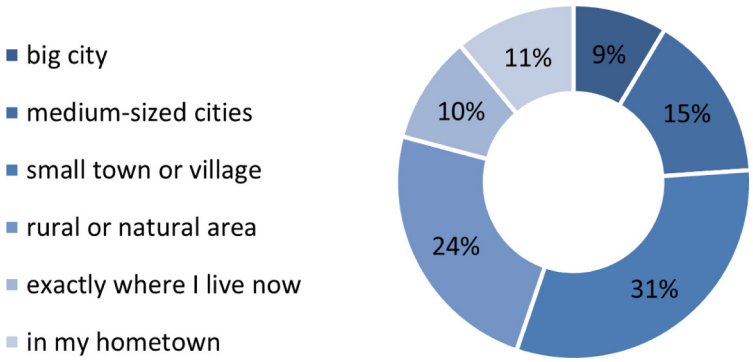

Fig. 6. Direction of transfers

The survey conducted revealed that the tendency of the surveyed sample is to relocate to other cities, mostly within the same regional or national area and in small or rural towns (Fig. 6). This willingness increases among residents of large cities, where the cost of living and unhealthy environments negatively impact quality of life. In contrast, the tendency to relocate decreases or is nullified for most individuals who have always lived in the same place since birth, particularly in small to medium-sized towns. This happens due to a sense of attachment to the area and social bonds formed over the years, which continue to be crucial in determining where to live.

5 Conclusions

The examination of social research methodologies, tools, and techniques aimed at capturing individual preferences, desires, and attitudes serves as a precursor to developing technologies and assessment tools tailored to understanding the settlement needs of the current and future digital society. This knowledge can facilitate spatial governance processes by clarifying, particularly in Italy, the guidelines for appropriately sizing plans and planning initiatives related to urban and territorial regeneration and the housing policies needed, leading to necessary legislative and regulatory adjustments.

This research reveals that urban areas, such as large cities like Florence and Pisa, experience lower satisfaction levels due to high living costs and environmental pressures. In contrast, smaller towns and rural areas are viewed more positively regarding ecological quality, notwithstanding their infrastructure and service limitations. Notably, a considerable proportion of respondents expressed a desire to relocate; however, financial limitations and social connections emerged as significant barriers to mobility, especially for individuals residing in extensive urban settings.

However, the study has several limitations that should be addressed in future research. The sample size, while significant, could be expanded to include a more diverse and representative group of respondents, particularly those from smaller communities or more remote areas, to ensure more accurate and comprehensive results. Additionally, future studies could explore the potential impact of other variables, such as employment status or digital connectivity, on relocation intentions and housing satisfaction.

Despite these limitations, the study highlights significant trends that can inform urban and territorial planning, especially in light of the digital transition. The study suggests that understanding new settlement preferences influenced by the digital transition can guide spatial governance and urban regeneration efforts, including establishing equitable housing policies that address the evolving trends of population movement, urbanization, and environmental factors.

Future research could delve deeper into regional differences in housing satisfaction and intentions to relocate, emphasizing how digital technologies could influence future settlement trends. Additionally, exploring how local and national policies can evolve to promote more sustainable and inclusive living conditions in urban and rural settings is essential.

Awareness of the digital transition's new settlement requirements is a crucial resource for spatial governance efforts. This understanding can lead to urban and territorial regeneration processes that effectively respond to new housing demand patterns and pave the way for fair housing policies. Thus, it is vital to be well-versed in the techniques that social research has developed over time.

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