Work, Education, Leisure, or Housing? Disentangling the Drivers of Inter-Urban Youth Migration in Spain

Topic:

Contemporary internal migration dynamics in Spain are characterized by high complexity, diverging sharply from past structural patterns. While previous periods were defined by dominant, unidirectional movements, such as the widely studied rural exodus of the mid-20th century, the current system exhibits a marked diversity of flows, with an increasing protagonism of interurban migration (González-Leonardo et al., 2022). Internal migration flows in Spain, however, have mostly been studied at the regional level, with few works focusing specifically on movements between cities (Melguizo & Royuela, 2020).

In contrast to the prevailing global trend of decreasing internal migration in developed countries, Spain has exhibited an anomaly: the internal mobility rates of its young population have more than doubled since the 1990s (González-Leonardo et al., 2022). The migratory dynamism of the youth in Spain is even more evident within inter-urban movements: while 18-to-34-year-olds accounted for 32.8% of all inter-municipal movements in 2023, this percentage rises to 40.8% when considering only flows between municipalities with over 50,000 inhabitants.

The escalating competition for population and talent has driven a severe polarization between urban contexts (González-Leonardo et al., 2022). This trend creates a clear divide: successful larger cities concentrate economic activity and talent, while declining urban areas struggle to foster economic dynamism and retain skilled workers (Martínez-Fernandez et al., 2012). This internationally widespread phenomenon is particularly prevalent in Spain, where the imbalance between cities is especially acute. It is thus crucial to identify the specific urban attributes that tip the balance toward attraction or expulsion within this competitive context.

While any kind of out-migration has territorial consequences, the impact is particularly acute when young people are the leavers, as they tend to embody both the human capital and the fertility potential of those areas. In this line, González-Leonardo et al. (2022) document an important trend of youth mobility in Spain from small and medium-sized cities in peripheral regions to bigger cities, leaving these disadvantaged territories with negative net migration of youth, contributing to growing processes of urban shrinkage. Therefore, since policymakers may be interested in encouraging the attraction of young adults in their cities to prevent decline (Maza, 2020), it emerges a pressing need for a deeper analysis of the factors driving youth migration between Spanish urban centers.

Building upon this framework, our work pursues two interrelated objectives to advance the understanding of youth internal migration dynamics in Spain: 1) to identify which Spanish cities are most attractive to young people, by developing four novel youth opportunity indices, through the assessment of factors most commonly cited in the literature as key attractors and expellers of young people (work, education, leisure and housing); and 2) to verify whether the actual inter-city mobility patterns of the youth in Spain can be explained through the opportunity indices, thus testing the applicability of theoretical premises to the Spanish inter-urban dynamics.

Theoretical focus:

The gravity model of migration remains the most popular paradigm for analyzing migration flows between pairs of territories. Drawing a parallel to the law of gravitation, the model posits that migratory movements are primarily determined by size (or mass) and distance (or friction): the larger the population of the destination, and the smaller the distance between origin and destination, the larger the number of arrivals. While the model's simplicity has ensured its widespread use in population migration studies, many empirical applications fail to adequately account for the specific factors that determine a territory's actual propensity to attract and/or expel residents (Niu, 2022).

In this regard, the classic "Push-Pull" theory framework, systematically summarized by Lee (1966), emphasizes that territories possess attributes that influence the migratory decision, either by encouraging residents to leave, or by attracting newcomers. This premise aligns with the theoretical model of utility maximization, according to which migrants decide whether or not to relocate by comparing the opportunities provided by their current location (origin) against the opportunities an alternative location (destination) would yield (Faggian & Royuela, 2010). However, we cannot expect all population groups to assign the same importance to all attributes; consequently, certain factors may be perceived as attractive by some demographic profiles but not by others (Navarro & Tapiador, 2019).

Despite this, few studies have analyzed the specific factors behind internal migration dynamics of particular demographic groups in Spain (Álvarez & Royuela, 2021). In particular, the migratory dynamics of youth are best understood from a life-course perspective, as this stage concentrates most key life-course transitions that trigger mobility (e.g., secondary school to higher education, education to initial employment, etc.) (Gruber & Schorn, 2019). In this sense, we must account for the fact that while certain drivers of youth migration align with those affecting all age groups, there are others that are specific and distinct from those influencing older cohorts (Belmonte et al., 2020).

Economic differentials have long been the core explanatory factor for migratory flows in the literature, with scholars often highlighting migration as part of the job-seeking process or even as a mechanism to improve job-matching between employers and workers (Melguizo & Royuela, 2020). For the young population, specifically, financial well-being and professional success are documented leading factors in choosing a city of residence (Antonova et al., 2020), with employment opportunities becoming especially crucial for the youth in the Spanish context (Melguizo & Royuela, 2020).

A driver specific to the youth, and related to labor market integration, is access to educational and training opportunities. Contemporary labor markets increasingly demand specialized skills, and migration provides a crucial mechanism to access educational opportunities that might not otherwise be available locally (Belmonte et al., 2020). While this factor may seem most prominent for younger cohorts transitioning to university, it is noteworthy that in countries like Spain, an increasing number of young adults remain in formal education longer to complete highly specialized studies, making this dimension potentially relevant across the entire youth age range.

Nevertheless, migration decisions are not based solely on economic-related conditions. Indeed, several studies highlight the critical role of leisure opportunities in the context of youth migration (Reissová et al., 2024), with high importance attributed to shopping, cultural, sports, and other recreational activities (Antonova et al., 2020). For the specific case of Spain, the work by

Melguizo and Royuela (2020) reinforces the idea that urban youth migration flows gravitate towards areas with more amenities. However, some research posits that these "soft factors" are more significant in retaining individuals than in initially attracting them (Sánchez-Moral et al., 2018).

Lastly, it is common for migration models to include the differences in housing prices between origin and potential destinations (Maza, 2020), a practice that gains even more importance given the acute housing crisis currently faced by Spanish youth. In this sense, some studies have shown that unaffordable housing can prevent people from moving (Causa et al., 2021). However, the literature reveals a spatial dichotomy: the study by Maza (2020) emphasizes that an improvement in housing opportunities only constitutes a relevant pull factor in short-distance migrations, whereas in long-distance movements, individuals tend to locate precisely in territories where housing prices are high, trading cost for other pull factors.

Data & Methods:

To address the study's objectives, and based on the theoretical foundations previously debated, several methods and data are considered. The methodology of the study can be divided in two major steps: first, the construction of the opportunity indices; second, the connection of those indices to the inter-urban migratory flows of the youth.

Step 1: Opportunity indices

Following guidelines found in the literature (as discussed in the previous section), the opportunities offered by Spanish cities to the young population are operationalized through a set of four composite indices. Each index is designed to measure distinct pull (or push) factors and is composed of a range of variables gathered from various official sources, including the National Statistics Institute (INE) and the Spanish Government Ministries.

1. Working Opportunities: it comprises variables linked to both the quantity and quality of employment in the city, such as the youth unemployment rate, the youth temporary employment rate, the youth over-qualification rate, the employment diversification index, and the average income.
2. Education Opportunities: it incorporates the educational offer present in the city across different fields, measured as the number of on-site official qualifications offered (including Bachelor's, Master's, Vocational Training, Sports Education, and Arts Education degrees).
3. Leisure Opportunities: it includes diverse amenity presence and availability variables, such as the number of major retailer clothing stores, cinema screens, theatres, museums, restaurants, bars, etc.
4. Housing Opportunities: it considers variables related to access and quality of housing for young people, specifically the average rental price, the youth emancipation rate, and the youth overcrowding rate (by floor area).

Prior to aggregating the variables into each of the indices, they must be normalized to ensure all indicators are expressed on a common scale. A widely used method for this purpose is the min-max normalization. Once normalized, individual indicators are aggregated into their respective indices, typically using the arithmetic mean. Nevertheless, the introduction of differentiated weights among variables is not dismissed, since it can allow to prioritize those indicators deemed of greater relevance according to the literature.

Step 2: Model

Once the opportunity indices are calculated, an extended gravity model is created through a count model regression where the dependent variable is the migratory flows of individuals aged 18 to 34 between cities during the 2021-2024 period. Following the core premises of the push-pull theory, the explanatory variables of the model are: the population size of the destination, the shortest road distance between the origin and destination (as a friction variable), the four opportunity indices of the origin (assessed as potential push factors), and the four opportunity indices of the destination (assessed as potential pull factors).

Furthermore, a binary variable is introduced to indicate whether the destination city coincides with the migrant's city of birth. This variable serves to control for return migration flows, which are presumed to respond to specific factors not fully controlled for by our dataset. Additionally, since the literature suggests the existence of interesting differences based on the distance between the cities involved in the migration, we will explore whether significant differences exist in the model's coefficients between short- and long-distance movements.

In addition to analyzing migratory flows globally through the regression model, and given the expected heterogeneity of movements, the methodology is complemented by a clustering analysis. This approach aims to identify different typologies of movements based on the opportunity factors that are maximized (or minimized) along each specific route.

To achieve this, each migratory movement is classified based on the scores of the two cities involved (origin and destination) across all four opportunity indices. Finally, to better interpret and understand these groupings, their relationship with key external variables will be analyzed, such as the mean distance of the movements, the average age of the migrants, and the type of cities involved.

Expected findings:

The scores of the cities in the opportunity indices will allow for a detailed analysis of urban attributes and their level of attractiveness for young people, at least from the perspective of the factors highlighted in the literature. This will not only facilitate the creation of interesting city rankings but, more crucially, will enable us to identify the specific strengths and weaknesses of each urban center in attracting the young population.

Regarding the model, it should be noted that previous extended gravity models based on similar premises have achieved good performance in other contexts, and have been useful in addressing which attributes act as push and pull factors (Niu, 2022). Therefore, it can be expected that the model proposed in this paper will produce interesting results of similar nature.

Nevertheless, it is plausible that the model will show weak coefficients in explaining the overall patterns of youth mobility in Spain. This outcome is partially expected due to the high diversity of Spanish inter-urban movements that may compensate for each other, so no single underlying logic could satisfactorily explain all migration flows. In any case, the results will be useful in testing the applicability of the mentioned theoretical premises in the Spanish case.

However, the use of clustering analysis on the flow data will help to identify different types of movements responding to distinct motivations. Thus, if a unique pattern fails to adequately describe the totality of movements, this complementary approach will allow to identify and describe relevant secondary patterns, and compare their specific characteristics (e.g., mean distance) to obtain potentially interesting findings.

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