Construction of a Well-Being and Infrastructure Index for Spain from a Gender Perspective

Gloria Alarcón García
Universidad de Murcia (gloria@um.es)

Edgardo Arturo Ayala Gaytán
Universidad Autónoma de Nuevo León (edgardo.ayalagytn@uanl.mx)

Jose Manuel Mayor Balsas
Universidad de Murcia (josemanuel.mayor@um.es)

Abstract

This study constructs the Well-Being and Infrastructure Index with a Gender Perspective (WIGI) for Spain in 2024, based on a representative survey of 1,502 individuals. The index measures how improvements in everyday infrastructure (health, transportation, care, etc.) affect subjective well-being through the strengthening of capabilities. The results show that, although access to infrastructure is similar by sex, women obtain a significantly higher benefit (index of 104 compared to 94 for men). The differences are particularly notable among individuals aged 45 to 64 and in medium-sized localities.

Keywords: Everyday Infrastructure, Subjective Well-Being, Capabilities, Spain

Introduction

In 2015, a joint study between the University of Murcia and the European Institute for Gender Equality (EIGE) launched an initiative to explore the extent to which improvements in everyday infrastructure—such as roads, street lighting, health clinics, childcare facilities, markets, and others—can affect people's well-being, and above all, how they can contribute to reducing the gender gap.

To this end, a representative sample of the European Community across 28 countries was collected, and a methodology was developed to measure the sensitivity of subjective well-being to improvements in infrastructure access, through the strengthening of individual capabilities. Details of this work can be found in Alarcón et al. (2020a, 2020b, 2020c, 2020d) and Alarcón, Ayala & Mayor (2025).

The present study is a continuation of this European precedent, focusing specifically on the case of Spain. The aim is not only to produce results that are valid for Spain rather than relying on highly aggregated findings across 28 countries, but also to incorporate improvements to measurement instruments and methodologies, as well as new issues such as gender-based violence.

In particular, we construct the Well-Being and Infrastructure Index for Spain for the year 2024. The first section synthesizes the theoretical framework underpinning the index—namely, theories of subjective and normative well-being and their applications to evaluating the impacts of infrastructure investment. The second section details the methodology used to construct the WIGI

indices, the third presents its estimation and main findings, and we close with conclusions and implications.

Well-Being and Everyday Infrastructure (Literature Review)

The Well-Being through Infrastructure Index

As the evidence presented in the literature review indicates, everyday infrastructure significantly improves people's well-being, whether understood from a subjective or experiential standpoint, or through the strengthening of the Capabilities that can trigger human flourishing. It is therefore important to have an index that captures how sensitive individuals are to improvements in infrastructure.

To this end, we employ the Well-Being and Infrastructure Index from a Gender Perspective, referred to as the WIGI Index—an acronym for "Well-being and Infrastructure from a Gender Perspective Index"—initially developed in Alarcón & Ayala (2018), and whose validity has been demonstrated in the European context (Alarcón, Buendía & Sánchez 2022; Alarcón, Ayala & Mayor 2025). The purpose of the index is to provide a metric of the contribution of each type of infrastructure to the well-being of men and women, combining the two leading approaches in the well-being literature: the Capability Approach (CA) and Subjective Well-Being (SWB).

The WIGI Index can be estimated using almost any survey that contains at minimum questions on individuals' perceptions of their access to each type of infrastructure, the importance of different infrastructures for the main capabilities identified in the literature, and individuals' satisfaction with their lives across various domains—such as satisfaction with health or economic situation. Figure 1 shows a graphical prototype of the conceptual model. Exogenous variables are presented in boxes and endogenous variables in ellipses.

Figure 1. A conceptual model of the effect of infrastructure access on Capabilities and subjective well-being

In the proposed model, infrastructure access is the critical exogenous variable. Access to infrastructure is a good measure of the "quantity" of infrastructure available to citizens. Typically, when data come from a survey, this variable is self-reported by respondents and defined in terms of the time required to receive infrastructure services and the monetary costs that might be involved. For example, even if a network of public hospitals exists that does not charge for services, access may be limited if facilities are not nearby or if services are provided months after being requested.

Thus, to construct the index, it is necessary to estimate two sets of parameters. The first set measures the impact of infrastructure on Capabilities; these are referred to as "weights" in this proposal and are represented by w_{kh} in Figure 1, where k is the subscript for the different Capabilities and h for the infrastructures. The second type of parameter measures the sensitivity of Subjective Well-Being (SWB) to increases in Capabilities induced by improvements in

infrastructure access; these are referred to as "coefficients" and expressed as β_{dk} ,where d is the subscript for the different life domains in which subjective well-being is reported.

Therefore, in the WIGI index, infrastructure affects well-being indirectly through Capabilities; in a statistical sense, infrastructure access is fully mediated by Capabilities. The magnitude of the effect of infrastructure access on well-being is then captured by the product of the "weights" and the "coefficients," that is, $w_{kh}\beta_{dk}$.

To estimate the weights w_{kh}, we use responses to questions on the importance that individuals assign to each infrastructure h in forming capabilities k. In our application, importance scores range from 1 to 10, where 1 is the lowest and 10 the highest; we subtract the scale minimum and divide by the scale range. Thus, a score of 1 yields a weight of zero, and a score of 10 yields a weight of 1, as shown in equation (1).

$$w_{kh} = (S_{kh} - 1) / (10 - 1) \quad (1)$$

Based on the importance of each infrastructure for each Capability, and infrastructure access, we estimate Capability k enjoyed by individual i as a result of their access to the different infrastructures (H in total) using equation (2):

$$C_{ik} = \sum_{h=1}^{H} w_{ikh} A_{ih} \quad (2)$$

To obtain the coefficients linking Capabilities to SWB, multivariate regression models are estimated where the dependent variable is subjective well-being in life domain d, SWB_{id}, as a function of its associated capability k, C_{ik}, and a vector Z of control variables such as age, locality size, education, income, and other socioeconomic variables. Model (3) incorporates an interaction between a binary variable $M_i = 1$ if individual i is female and 0 otherwise, and the level of Capability ($M_i * C_{ik}$):

$$SWB_{id} = \alpha_d + \theta_{dk} C_{ik} + \pi_{dk}(M_i * C_{ik}) + Z_i' \gamma_d + \varepsilon_{id} \quad (3)$$

In this way, the coefficients required to estimate the WIGI index vary across individuals depending on whether they are women or men. Specifically:

$$\beta_{idk} = \theta_{dk} + \pi_{dk} M_i \quad (4)$$

Thus, the parameter of interest, the regression coefficient β_{idk}, measures the increase in subjective well-being in domain d for a unit increase in the associated capability k; for men this equals θ_{dk} , while for women it equals $\theta_{dk} + \pi_{dk}$.

The WIGI index is constructed by multiplying the weights by the coefficients, as in equations (5) through (7). Equation (5) estimates the WIGI for each individual across each type of infrastructure, capability, and life domain; equation (6) applies at the individual level for a single infrastructure; and equation (7) aggregates across infrastructures, capabilities, and life domains for each individual.

$$I_{ikhd} = w_{ihk} * \beta_{idk} \quad (5)$$

$$I_{ih} = \sum_d \sum_k w_{ikh} * \beta_{idk} \quad (6)$$

$$I_i = \sum_h \sum_d \sum_k w_{ikh} * \beta_{idk} \quad (7)$$

However, the WIGI Index does not have a physical unit of measurement in and of itself. To facilitate interpretation, we suggest normalizing the indices in either of the following two ways: (a) divide each individual or group index by the overall mean of all indices; (b) for each life domain and for total subjective well-being, use formula (1) to rescale the index between 0 and 1. The first alternative makes it easier to compare across different life domains (inter-domain comparisons), while the second facilitates interpretation of the relative importance of each infrastructure within a single life domain (intra-domain comparisons).

Data Collection

The information required to estimate the WIGI for Spain comes from the Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being, designed and administered by the Gender Center research group at the University of Murcia, led by Gloria Alarcón. A total of 1,502 telephone interviews were conducted between April and June 2024, with a random sample of adults aged 18 and older. The sample is representative by sex and for three locality sizes: those with fewer than 5,000 inhabitants (referred to as "small"), "medium" localities ranging from 5,000 to 400,000 inhabitants, and "large" localities with more than 400,000 residents.

Table 1 presents the main characteristics of the individuals who participated in the sample.

Table 1

Sociodemographic Characteristics of the Sample for the Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024

	Observations	Mean	Std Dev	Minimum	Maximum
Characteristics					
Female	1,502	0.5100	0.5001	0	1
Age	1,502	50.1012	17.1045	18	94
Married or in union	1,495	0.5431	0.4983	0	1
Children under 18 years	1,501	0.2865	0.4523	0	1
Other dependents	1,501	0.1845	0.3881	0	1
Religious	1,471	0.6179	0.4861	0	1
Heterosexual	1,457	0.9307	0.2541	0	1
Education					
Secondary or less	1,499	0.1755	0.3805	0	1
Intermediate	1,499	0.3976	0.4896	0	1
Higher	1,499	0.4270	0.4948	0	1
Monthly income (euros)					
0 to 1,200	1,356	0.4004	0.4902	0	1

1,201 to 2,400	1,356	0.4403	0.4966	0	1
More than 2,401	1,356	0.1593	0.3661	0	1
Employment Status					
Students	1,501	0.0420	0.2006	0	1
Retired	1,501	0.2725	0.4454	0	1
Unemployed	1,501	0.0926	0.2900	0	1
Homemaker	1,501	0.0300	0.1706	0	1
Private employee	1,501	0.3411	0.4742	0	1
Civil servant	1,501	0.1073	0.3095	0	1
Self-employed	1,501	0.1113	0.3146	0	1

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

The average age is approximately 50 years, slightly above the median age of adults in Spain, which is estimated at between 44 and 48 years depending on the source. The same applies to the proportion of adults who report being retired, which reaches 27%, while the population estimate ranges between 22% and 25%. The sample is balanced by sex, slightly more than half live with another person, and 46% of interviewed adults report having children or living with other dependents.

The survey includes sections on sociodemographics, everyday infrastructure, time use, and satisfaction with different life domains. It is designed to be completed by phone in no more than 20 minutes. Most questions are closed-ended and easy to understand.

In the infrastructure section, respondents assign scores from 1 to 10—where 1 indicates the complete absence of the attribute and 10 its maximum presence—to rate their access to and the importance of different types of infrastructure in their daily lives. Respondents are also asked their opinion on the importance of each infrastructure for reducing gender-based violence. The infrastructures analyzed are the following:

- Childcare centers for children under 3 years of age
- Health centers and hospitals
- Care centers for dependent persons (retirement homes, day centers, centers for persons with disabilities, and others)
- Sidewalks, pedestrian streets, parks, public lighting, and green spaces
- Markets and shopping centers
- Public transportation (used for local travel and daily commuting)
- Cultural and recreational leisure areas: theaters, cinemas, exhibition halls; and sports facilities: swimming pools, gyms, fitness centers
- Industrial parks

The capabilities selected in the study, along with a brief description of each, are as follows:

- Physical and mental health: contribute to your being physically healthy, able to enjoy a life of normal length, and capable of being mentally well.
- Social relationships: contribute to your developing friendships, being part of social networks and associations, and giving and receiving social support.
- Education: contribute to having the opportunity to be educated and to use and produce knowledge.
- Domestic work and care for dependent or disabled persons: contribute to managing household tasks, raising children, and caring for others—elderly persons, dependents, and persons with disabilities.
- Labor market integration: contribute to your integration into the labor market or to carrying out personal projects, including artistic ones.
- Mobility: contribute to your ability to move, implying physical and personal autonomy.
- Leisure and free time: contribute to your being able to participate in leisure activities, both cultural and sporting (cultural activities, sports, recreational pursuits).
- Emotions: contribute to your feeling and publicly expressing your emotions or feelings. Being able to love those who love and care for us, and to grieve their absence. In general, to love, feel sorrow, longing, gratitude, and justified indignation, and not to feel anxiety.

Of particular importance are the questions in which respondents are asked to give a score from 1 to 10 indicating how much a particular infrastructure contributes to each of the listed capabilities. This information yields the weights used in the construction of the WIGI index.

Finally, respondents assigned scores from 1 to 10—where 1 means not at all satisfied and 10 means very satisfied—regarding their physical health, education, state of social relationships, time spent on domestic tasks, paid work, economic situation, public transportation system, free time available for leisure, and the development and expression of their emotions. The Satisfaction with Life Scale by Diener et al. (1985), one of the most widely used in the field, was also included.

Results

Table 2 presents scores on a scale from 1 to 10 regarding respondents' access to the eight infrastructures studied and the importance they assign to each. We report means separately for women and men, and present two mean tests: the first, labeled "without controls," refers to the hypothesis test that mean scores are equal across both populations. The second conditions expected values on a set of controls such as age group, locality size, and others; the conditional test is based on the significance of the regression coefficient of a binary variable equal to 1 if the respondent is female and 0 otherwise.

As can be observed, for infrastructure access, the hypothesis that women and men have the same level of access cannot be rejected in the vast majority of cases; the exceptions are childcare centers, where women report greater access, and industrial parks, where the difference favors men.

Regarding the importance assigned to infrastructure, women rate nearly all types as more important than men do, regardless of whether the test is conducted with or without controls. The exceptions are childcare centers, where no significant difference is found, and industrial parks, where the difference favors men.

Table 2

Access to and Importance of Everyday Infrastructure in Spain 2024

	Sample	Women	Men	Difference Without controls	Difference With controls
Access to Infrastructure					
Childcare centers for children under 3 years	7.0846	7.2647	6.9383	0.3264**	0.3454*
Health centers and hospitals	7.5567	7.6501	7.4701	0.1800	0.1292
Care centers for dependent persons	5.6258	5.7153	5.5698	0.1454	0.1292
Streets, sidewalks, lighting, parks and green areas	7.6533	7.7546	7.5679	0.1866	0.1901*
Markets and shopping centers	7.0662	7.1165	7.0747	0.0418	-0.0399
Public transportation	6.4517	6.6000	6.3420	0.2580*	0.1555
Leisure, cultural and sports facilities	6.8203	6.8366	6.8844	-0.0478	-0.0805
Industrial parks	5.6956	5.5356	5.9113	-0.3757**	-0.4000***
Importance of Infrastructure					
Childcare centers for children under 3 years	7.7437	7.8259	7.6571	0.1688	0.1627
Health centers and hospitals	9.1643	9.2627	9.0462	0.2165***	0.2130***
Care centers for dependent persons	7.4281	7.6232	7.2202	0.4029**	0.3997***
Streets, sidewalks, lighting, parks and green areas	8.6714	8.9398	8.3777	0.5621***	0.5518***
Markets and shopping centers	7.8718	8.1451	7.6033	0.5418***	0.5067***
Public transportation	8.2072	8.5079	7.8721	0.6357***	0.6029***

Leisure, cultural and sports facilities	8.0941	8.1872	7.9946	0.1926*	0.1865*
Industrial parks	6.1575	5.8987	6.4259	-0.5272***	-0.5039***

Note: ***p<0.01; **p<0.05; *p<0.1. Without controls refers to a mean difference test; with controls refers to the coefficient of the female binary variable in a regression that includes dummy variables for locality size, highest educational level, age group, and whether respondents have minor children and/or other dependents.

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

In summary, the pattern indicates that access to infrastructure is practically the same for women and men, but everyday infrastructure plays a more important role in women's lives than in men's.

Constructing the Subjective Well-Being through Infrastructure Index—referred to as the WIGI index—requires estimating coefficients that measure the impact of each infrastructure on each of the considered capabilities, as well as the sensitivity of subjective well-being in each life domain to those capabilities. The first parameter is measured through the importance that respondents assign to each infrastructure for each capability.

Displaying all estimates would require considerable space: in the full sample there are 64 weights, and separating these for women and men would require tables with 192 entries, making the analysis unwieldy. Table 3 offers a concise way to present the information.[1] Each row shows an infrastructure—for example, the first row corresponds to Infant Schools—followed by the score (from 0 to 1) of the capability for which that infrastructure has its lowest score (for women, this was Leisure, with a score of 0.5710), then the name of that minimum capability, followed by the score and name of the maximum capability, and finally the median. Results are shown separately for women and men.

A detailed examination of the table suggests that the minimum and maximum capabilities do not differ greatly between women and men. The key difference is that the minimum, maximum, and median scores are higher for women than for men in most cases, with the exception of industrial parks. This suggests that the distribution for women lies to the right of that for men across most types of infrastructure.

Table 3

Importance of Everyday Infrastructure in the Formation of Minimum, Maximum, and Median Capabilities in Spain 2024

Infrastructure		Minimum		Maximum		Median
		Score	Capability	Score	Capability	Score
Infant Schools	Women	0.5710	Leisure	0.7549	Physical and Mental Health	0.6326
	Men	0.4808	Mobility	0.7052	Education	0.5424

Health Centers and Hospitals	Women	0.4085	Leisure	0.8935	Physical and Mental Health	0.5754
	Men	0.3825	Leisure	0.8495	Physical and Mental Health	0.5182
Care Centers for Dependent Persons	Women	0.5156	Leisure	0.6779	Domestic and Care Work	0.5773
	Men	0.4319	Labor Market Integration	0.6480	Domestic and Care Work	0.5406
Sidewalks, Streets, Parks, Lighting and Green Areas	Women	0.4469	Labor Market Integration	0.7956	Physical and Mental Health	0.7222
	Men	0.4309	Labor Market Integration	0.7466	Leisure	0.6711
Markets and Shopping Centers	Women	0.4683	Labor Market Integration	0.6504	Leisure	0.5474
	Men	0.4119	Domestic and Care Work	0.6104	Leisure	0.4908
Public Transportation	Women	0.5550	Domestic and Care Work	0.7577	Mobility	0.6287
	Men	0.4669	Emotions	0.7147	Mobility	0.5716
Leisure Areas (theaters, cinemas, sports)	Women	0.4712	Labor Market Integration	0.8126	Physical and Mental Health	0.7367
	Men	0.4267	Labor Market Integration	0.7914	Physical and Mental Health	0.7034
Industrial Parks	Women	0.3888	Domestic and Care Work	0.5677	Labor Market Integration	0.4384

	Men	0.3642	Domestic and Care Work	0.6311	Labor Market Integration	0.4534

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

The other crucial parameter for estimating the WIGI is the sensitivity of subjective satisfaction across different life domains to the capabilities developed through infrastructure. Statistically, these are the regression coefficients of subjective satisfaction in a given domain with respect to the level of the associated capability, controlling for a set of covariates—that is, the estimation of coefficients β_{idk} based on regression equation (3). Control regressors were selected using stepwise selection from the full set of potentially relevant variables. Estimates were obtained using Ordinary Least Squares with heteroskedasticity-corrected standard errors.

It is worth noting that equations were also estimated incorporating as a control the average of the other capabilities not associated with the satisfaction domain in question. Since the results do not change substantially, we chose to present the simpler version.

The sensitivity estimates for women and men are presented in Table 4. All sensitivities are positive and significantly different from zero at conventional significance levels, indicating that higher capabilities are associated with greater subjective well-being across all life domains.

Table 4

Sensitivity of Satisfaction with Different Life Domains to Their Associated Capability in Spain 2024

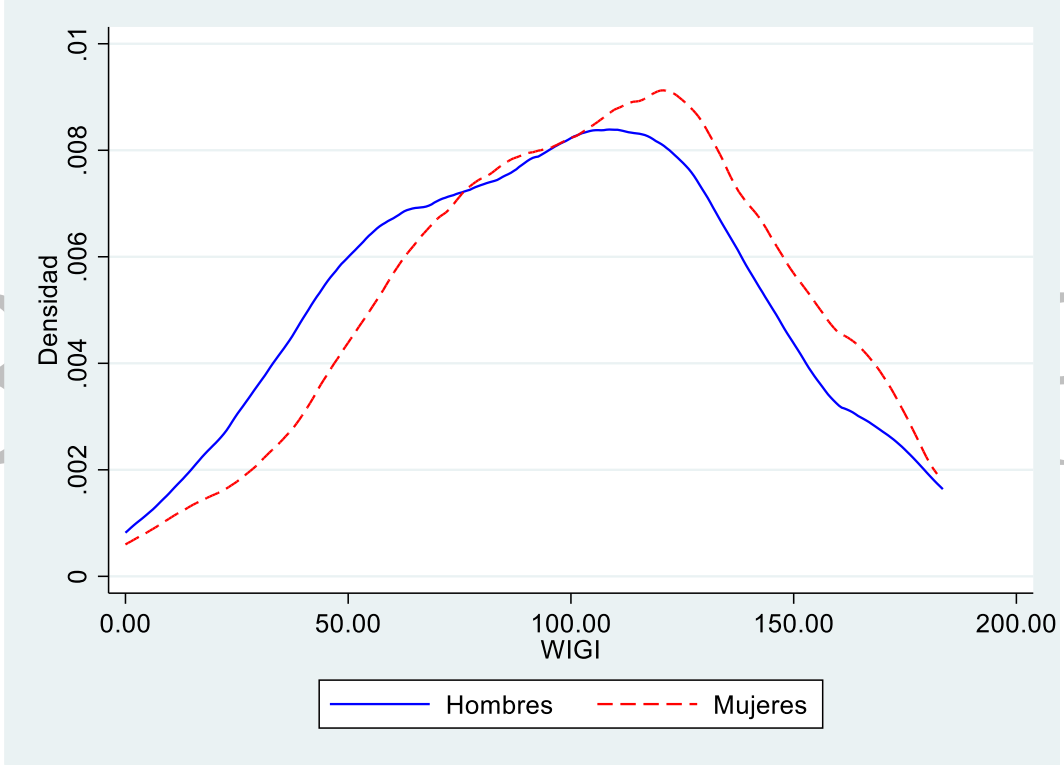
	Associated Capability Coefficient				
Dependent Variable	**Women**	**Men**	**Observations**	**R^2**	**F**
Satisfaction with:					
Health	0.0085**	0.0131**	907	0.1419	16.4844
Personal relationships	0.0149***	0.0101***	1070	0.1224	14.7644
Education	0.0162***	0.0124***	840	0.136	10.0031
Domestic work	0.0211***	0.0294***	1012	0.1509	13.6414
Paid work	0.0082***	0.0068***	1047	0.1797	15.0603
Economic situation	0.0079*	0.0072	1053	0.2105	16.2317
Public transportation	0.0646**	0.0706*	970	0.3407	45.0008

Free time	0.0234***	0.0191***	1058	0.2643	17.7217
Emotions	0.0330***	0.0305***	835	0.1825	26.3675

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

Figure 1 presents the kernel density distributions of the WIGI indices estimated according to equation (7), normalized by the overall sample mean. That is, an observation below the mean will have a WIGI below 100, one exactly at the mean will equal 100, and one above the mean will exceed 100. The distributions are asymmetric and right-skewed; density is higher for men in the lower tail but lower at the upper end.

Figure 2. Kernel distributions of the WIGI Index by sex in Spain 2024



Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

The WIGI normalized by the mean is higher for women than for men: across the total sample it is 104 for women and 94 for men, a difference of 8%. Higher WIGI values for women compared to men are replicated across age groups and locality sizes. The contrasts in Table 5 indicate that differences are not statistically significant only for individuals aged 65 or older and for those living in localities with fewer than 5,000 inhabitants.

The indices increase with age, reaching a maximum for women aged 45 to 64, and for men aged 31 to 44. The indices are higher in localities of 5,000 to 400,000 inhabitants for both women and men.

Table 5

WIGI Indices by Sex, Age Group, and Locality Size in Spain 2024 (Normalized by the Mean)

	Total	Women	Men	Difference	t	p-value
Total	100.0000	104.0957	95.7374	8.3583	3.8852	0.0001
Age groups						
18 to 30 years	97.9584	102.2096	93.8454	8.3642	1.8883	0.0602
31 to 44 years	103.0347	106.9542	99.2064	7.7478	1.8328	0.0677
45 to 64 years	100.7842	106.9915	94.5541	12.4374	3.4530	0.0006
65 or older	97.4263	99.0163	95.4883	3.5281	0.7161	0.4744
Locality size						
Less than 5,000 inhabitants	98.3234	100.8430	95.9602	4.8828	1.2473	0.2129
5,000 to 400,000 inhabitants	102.1178	107.226	96.75941	10.4666	2.9595	0.0032
More than 400,000 inhabitants	99.5503	104.0307	94.4160	9.6147	2.5771	0.0103

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

Finally, Table 6 presents the results of a linear regression of the mean-normalized WIGI index on various sociodemographic variables, with the aim of explaining heterogeneity in WIGI scores across the sample. As in Table 4, independent variables were selected using the stepwise method. In this exercise, interactions between the female binary variable and other relevant variables were included among the candidate regressors—for example, female*children is the product of the female dummy variable (equal to 1 if the individual is female and 0 otherwise) and the children dummy variable (equal to 1 if the individual has children under 18 and 0 otherwise).

Several interesting patterns emerge. The WIGI index is higher for women than for men. However, if a woman has children, this difference increases, suggesting that women benefit more from improvements in infrastructure access, and that having children further amplifies this well-being gain. In contrast, when women have other dependents, the gap with men narrows. Notably, the WIGI decreases substantially when women are engaged exclusively in household work.

Migrants tend to present lower indices than Spain-born individuals, and more educated individuals appear to be less sensitive to well-being improvements through infrastructure access than those with lower levels of education. Similarly, indices are lower for heterosexual individuals, suggesting they benefit less from greater infrastructure access than homosexual or bisexual individuals.

Table 6

Differences in WIGI Indices by Sex and Other Sociodemographic Conditions in Spain 2024 (Normalized by the Mean), Controlling for Sociodemographic Conditions

	Coefficient	Standard Error	t	P>t
Constant	122.6748	5.416712	22.65	0
Female	8.057382	2.666863	3.02	0.003
Female*Children	7.345348	3.364873	2.18	0.029
Female*Dependents	-12.23564	5.661447	-2.16	0.031
Migrant	-21.27246	3.501719	-6.07	0
University educated	-8.317137	2.241077	-3.71	0
Dependents	14.23997	4.154425	3.43	0.001
Catholic	5.129735	2.287473	2.24	0.025
Female*Homemaker	-97.33264	40.33779	-2.41	0.016
Homemaker	84.6504	39.68874	2.13	0.033
Heterosexual	-7.508588	4.215608	-1.78	0.075
Peripheral area	5.249959	2.824421	1.86	0.063
Madrid	-7.240334	4.124433	-1.76	0.079
Andalusia	-5.708124	2.687667	-2.12	0.034
n	1,309			
R-squared	0.0781			
Adj R-squared	0.0688			

Source: Survey on Infrastructure for Daily Life from the Feminist Economy of Well-Being 2024, University of Murcia

Conclusions

This study presents the estimation of WIGI indices using a representative survey of Spain for 2024. The index measures the increase in subjective well-being resulting from improved access to infrastructure, which arises from the strengthening of individual capabilities. As in a similar exercise conducted with a representative sample of the European Community (EU-28) in 2015, the index reveals that even though infrastructure access is similar across genders, it is women who benefit more from everyday infrastructure.

The WIGI index, as estimated, can be used to evaluate patterns of public investment in everyday infrastructure. For instance, a mathematical programming problem could be formulated to maximize a global well-being function based on the WIGI, where access to each infrastructure is expressed as a proportion of the total everyday infrastructure—analogous to optimal portfolio selection in finance. Constraints should incorporate the availability of resources for infrastructure investment (for example, that the proportions sum to 1), the relative cost of increasing each type

of infrastructure by one unit, and some minimum acceptable level for society, along with non-negativity conditions.

However, it must be acknowledged that metrics based on well-being theories from a gender perspective are still relatively recent, and it is worthwhile to continue strengthening the internal validity of the index. Two steps in this direction would be to test whether the assumption of full mediation between infrastructure access and capabilities is statistically valid, and to verify whether self-reported infrastructure access scores are reasonably correlated with objective variables that reflect the actual availability or scarcity of infrastructure.

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[1] To estimate the WIGI, all cases suspected of exhibiting "response fatigue" were excluded. In our case, we omitted observations in which the importance assigned to a given infrastructure is always the same regardless of the capability. For example, cases in which an individual assigns an importance score of 1 to childcare centers for all capabilities—health, education, mobility, leisure, and the rest.