Report on Public Transport Fares from a Gender Perspective, Barcelona 2025

ITTG, BCN 2025

Barcelona, May 2025

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* This report was produced under the Barcelona City Council service contract "Analysis of Public Transport Fares from a Gender Perspective", May 2025. Its authors are Gloria Alarcón-García, Diego Peñarrubia Blasco and José Manuel Mayor Balsas, University of Murcia.

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FOREWORD **5**

1. INTRODUCTION **9**
1.1. Main objectives 9
1.2. Methodological approach 10
1.3. Research plan 11

2. THEORETICAL FRAMEWORK **11**
2.1. Infrastructure for everyday life 11
2.2. Care, mobility and public transport from a gender perspective 16
2.3. Fares and gender-related social justice in public transport 21

3. FARE STRUCTURE AND GENDER **23**
3.1. Public transport system in the Barcelona area 23
3.1.1. Territory, people and institutions 24
3.1.2. Structure and infrastructure of public transport in Barcelona 26
3.1.3. Brief description of the fare system 30
3.1.4. Operators' accounts: costs and revenue 35
3.2. Reflections on the public transport fare structure 40
3.2.1. Comparison with fares in other metropolitan areas 44
3.3. Fares, people and the (lack of a) gender perspective 44
3.4. Working-Day Mobility Survey (EMEF) 49

4. QUALITATIVE ANALYSIS I: IN-DEPTH INTERVIEWS (IDIs) **50**
4.1. Methodological foundations 50
4.2. Mobility and specific needs 53
4.2.1. Key emerging themes 53
4.2.2. Patterns and trends identified in the responses 55
4.2.3. Relationships between concepts 56
4.2.4. Selection of representative quotations 57
4.2.5. Linking responses to existing theories 58
4.2.6. Differences between interviewees according to socioeconomic characteristics 58
4.2.6. Results and conclusions 59
4.3. Fare system and care 61
4.3.1. Key emerging themes 61
4.3.2. Patterns and trends identified in the responses 62
4.3.3. Relationships between concepts 63
4.3.4. Selection of representative quotations 64
4.3.5. Linking responses to existing theories 65
4.3.6. Differences between interviewees according to socioeconomic characteristics 66
4.3.7. Results and conclusions 67
4.4. Recommendations for reform arising from the IDIs 67
4.4.1. Key emerging themes 67
4.4.2. Patterns and trends identified in the responses 69
4.4.3. Relationships between concepts 70
4.4.4. Selection of representative quotations 71
4.4.5. Linking responses to existing theories 73
4.4.6. Differences between interviewees according to socioeconomic characteristics 73
4.4.7. Findings and conclusions 75

5. QUALITATIVE REPORT II: FOCUS GROUP ANALYSIS 77
5.1. Methodological foundations 77
5.2. Key emerging themes 79
5.3. Patterns and trends identified in responses 80
5.4. Relationships between concepts 82
5.5. Representative quotations 82
5.5.1. Key quotations summarising common views 82
5.5.2. Quotations best illustrating key themes 83
5.6. Linking responses to existing theories 83
5.7. Differences between participants 84
5.7.1. Significant differences by profile 85
5.7.2. Variation by age, gender and experience 85
5.8. Results and conclusions 85

6. CONCLUSIONS: PREMISES, EMERGING THEMES AND PROPOSALS 86
6.1. Care mobility 86
6.2. Importance of sex-disaggregated data for quantitative analysis 87
6.3. Transport fares as political prices: fares as a policy instrument for accessibility from a gender perspective 89
6.4. Simplifying fares from a gender perspective 90
6.5. Fares and care mobility: proposals 91
6.5.1. Evidence of discrimination against carers under the current fare system 92
6.5.2. Policy mechanisms that produce these inequalities 92
6.5.3. Proposals for fare reform from a gender and care perspective 92

7. BIBLIOGRAPHY 95

8. ANNEXES 104
8.1. Quantitative report 104
8.1.1. Working-Day Mobility Survey (EMEF) 104
8.1.2. Multimodality 108
8.1.3. Duration, purpose and mode 109
8.1.4. Area 112
8.1.5. Perceptions of the service 114
8.1.6. Reasons for using or not using particular modes 116
8.1.7. Discounts 117
8.2. Technical details of the in-depth interviews (IDIs) 117
8.2.1. Interviewee profiles 118
8.2.2. Interview guide 118
8.3. Technical details of the focus groups (FGs) 119
8.3.1. Recruitment process 120
8.3.2. Composition of focus-group participants 123
8.3.3. Profiles of participants in FG1 124
8.3.4. Profiles of participants in FG2 124
8.3.5. Profiles of participants in FG3 125
8.3.6. Focus-group moderation guide 125

FOREWORD

This Report on Public Transport Fares from a Gender Perspective, Barcelona 2025 (ITTG, BCN 2025*), was commissioned* under Barcelona City Council's contract "Analysis of Public Transport Fares from a Gender Perspective", as part of the Council's Second Plan for Gender Justice (2021–2025). Its aim is to analyse the gender impact of the public transport fare system within the areas of responsibility of the Barcelona Metropolitan Transport Authority (ATM) and the Barcelona Metropolitan Area (AMB).

In approaching this study, we have chosen to adopt an external perspective, examining the Barcelona area's public transport system from the outside in order to identify its distinctive institutional, territorial, technical and economic characteristics through the lens of feminist economics. Such a perspective carries the risk of dwelling on matters that may appear self-evident to those within the system, or of introducing simplifications and even inaccuracies from the standpoint of specialists familiar with its internal workings. Nevertheless, we believe that undertaking this research from the University of Murcia makes it possible to turn geographical and institutional distance from a disadvantage into an analytical resource.

The research visit undertaken by the project director to the WiSE Centre for Economic Justice at Glasgow Caledonian University, Glasgow, during the preparation of this study, which led to seminars discussing the research; the links between this study and the research programme initiated by our group in 2010 and consolidated through competitive national research projects — "Gender Equality as the Foundation of a New, Efficient and Sustainable Economic and Social Model: The Role of Public Policy" (Institute for Women, Ministry of Labour and Social Affairs, R&D&I project 154/100), and the ongoing project "Infrastructure for Everyday Life from the Perspective of Feminist Well-being Economics" (PID2022-141305OB-I00, Knowledge Generation Projects 2022, Type B Targeted Research, Ministry of Science, Innovation and Universities); the competitive contracts undertaken for the European Institute for Gender Equality (EIGE) between 2013 and 2016; the research team's participation in the European Gender Budgeting Network; and its contributions to forums such as the United Nations and the World Bank all underline the group's capacity to conduct the research from the external perspective described above.

The subject has been approached through perspectives drawn from geography and urban planning, particularly those developed by Carme Miralles-Guasch et al. (2016), Inés Sánchez de Madariaga (2009), Paola Jirón (2010), Anne Power (2020) and Leslie Kern (2020), alongside research undertaken by Catalan institutions, including the 2023 Working-Day Mobility Survey (EMEF), published by Institut Metròpoli (2024), and the 2019 Manual on Everyday-Life Urban Planning from a Gender Perspective, produced by Barcelona Regional. This scholarship has shown that public transport systems have traditionally been designed around male mobility patterns associated with paid employment and linear journeys, whilst the fragmented, multiple and everyday journeys associated with care work — more commonly undertaken by women — have been rendered invisible.

Against this background, two parallel dimensions have shaped our work. The first is a gender-

sensitive examination of the Metropolitan Area of Barcelona's transport system, including its modes of transport, routes, stops, timetables and related features. The second is the fare structure itself: a complex set of prices differentiated by intensity of use and personal characteristics. It is only after describing the system and examining it from a gender perspective that it becomes meaningful to study fares in their own right. At first glance, fares may appear to affect social groups differently through explicit provisions, such as discounts or specific concessions, or more subtly where different patterns of use and needs produce different costs. What is much less evident at first sight is the effect of these arrangements on women's journeys combining care responsibilities with paid employment, as compared with men's mobility. It is precisely here that our research is situated.

Within this layered approach, the first stage involved reviewing the relevant Spanish and international scholarship and examining the design of the metropolitan transport system in Barcelona. Mobility survey data provide an indispensable empirical basis, especially the 2023 Working-Day Mobility Survey (EMEF) conducted by Institut Metròpoli. Our intention was not to repeat the extensive analysis already undertaken using those data, but rather to identify additional, potentially revealing relationships.

We discovered that the Metropolitan Transport Authority (ATM) and the Barcelona Metropolitan Area (AMB) lacked sex-disaggregated fare data suitable for statistical analysis, which would otherwise have enabled a quantitative examination of our research question. This led us to employ qualitative methods: in-depth interviews (IDIs) and focus groups (FGs). These provided the findings and conclusions presented at the end of this report, ITTG, BCN *2025, and* formed the basis for our proposals.

The use of qualitative methods, particularly IDIs and FGs, also introduces a humanistic dimension that is intrinsic to gender analysis, allowing us to capture situated experiences and the social perceptions of those who use the transport system, especially experiences shaped by structural gender inequalities. From this sociological and feminist-economic perspective, with implications for legal analysis, it is useful to reflect on how gender inequalities in access to infrastructure have evolved. *The* Catalan film "El 47", about a bus, provides an evocative point of departure. Although the film depicts the 1960s, when social inequality was understood primarily in class terms, the question in 2025 — in light of the progress achieved through Barcelona City Council's gender equality policies — is whether the same bus reveals forms of exclusion, neither entirely new nor adequately recognised, associated with gender, territory and care. We therefore ask: What is the relationship between transport and inequality between women and men? To what extent is it linked to care responsibilities? Do public transport fares contribute to these inequalities? And how should fare policy intervene to redress them? The qualitative research methods employed have helped us answer these questions.

Moreover, the use of qualitative methods — and focus groups in particular — connects scientific research with the notion of education in open government, as recognised in Spain's Law 19/2013 of 9 December on Transparency, Access to Public Information and Good Governance. These methods allow the needs of the population to be identified through dialogue, collective deliberation and attentive listening to situated experiences. This is especially important given

that women are disproportionately represented among those experiencing poverty and social exclusion, whilst their voices have often been overlooked.

Finally, in situating the study within its wider policy context, we emphasise its direct alignment with the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty) and SDG 5 (Gender Equality), and its complementary relevance to SDG 3 (Good Health and Well-being), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities) and SDG 17 (Partnerships for the Goals).

The research therefore presents several challenges. The first is to establish the nature of public transport fares, a contested question in both legal and public-finance terms. The second is to understand in depth the public transport system of a major city such as Barcelona, including its structure, operators, legal and economic arrangements and present and future particularities. The third is to compensate for the lack of the data described above by applying qualitative methodologies, which remain less widely used in legal and economic research. The fourth is to bring a gender perspective to an area of public policy that has received relatively limited attention from this standpoint within economics: public mobility infrastructure. Finally, the study seeks to contribute new scholarship in this field. Although sociology and urban planning offer an extensive body of work on mobility and public transport from a gender perspective, at the time of completion of this research we identified an absence of academic work addressing public transport fare policies from that perspective. This report therefore offers a starting point for research in this area.

Designing public transport and fares that respond equally to the needs of women and men is not merely a matter of efficiency, but one of social, economic and environmental justice. Only where public transport is attractive, accessible, difficult to substitute, sustainable and equitable can a coherent public policy committed to inclusive development and the United Nations Sustainable Development Goals be achieved. Reconsidering public transport fare policy as a means of securing equal access to well-being, work, education, care, leisure and personal relationships for women and men across the Barcelona metropolitan area is to recognise its emancipatory potential.

Reforming the fare system from a gender perspective is not only a requirement of social justice, but also a prerequisite for creating a genuinely caring and sustainable city. ITTG, *BCN 2025 proposes* an analytical framework and concrete measures that make it possible to identify and address a form of structural inequality which has hitherto remained largely invisible.

This report provides a starting point for rethinking the metropolitan fare system in the interests of social justice. Such an approach places equality between women and men at the forefront from an intersectional perspective and takes account of their individual and collective well-being.

A caring city is also designed through its fares.

Acknowledgements

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We also wish to thank the Barcelona Metropolitan Transport Authority (ATM); the Barcelona Metropolitan Area (AMB); Barcelona Regional (BR); Institut Metròpoli (IM); the Autonomous University of Barcelona (UAB); Pablo de Olavide University (UPO); and all those who, in their individual capacities or on behalf of these institutions, generously contributed essential information to the research.

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1. INTRODUCTION

Under its Second Plan for Gender Justice (2021–2025), Barcelona City Council has committed, within its responsibilities for mobility management, to promoting gender-sensitive and intersectional mobility that eliminates inequalities between women and men. One of the measures envisaged is an assessment of the gender impact of the public transport fare system in the Barcelona metropolitan area.

In fulfilment of this commitment, the City Council invited the Fiscal Observatory: Public Policy Analysis research group at the University of Murcia, alongside other research groups, to undertake the study. The contract was ultimately awarded to the University of Murcia group.

The purpose of the research underlying ITTG, BCN 2025 is *to analyse* the gender impact of public transport fares within the geographical remit of the ATM and AMB. The fare system in the Barcelona metropolitan area differentiates by zone, time and passenger profile, potentially imposing a disproportionate burden on complex, multi-purpose mobility compared with linear journeys. The ATM fare structure — based on six zones, journey duration and the type of T-mobilitat travel card used — may generate higher costs for women than for men. Women's mobility patterns are often multi-purpose, complex and associated with care responsibilities as well as paid work, whereas men's journeys have more commonly followed single-purpose, linear patterns linked primarily to paid employment. Other relevant considerations include passenger safety according to the mode of transport, the location and organisation of stops, and service timetables.

Preparatory work took place between September and December 2024. Fieldwork, analysis of findings, conclusions and recommendations were carried out between January and early June 2025. The research was led by Dr Gloria Alarcón-García, Professor of Applied Economics and Principal Investigator of the University of Murcia's Fiscal Observatory: Public Policy Analysis research group, together with Dr Diego Peñarrubia Blasco and Dr José Manuel Mayor Balsas, also of the University of Murcia, from the Departments of Foundations of Economic Analysis and Sociology, respectively.

1.1. Main objectives

As indicated above, the principal objectives of this study are:

1. To analyse the differentiated impacts on women and men of the public transport fare system within the ATM's remit.
2. To recommend improvements to fare policy (prices, exemptions and reductions) in response to inequalities identified on the grounds of sex.

1.2. Methodological approach

The aim of this research is to deepen understanding of how public transport fares affect everyday mobility associated with care in the Barcelona Metropolitan Area, from a gender perspective.

The first part of the report reviews the literature on infrastructure for everyday life, within which public transport is situated, as well as legal theories concerning the nature of public transport fares. The second examines scholarly and statistical sources through a deliberately eclectic methodological approach, ranging from theoretical analyses of optimal public transport pricing to available data from the companies providing services in Barcelona. The following section focuses on the 2023 Working-Day Mobility Survey (EMEF), using a descriptive analysis of responses that combines a gender perspective with survey variables capable of revealing differences in use suggestive of indirect discrimination. The data were analysed using RStudio, avoiding duplication of descriptive analyses already undertaken elsewhere.

The third stage consisted of qualitative research drawing principally on the technical and academic expertise of six specialists and/or individuals institutionally involved in planning or managing urban mobility and public transport, while also incorporating their personal experiences and reflections. Through in-depth interviews (IDIs), we sought to examine how the existing fare system affects equality of access and reproduces structural inequalities.

The fourth stage involved three focus groups (FGs) with people using metropolitan public transport in Barcelona, from which evidence was gathered about everyday experiences of the transport system and its fares.

In implementing the qualitative research, the team repeatedly sought to ensure that both methods were undertaken by professionals based locally. Unfortunately, this proved impossible.

Accordingly, before drafting ITTG, BCN 2025, the research team organised an exploratory and confirmatory field visit to the Barcelona metropolitan area to review the evidence gathered through the *IDIs and FGs*. This visit enabled the team to corroborate the most important experiences and conclusions reported by passengers and to develop findings, conclusions and proposals directly addressing the research objectives.

Drawing inspiration from previous research, such as the study by Díaz Aravena and Vergara-Perucich (2021) in Santiago de Chile, which examined the everyday mobility of women with care responsibilities before and during the pandemic through interviews and participatory mapping, the present research recognises the distinctive, fragmented and often invisible patterns of care mobility. It examines a question that had not, to our knowledge, previously been addressed in the literature: whether existing fare structures penalise care mobility, alongside other forms of disadvantage. Just as the Chilean study sought to capture changes in everyday experiences of public space, this report seeks to reveal how fare structures may increase the cost of, constrain or restrict journeys essential to sustaining life. In this respect, it represents a pioneering contribution to Spanish and international scholarship on a matter of particular relevance to women.

We wish to conclude this section by drawing attention to a deliberate methodological choice. The bibliography at the end of this report uses the given names of all authors rather than initials. Although this departs from APA conventions, it reflects a position adopted by feminist activist scholars: one of our aims is to make women's scholarly contributions visible, something which is impossible when given names are reduced to initials.

1.3. Research plan

The research was conducted as follows.

1. Formulation of research hypotheses:
    The research hypotheses are as follows:
    a. A fare system based on distance, time and passenger profile places a greater burden on complex, multi-purpose mobility than on linear journeys. The ATM fare structure, based on six zones, journey duration and the type of T-mobilitat travel card, disproportionately affects women by potentially imposing higher costs. This is because women's journeys are more often multi-purpose, complex and associated with unpaid care as well as paid employment, whereas men's journeys more commonly follow single-purpose, linear patterns linked to paid employment.
    b. Public transport fares are politically determined prices rather than direct reflections of the costs of providing the service. Fare-setting should therefore consider not only these costs, but also wider objectives of social sustainability and gender equality.
    c. The existing fare policy does not take account of the location of infrastructure associated with care.
    d. Sex-disaggregated data on modes of transport and fares should be collected to advance research into mobility and fare-setting from a gender perspective.
2. Six online IDIs with specialists in mobility and/or gender, conducted by the research team.
3. Three online FGs conducted by the Taracea co-operative.
4. An exploratory and confirmatory visit by the research team to the Barcelona metropolitan area to assess the evidence emerging from the FGs.
5. Preparation of the *final ITTG*, BCN 2025 report, presenting the study's findings and strategic recommendations for the ATM and AMB.

2. THEORETICAL FRAMEWORK

2.1. Infrastructure for everyday life

Infrastructure for everyday life comprises the facilities and systems designed to meet people's essential needs, including those of households with children, older people and/or people with

disabilities. This analytical category distinguishes infrastructure associated with productive work from infrastructure associated with reproductive work[1].

The International Labour Organization (ILO) defines reproductive work as encompassing direct care of people and indirect care activities, such as cleaning and cooking, whether paid or unpaid (Benería, 1970). It therefore concerns care, which, given the unequal distribution of responsibility for providing it, has historically been associated with women's work and needs. Broadly speaking, we refer to productive work as predominantly undertaken by men and associated with the "standard man", generating a conventional male pattern of infrastructure use, whilst reproductive work has been predominantly undertaken by women and associated with the "standard woman". According to the ILO (2018), women perform 76.2% of unpaid care work, contributing to gendered patterns of infrastructure use, particularly in relation to mobility. As explained below, our concept of "care mobility" also encompasses journeys associated with women's paid employment when these are combined with journeys undertaken for reproductive and care activities.

Infrastructure and the public services associated with it — including transport, health centres, parks, nurseries, industrial estates and dependency care centres — play an essential part in people's well-being and structure their everyday lives. We routinely use these facilities and services to carry out our daily activities. They therefore sustain our daily lives as individuals and, collectively, are indispensable to society as a whole.

As indicated above, when we contrast the needs of women and men served by public infrastructure, we are referring to observed contemporary social arrangements. In particular, we distinguish those who perform almost all reproductive work, often alongside paid employment (INE, 2016), from those whose activities are predominantly associated with productive work, even if they undertake some reproductive activities. Depending on how public infrastructure is designed and implemented, it may primarily support productive work, reproductive work or care, and it may foster or constrain equality of opportunity between those principally undertaking each type of work.

A thorough analysis of the intended beneficiaries of public policy also requires us not to treat all women — or all men — as a homogeneous group. We must consider intersecting circumstances such as age, income, education, ethnicity, religion, migration status, sexual orientation and whether a person lives in a rural area. Women, like men, are differently positioned across these dimensions, which interact to shape experiences of advantage and disadvantage (Crenshaw, 1989). For example, will two white women have the same needs if they differ in income and education and one lives in fare zone 1 whilst the other lives in zone 6 of the Barcelona metropolitan area? Similarly, do a white woman and a Black woman necessarily enjoy the same opportunities even where their income, education and religion are equivalent? Additional

[1]The principal purpose of this distinction is to make visible women's work and its concentration in the reproductive and unpaid sphere (Benería, 1970). Although the traditional terms are increasingly being replaced by "paid work" and "unpaid work", we retain the classical distinction because it is more expressive for the purposes of this study.

intersections reveal further differences in needs, all of which public policy should address on an equal basis. This is the premise of intersectional analysis, deriving from intersectional feminism, a concept introduced by Kimberlé Williams Crenshaw in 1989 to describe how individuals experience oppression or privilege through the interaction of multiple social categories.

These observations challenge the supposed compatibility of public-policy neutrality with universal provision. They draw attention to the patriarchal structures of society, within which policies presented as gender-neutral may in practice fail to be genuinely universal. Naila Kabeer (1996) describes policies that appear universal and neutral because they invoke abstract categories such as community, citizens, people, disadvantaged populations or vulnerable groups, whilst implicitly privileging male experiences and needs.

Adopting a gender perspective in the design of public infrastructure is therefore a political commitment in its own right: it entails building more equitable and just relationships between women and men so that infrastructure provision may become genuinely universal and non-discriminatory.

"Infrastructure for everyday life from an intersectional perspective" is thus a broader and more precise concept than either urban planning or urban facilities alone. It encompasses the facilities and services that meet people's structural and reproductive needs, both as individuals and as members of communities, and whose provision supports well-being, a dignified life and productive activities.

The concept of infrastructure for everyday life from an intersectional perspective accordingly requires a gender perspective to be integrated into the design, planning, implementation and evaluation of each form of public infrastructure. It is closely connected with the model of socioeconomic development a society wishes to pursue. Infrastructure for everyday life must take account of the daily needs of, for example, a woman who begins her day by taking her children to nursery or school, then travels to work, leaves work to attend a meeting with a child's teacher, returns to work and later collects her children before going home for lunch. In the afternoon she accompanies them to extracurricular activities, visits her father in a residential care home, buys food for dinner, collects her children and returns home. By contrast, supposedly "universal" or "neutral" infrastructure may ignore this complexity and assume that everyone's journeys are simply between home and work, reflecting the conventional model of productive employment historically associated with men. Planning that genuinely meets the population's needs and safeguards well-being must account for these everyday journeys, rather than merely connecting homes with workplaces or educational institutions.

The concept of infrastructure for everyday life emerged at the intersection of gender studies and the practice of urban and regional planning. It addresses practical problems linked to global challenges, both in terms of population well-being and the sustainability of economic, social and environmental systems.

With regard to the incorporation of a gender perspective into public infrastructure policy — in order to transform infrastructure into infrastructure for everyday life — the literature is considerably more developed in architecture and planning than in feminist economics.

Many architectural studies have examined urban planning and infrastructure for everyday life from a gender perspective (Sánchez de Madariaga, 2004, 2006; Carpio-Pinedo, De Gregorio and Sánchez de Madariaga, 2019).

Within feminist economics, by contrast, relatively little research has examined expenditure on public infrastructure for everyday life. Existing studies have focused predominantly on low- and middle-income rather than high-income countries, leaving an important research gap (Alarcón-García, 2023). Nevertheless, the significance of infrastructure for women's well-being has become increasingly prominent in the economic literature (Alarcón-García et al., 2020a, 2020b, 2020c, 2020d).

In this context, in 2015 the European Institute for Gender Equality (EIGE) launched "*Benefits of Gender Equality through Infrastructure Provision:* [2]An EU-wide Survey" across the then 28 EU Member States. As mentioned in the introduction, this survey was coordinated and implemented by our University of Murcia research group. It sought to generate evidence on the benefits of public infrastructure from a gender perspective across the European population. Respondents were asked to assess[3] a range of public infrastructure and relate[4] it to a set of capabilities which, in our research framework, are associated with population well-being. These included labour-market integration, mobility, care and domestic work.

Using some of the findings of our research, and taking urban mobility as an illustrative case, we considered four types of public infrastructure included in the survey: pavements and streets, street lighting, public transport and parks. Women perceived all four as substantially more

[2]Alarcón-García, G., Addabbo, T., Ayala-Gaytan, E., Fernandez, E., Rubio, M., Castellet, A., O'Hagan, A., and Mayor, J. M. (2020a). Benefits of gender equality through infrastructure provision: An EU-wide survey. https://eige.europa.eu/publications/benefits-gender-equality-through-infrastructure-provision-eu-wide-survey

[3]The infrastructure assessed in this study comprised: (1) nurseries for children aged 0–3 and from age 3 to compulsory school age; (2) residential homes and day centres for older people; (3) health centres and hospitals; (4) centres for people with disabilities; (5) pavements and streets; (6) street lighting; (7) parks and green spaces; (8) public transport; (9) cultural centres; and (10) sports centres.

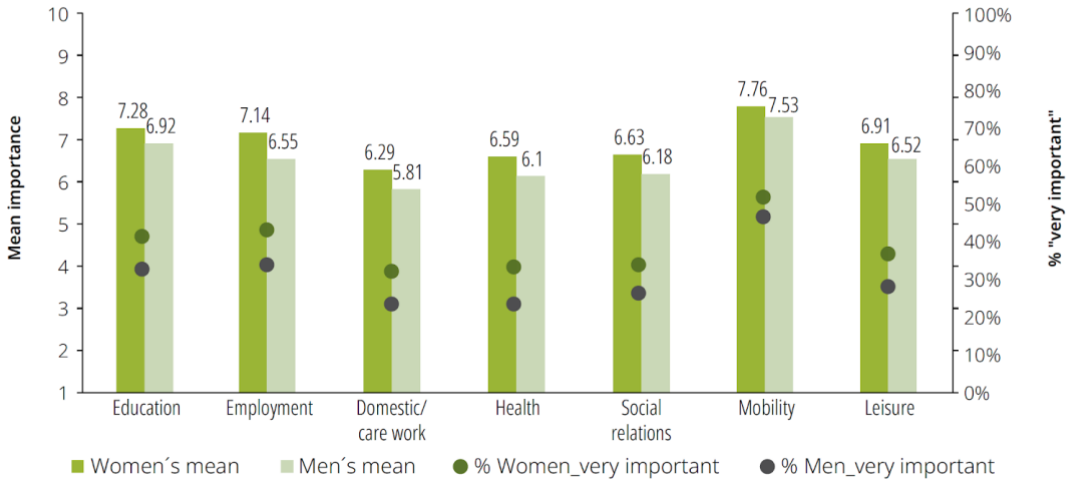
[4]In the survey, respondents were asked to consider the extent to which each form of infrastructure contributed to each of the following capabilities: (1) physical and mental health; (2) bodily integrity and personal safety; (3) social relationships; (4) education; (5) care and domestic work; (6) employment; (7) environment; (8) mobility and autonomy; (9) leisure; and (10) emotional integrity and emotions. https://eige.europa4.eu/gender-statistics/dgs/browse/genmain/genmaineqpol/genmaineqpolgepi.

important for their everyday lives than men did (Alarcón-García et al., 2020d; Alarcón-García, 2023).

Focusing on public transport, women attach greater importance to it than men. Indeed, public transport was considered the second most important infrastructure service for facilitating everyday life, after health services and medical centres. In particular, the survey findings show that:

- 40% of women stated that public transport was "very important" in enabling them to access education, compared with 32% of men;
- 42% of women considered transport "very important" for their participation in paid employment, compared with 33% of men.

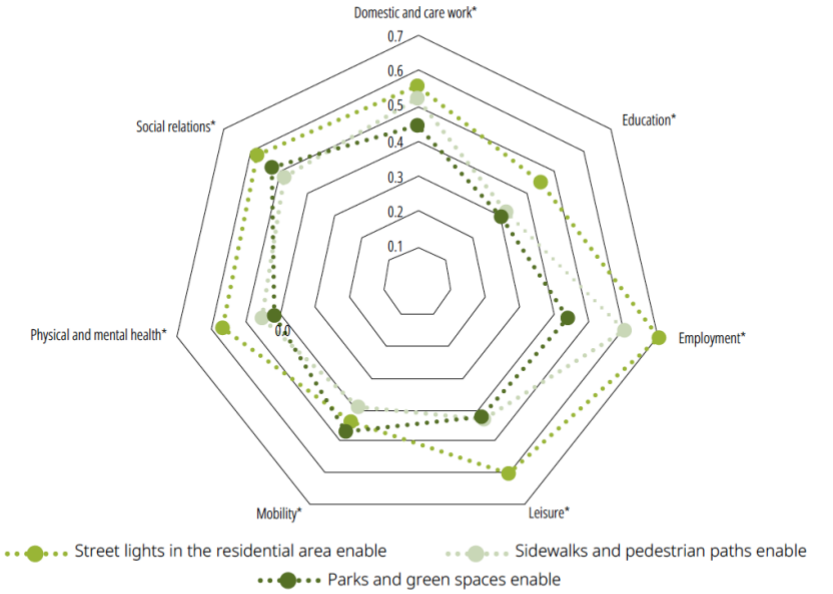
Figure 2. The importance of public transport in enabling participation in different life activities (on an ascending scale from 1 to 10)



From a complementary perspective on mobility, the 2015 EIGE survey found that public-space infrastructure — pedestrian areas, street lighting and green spaces or parks — played a more important role in women's urban mobility than in men's. Women placed greater value on pavements as means of accessing employment and social relationships within the community. They also rated street lighting as particularly important for urban mobility, labour-market participation and social relationships beyond the family, as well as for facilitating domestic work and care.

Taken together, the survey findings indicate that women and men assess public-space infrastructure differently, as they do mobility infrastructure. This evidence suggests that planning infrastructure for everyday life affects women's bodily integrity, personal safety, mobility and autonomy, and potentially their income, thereby contributing directly to their livelihoods, well-being and quality of life.

Figure 4. Difference in importance of public spaces to enable various life activities for women and men (*)



(*) The difference between women and men reached statistical significance (p > 0.05) in all cases. In the figure, the gap between mean scores shows the difference: the men's mean score is subtracted from that of the women's. No difference would mark zero (0); the positive result signals that women perceive the infrastructure service to be more important.

2.2. Care, mobility and public transport from a gender perspective

Over recent decades, the incorporation of a gender perspective into urban analysis has exposed the profound structural inequalities embedded in transport systems. The conventional design of mobility policies has privileged a productivist understanding of travel, centred on linear home-to-work journeys associated with the 'standard man', that is, an economically active male in employment (Miralles-Guasch and Domenec, 2010; Sánchez de Madariaga, 2013; Miralles-Guasch, Martínez and Marquet, 2016; Manual d'urbanisme de la vida quotidiana: Urbanisme amb perspectiva de gènere, 2019; and Institut Metròpoli, 2024). This model has rendered invisible the patterns of everyday mobility associated with care responsibilities, which are predominantly

undertaken by women. Sánchez de Madariaga (2009) coined the concept of the 'mobility of care' to make these journeys visible.[5]

Care as a subject of academic enquiry is a relatively recent concept in the literature (Arriagada, 2011; Borderías, Carrasco and Torns, 2011; Daly and Lewis, 2000; Esquivel, 2013; Esteban, 2017; Tronto, 1993; Valdivia, 2018; Vega and Gutiérrez, 2014). It was initially addressed primarily in sociology and subsequently in feminist economics.

Care work encompasses a range of everyday activities undertaken both within and outside the home, aimed at securing people's material, economic, moral and emotional well-being (ECLAC, 2015). Its nature and intensity vary across the life course, with childhood, old age and illness requiring greater amounts of time and more specialised attention (Barcelona City Council, 2019).

Care work is closely connected with sustaining life and comprises an entire subsystem of care-related services, generally informal and invisible, which are essential to that purpose and meet numerous social needs (Borderías, Carrasco and Torns, 2011). These services and responsibilities are overwhelmingly provided or assumed by women (ILO, 2018). Against this background, one of the aims of feminist economics is to displace productive work from the centre of public policy and place reproductive work on an equal footing with it. Reproductive work makes the sustainability of life possible and should therefore occupy a central position in both political and social life. This shift entails giving equal importance to meeting all human needs.[6]

Care also has a pronounced spatial dimension: it takes place in physical settings that extend beyond the domestic sphere (Comas d'Argemir, 2016). Public space and the way in which it is organised are therefore crucial to whether care needs can be met. Zúñiga-Olave and Herrmann-

[5]The concept first appeared on the website Gendered Innovations in Science, Health & Medicine, Engineering and Environment, a European Commission and Stanford University initiative (2011–2013): https://genderedinnovations.stanford.edu/. The project was launched in 2009 by Stanford University and the European Commission. Between 2011 and 2013, the European Commission funded an expert group known as 'Innovation through Gender/Gendered Innovations' to develop the gender dimension of European Union research and innovation. This initiative became a major reference point for introducing gender analysis into European research. The first edition of Gendered Innovations included a case study on the mobility of care (Schiebinger and Klinge, 2013, Gendered Innovations: How Gender Analysis Contributes to Research, European Commission). The second edition included the concept of 'mobility of care' in a case study on Smart Mobility. A central concern was the collection of sex-disaggregated mobility data, making it possible to identify differences between women's and men's travel patterns, including those arising from care responsibilities. http://genderedinnovations.stanford.edu/case-studies/mobility.html#tabs-2https://genderedinnovations.stanford.edu/

[6]Some scholars argue that care should occupy the central position (Pérez Orozco, 2006; Carrasco Bengoa, 2016).

Lunecke (2022) argue that, from the standpoint of the city, care is provided and received in two coexisting spaces of proximity. The first comprises care given and received within the home, often unpaid, although it can also include paid care provided by domestic workers. The second encompasses care provided outside the household through public services and private organisations (Durán, 2017).

Among more recent studies, Valdivia (2018) argues that care and everyday life should be addressed through urban planning, thereby providing a more comprehensive understanding of urban processes and dynamics. This raises an important question: should care work, or reproductive work, be treated in spatial public policy and urban planning as a distinct activity requiring separate provision from productive work, or should both be addressed together? Comas d'Argemir (2016) proposes that spaces should be conceived with a view to a fairer, more equitable society, in which the responsibilities still borne predominantly by women are shared, and women's experiences and perspectives are recognised as essential to an inclusive city. This approach has given rise to the concept of the 'caring city' (Durán, 2017).

Care has another particularly important dimension: time, which appears to be undervalued when devoted to caring. Put differently, women's time spent providing care is treated as though it were free, whereas time spent in productive employment is regarded as valuable. This is especially relevant in light of the Spanish National Statistics Institute's 2010 Time Use Survey, which found that women spent two hours and 23 minutes more than men each day on unpaid work, including a substantial share of care-related journeys (INE, 2011). In Catalonia, the 2020 Survey on Time Use and Lockdown ('Enquesta sobre els usos del temps i el confinament 2020'), conducted by the Government of Catalonia's Centre for Opinion Studies, found that women devoted significantly more time than men to care during the lockdown, even though both were at home. In particular, women accounted for 64.2% of those who took responsibility for children's schooling during this period, compared with 35.4% for men.[7]

Inequalities in the allocation of time clearly have a direct effect on women's mobility relative to men's, which explains the importance of time in the analysis of travel and public transport. The need to make multiple journeys to fulfil care responsibilities, such as accompanying children to school or looking after dependent relatives, restricts women's access to employment and education. Furthermore, where public transport infrastructure fails to accommodate these patterns of movement, it may increase women's time pressures and emotional burdens, to the detriment of their physical and mental health and overall well-being.

[7]Institut Català de les Dones; Centre d'Estudis d'Opinió.https://dones.gencat.cat/web/.content/03_ambits/Observatori/03_dossiers_estadistics/Limpacte-de-genere-de-la-COVID-19-en-dades.pdf?utm_source=chatgpt.com

Studies by Colom (2020) and Miralles-Guasch et al. (2016) reinforce this evidence of inequality, showing that women make more chained and shorter journeys, travel at less regular times and bear a greater logistical burden, all of which affect their ability to access transport on equal terms. As Colom (2020) demonstrates, women spend more time making chained, repeated journeys associated with care, exposing them to higher time and monetary costs. Miralles-Guasch et al. (2016) have shown that, in Catalonia, these differences are neither territorially nor socially neutral: journey times, their cumulative effects and the associated emotional burden directly affect women's quality of life and equal access to employment, education and healthcare. This unequal distribution of travel time has direct consequences for access to rights, opportunities and well-being. Public transport design must recognise these differences if it is to satisfy principles of equity.

As discussed earlier, and returning to mobility policy more broadly, care is a decisive factor in women's mobility, people's interdependence and quality of life (Alarcón et al., 2000d; Sánchez de Madariaga, 2009; Jirón, 2017). We therefore return to the starting point: people's mobility patterns are not homogeneous, particularly when different dimensions of inequality intersect (Jirón, 2007). Women tend to travel within relatively local areas (Soto, 2013), both for reproductive activities and paid employment. Consequently, they chain more journeys together, walk more and use public transport more frequently than men (Valdivia, 2018; Sagaris and Tiznado-Aitken, 2020). Men's mobility patterns, by contrast, are more often characterised by longer distances, greater use of private transport and single-purpose journeys, primarily for work or study (Allen et al., 2018; Ciocoletto, 2014).

At a further level of analysis, an intersectional perspective reveals important differences between women themselves. Women from lower socioeconomic groups tend to travel shorter distances, generally in areas close to their homes (Pérez, 2019). Figueroa and Waintrub (2015) likewise identify a greater reliance on walking and a heavier care workload among women as socioeconomic status declines. Rivera (2007) and Buiten (2007) caution against universalising women's needs, emphasising the diversity of their experiences according to age, class, territory and ethnicity.[8]

A particularly valuable contribution to analysing care mobility is offered by Sánchez de Madariaga and Zucchini (2020), who identify three principal dimensions affecting women's mobility:

a) territorial organisation and accessibility, where distance and the time required to reach a destination create difficulties;
b) personal safety;
c) gender roles, given the heavy burden of household work and caring for others, and the consequent need to chain journeys together to perform multiple tasks (Sánchez de Madariaga, 2009).

The third of these dimensions brings us back to women's mobility understood as the 'mobility of care': journeys generally undertaken by women, although sometimes also by men, in connection

[8]For intersectional analyses without an explicit gender perspective, see Lucas and Porter (2016).

with unpaid work and care responsibilities. Sánchez de Madariaga explains that the mobility of care encompasses all journeys made to undertake everyday care tasks, including accompanying children to school, extracurricular activities or sport; shopping; running errands; and visiting or accompanying sick or older relatives (Sánchez de Madariaga and Zucchini, 2020). The concept emerged from the need to make visible journeys undertaken neither for paid employment nor for leisure, but rather to accompany, assist or organise the lives of other people. These journeys are often multiple, chained and adapted to irregular schedules, creating tensions with existing fare systems that penalise intensive and fragmented patterns of transport use (Martínez Argüello, 2024).

In our view, as already suggested, and departing from certain positions in the literature cited above (Sánchez de Madariaga, 2009), the expression we shall adopt is 'care mobility' in its broader sense. We do so because care takes many forms and arises for different reasons: it includes not only journeys strictly associated with unpaid care, but also women's travel that combines such responsibilities with paid or productive employment. When we speak of the double or triple working day, this is precisely what we mean: women undertake reproductive work, in its various forms and for various purposes, alongside productive work, combining the two through trip chaining. Mobility plays a fundamental part in this combination and has significant implications for women's well-being and quality of life.

Understanding care mobility as extending beyond journeys associated exclusively with reproductive work is particularly important given the marked geographical differences across the world in the profiles of those who provide care. Martínez Argüello (2024) distinguishes three broad geographical contexts. In high-income countries, most people making care-related journeys are women who combine employment in various sectors with unpaid care responsibilities. This category also includes domestic workers and people employed in professional care services (Martínez Argüello, 2024). The situation differs in developing countries, including parts of Latin America, where domestic work is a major source of female employment (ECLAC, 2020), and in Scandinavian countries, where more developed welfare states provide publicly funded care services for dependent children and older people. Although this employment is also predominantly undertaken by women, it is paid work (WIEGO, 2021). As Martínez Argüello (2024) aptly summarises, there are differences between the profiles of carers in developed countries, where most combine other employment with care; in developed countries with stronger welfare states, particularly the Scandinavian countries, where a significant share of care is delivered as a public service but again largely by women; and in developing countries, where much care is provided as a private service under precarious and informal working conditions by women who must also look after their own families.

Oviedo and Titheridge (2016) emphasise that care mobility is a socially necessary form of travel, yet one that is systematically marginalised in transport planning. Research promoted by international organisations and initiatives, including ESCAP (2007) and the TInnGO Hub (2020), calls for the systematic incorporation of a gender perspective at every stage of the design, implementation and evaluation of transport policies.

2.3. Fares and gender-related social justice in public transport

The legal and economic characterisation of public transport fares has long been debated within administrative law and the theory of public revenue. Distinguished administrative-law scholars such as García de Enterría (1953, 1989) and Villar Palasí (1961) have argued for more than six decades that public service fares cannot be treated as market prices. Rather, they belong to the broader category of publicly determined prices and, more specifically, 'political prices'. This approach has profound normative and distributive implications for fare policy, particularly in urban and metropolitan settings.

In this regard, González-Hernández (2002) maintains that a 'political price' is one determined not by market logic but through state intervention, where a particular good or service is considered something that should be accessible to the entire population.

From a legal standpoint, political prices are defined in contrast to private prices. Whereas private prices reflect market logic and are established through free competition, political prices are set unilaterally by the public authorities to pursue objectives in the general interest. Their essential characteristic is that they do not necessarily reflect the actual cost of the service provided; instead, they respond to non-market considerations such as income redistribution, universal access and social cohesion (Villar Palasí, 1961).

Within classical Spanish administrative-law scholarship, García de Enterría (1953, 1989) argues that public transport fares should be understood as parafiscal instruments, closer to a public levy than to a contractual price. Rather than expressing a direct exchange between the cost of providing a service and the payment made by a passenger, the fare constitutes a contribution by the citizen to a service whose existence benefits the community as a whole. This view is grounded in the theory of the sufficiency of public revenue, under which public resources must ensure the continued provision of essential services without making their funding conditional upon a principle of direct equivalence.

Along these lines, García de Enterría (1953) observes that public transport cannot be financed exclusively through fares paid by passengers, because it is a service of general interest whose provision serves structural purposes: securing mobility, accessibility and territorial cohesion. A fare therefore operates as a political price: an instrument defined not by market logic, but by public decisions that incorporate social, territorial and equity considerations. The author also stresses that fare design should not be governed by a direct exchange between the service delivered and the amount paid, but by the principle of ability to pay associated with taxation.

In this sense, political prices are instruments of public intervention, subject to constitutional values such as equality and social justice, and are especially relevant to essential public services, including education, healthcare and transport.

Of particular importance is García de Enterría's insistence that fares should be adjusted to passengers' ability to pay, thereby justifying concessions and socially differentiated tariffs. In his

approach, such concessions are not exceptions to the fare model, but a logical consequence of the principles of revenue sufficiency and substantive justice (García de Enterría, 1953). Reduced fares for particular groups — people on low incomes, older people, people with disabilities and carers — are not merely legitimate but necessary to ensure that access to transport is not conditional upon a passenger's financial circumstances. From this perspective, the author insists that a fare system cannot operate on the basis of technical neutrality; it must be shaped by deliberate political decisions prioritising inclusion and universal access (García de Enterría, 1989).

García de Enterría also maintains that public transport funding cannot rely on fare revenue alone. It must be supplemented by public subsidies covering the difference between the actual cost of the service and the price paid by passengers (García de Enterría, 1953, 1989). Such indirect financing is not only legitimate but essential if transport is to fulfil its role in structuring territory and redistributing resources. The parafiscal character of fares, he argues, means that public authorities must cover operating deficits through general taxation, as an expression of solidarity and cohesion (García de Enterría, 1953).

Villar Palasí (1961) complements this reasoning by locating the category of political prices within administrative techniques of intervention and public support. For him, political prices are defined by their lack of direct correspondence with the actual cost of a service and by their subordination to public-interest objectives. They are also justified by the principle of income redistribution, so that basic public services remain accessible to all social groups regardless of economic position. Political pricing in urban transport therefore forms part of an approach to state intervention that corrects the regressive effects of markets through compensatory mechanisms, including subsidies, fare concessions and differentiated tariffs.

From a more contemporary economic perspective, González-Hernández (2002) reaffirms that public services should be governed by the combined principles of financial sufficiency, equity and collective efficiency, rather than individual efficiency alone. Accordingly, public transport fares should pursue social-policy, environmental and sustainable-mobility objectives, not simply cost recovery. Ramírez, Ortega and Marín (2008) share this view, warning that pricing based exclusively on economic efficiency may deepen social and territorial inequalities, particularly in cities with pronounced residential segregation and employment polarisation.

In particular, these authors argue for concessions based on ability to pay as part of a redistributive fare policy. Such concessions are justified because they enable people and groups with lower purchasing power to gain effective access to essential services, while maintaining the principle of financial sufficiency. Under this approach, socially differentiated fares become an instrument for realising distributive justice without undermining the system's sustainability. González-Hernández (2002) emphasises that these mechanisms are justified not only economically, but also constitutionally and ethically. Likewise, Ramírez et al. (2008) argue that fare differentiation according to income or other indicators of social vulnerability can be compatible with efficiency objectives if appropriately designed, through cross-subsidies or public compensation. Public subsidies for fare systems are therefore not exceptional measures, but expressions of a public commitment to territorial equity and social cohesion, as well as a necessary condition for the effective exercise of the right to mobility.

Treating fares as political prices does more than redefine their revenue-raising function: it also makes it possible to recognise and accommodate social realities historically excluded from fare design, including care mobility. As discussed above, this heavily feminised form of mobility is characterised by short, chained and frequently unpredictable journeys, often outside peak hours and involving multiple destinations, including schools, health facilities and the homes of dependent people. Such journeys do not fit the linear, repetitive home-to-work model around which fare systems have traditionally been organised.

By describing public transport fares as political prices, we mean that their level is not determined exclusively by market logic. Rather, fares are established or adjusted through public decisions pursuing equity, social justice, accessibility, social transformation and other values and objectives, including gender equality as guaranteed by the Spanish Constitution and the Organic Law on Effective Equality between Women and Men.

3. FARE STRUCTURE AND GENDER

3.1. Public transport system in the Barcelona area

We understand public transport as an organised system for the physical mobility of people within a particular territory. In this chapter we review some basic features of the Barcelona case. Although these will be familiar to those who know the system, they need at least to be outlined in order to provide the context for the discussion that follows, particularly the analysis based on the Working-Day Mobility Survey (EMEF, from its Catalan initials).

In the present case, the territory is defined by the municipalities belonging to the Barcelona Metropolitan Transport Authority (ATM) consortium. This introduces an initial difficulty: 296 municipalities belong to the consortium, whereas the EMEF, which provides much of our evidence, covers residents of all 311 municipalities in the province of Barcelona. The Integrated Fare System covers 346 municipalities; the 50 additional municipalities beyond the ATM network are treated as a seventh ring.

The preceding paragraph already suggests the multiple dimensions of the system's complexity. This is not simply a matter of size: the system manages more than one billion journeys made by nearly four million people. Rather, different public authorities interact across various transport modes and generate a range of fares that cannot be assessed without examining the underlying arrangements. We shall first attempt to summarise these features before turning to fares.

For an initial overall assessment of mobility in the Barcelona area, the balance between public transport, private transport and active travel is very favourable, as Figure 1 shows for a sample of European cities. Active travel occupies a particularly strong position, approached only by smaller, flatter cities with a long cycling tradition, such as Amsterdam and Rotterdam. There is, of course, a substantial academic literature evaluating Barcelona's public transport system: in relation to urban planning (García-López, 2012), sustainability (Recasens-Alsina, 2020), micromobility

(Roig-Costa et al., 2021), the health effects of replacing car journeys (Rojas-Rueda et al., 2012), delivery time windows for freight distribution (Savall-Mañó and Ribas, 2024), and international comparisons (Wolniak, 2023). Here, however, our intention is simply to provide an outline of the system's main characteristics.

Figure 1. Urban mobility modes and the size of selected European cities1



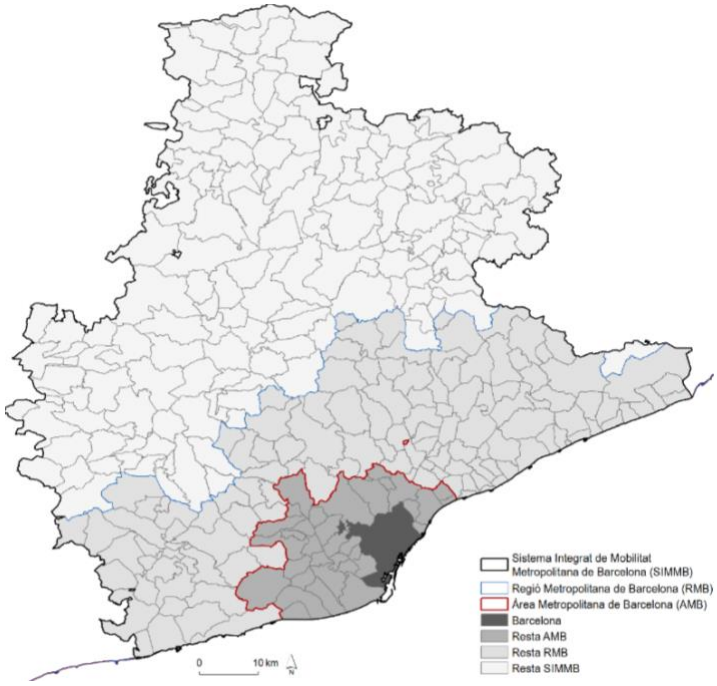
Source: EMTA (2024).

3.1.1. Territory, people and institutions

We begin with the territory, the defining characteristic of any transport system. Figure 2 illustrates four progressively wider areas. The first, at the centre, is the municipality of Barcelona itself. The second is the Barcelona Metropolitan Area (AMB), comprising a further 35 municipalities and covering a total area of 626 km² with a population of 3.2 million. The third ring is the Barcelona Metropolitan Region (RMB), an area of approximately one hundred municipalities covered by the Barcelona Metropolitan Strategic Plan 2030. The fourth level is the area covered by the Barcelona Integrated Metropolitan Mobility System (SIMMB), originally the area incorporated into the ATM. In December 2024, however, three further counties outside the

area shown in the figure joined the system: Berguedà and Solsonès, in the province of Barcelona, and Ripollès, in Girona.Figure 2. Areas integrated into the ATM2[9][10]

Figure 2. Areas integrated into the ATM2



It should be noted that Catalonia has three other metropolitan transport authorities, as Figure 3 shows. The potential integration of these authorities has long been debated, at least in terms of the mutual validity of tickets and passes. Such integration would undoubtedly be a significant step towards making the system easier to understand, an important condition for encouraging greater use of public transport.Figure 3. Territorial coverage of integrated fare systems3

Figure 3. Territorial coverage of integrated fare systems3

[9] https://www.amb.cat/s/es/web/area-metropolitana/municipis-metropolitans.html.
[10]This term, like similar expressions such as 'concentric zones', is not strictly applicable because the system's centre, situated on the coast, is not at its geographical centre.



Source: https://transportpublic.org/sistema-tarifari-integrat/https://transportpublic.org/sistema-tarifari-integrat/

Madrid offers a useful comparison. Its administrative complexity derives less from the number of municipalities (179 in the province of Madrid, compared with Barcelona's 311, the third-largest provincial total in Spain) than from the fact that the Community of Madrid has, from the outset, managed the metropolitan area as an entity whose territory is effectively coterminous with that of the autonomous community, without intervening bodies (there is no provincial council in a single-province autonomous community). Catalan integration would reverse that comparison by encompassing medium-distance connections between provincial capitals. Such links increasingly warrant integration, given shorter journey times and changing mobility associated with remote working. In Madrid, by contrast, these matters extend beyond the regional government's remit because the wider metropolitan region reaches into the two neighbouring autonomous communities.

3.1.2. Structure and infrastructure of public transport in Barcelona

The Barcelona public transport system is integrated not so much because it brings public authorities together, but because it connects territories and people through integrated transport modes and travel passes. The system comprises:[11]

[11]Following the distinctions drawn above, when speaking in general terms we do not specify whether we mean the

- Metro: 12 lines with a total length of 170 kilometres. Some lines are operated by TMB, Barcelona's metropolitan transport company, and others by FGC (Ferrocarrils de la Generalitat de Catalunya).
- Rail: the area has eight suburban railway lines, of which lines 5 and 6 are operated by FGC and the remainder by Renfe.[12]
- Buses: more than 800 routes operated by 70 companies, including public operators such as TMB, although most operate under private concessions.
- Trams: services operate in the city centre and in the Besòs area; a connection along Avinguda Diagonal entered service at the end of 2024.
- Funiculars: those serving Montjuïc and Vallvidrera.

A much more detailed description of the modes operated by each company is available, for example, from TMB.[13]

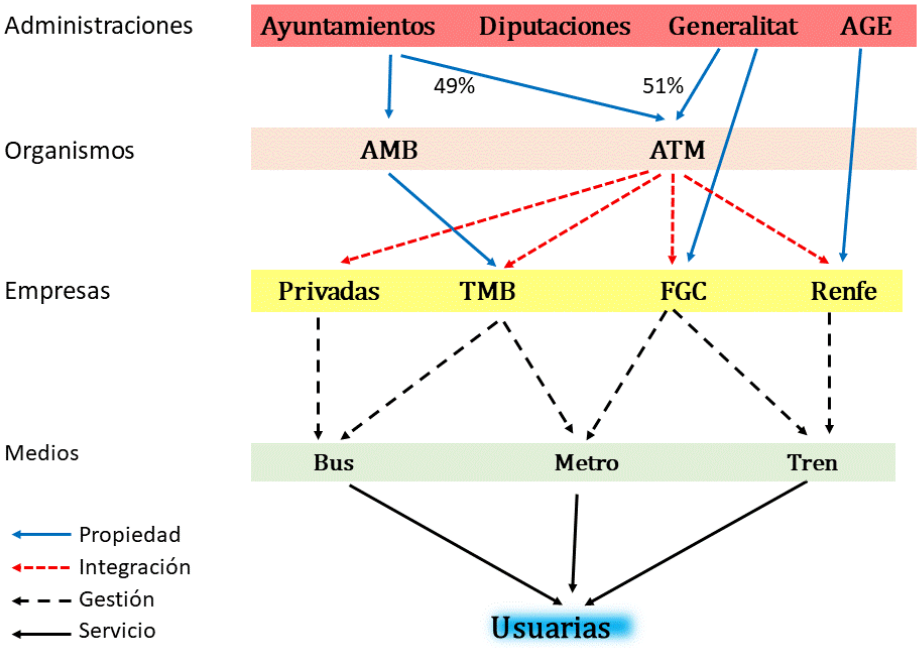
Figure 4 summarises the institutional structure of public transport in the Barcelona metropolitan area. It includes the Barcelona Provincial Council (Diputació de Barcelona) because, although it does not operate direct transport services, it has responsibilities for mobility (including local roads) and maintains a Technical Mobility Office. Other institutions are not shown, such as the Association of Municipalities for Mobility and Urban Transport (AMTU), although it is represented within the ATM, because it constitutes delegated representation of the participating municipalities.Figure 4. Institutional structure of public transport in Barcelona4

municipality, metropolitan area, region, metropolis or province. A degree of ambiguity may be helpful when this precision is unnecessary.

[12]At the time of writing ITTG, BCN 2025, an agreement had been reached on the transfer of responsibilities, but it was unclear whether the service would ultimately operate through a jointly owned company. We set that issue aside.

[13] https://transparencia.tmb.cat/documents/525003/1436181/Dades+b%C3%Aosiques+viatgers+bus+metro+2024CAEN.pdf/563c476f-7c17-f043-430e-92a21e5df9d5?t=1713784096307

Figure 4. Institutional structure of public transport in Barcelona4

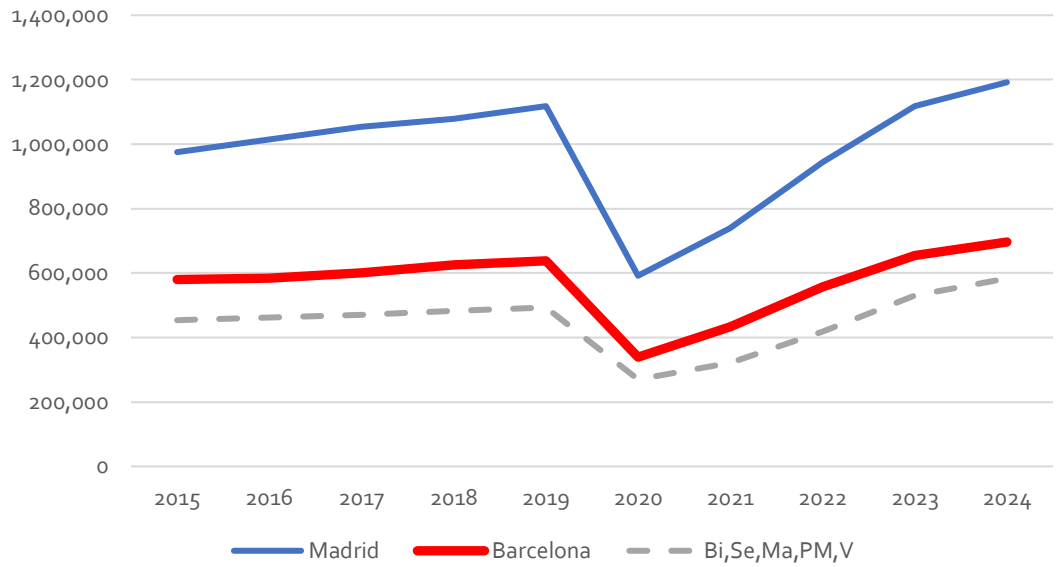


Source: authors' own elaboration.

These transport modes meet the mobility needs of the area's population through a crucial element: the design and operation of the network itself, including service frequencies and timetables. Cheap or free public transport serves little purpose if its design does not meet people's mobility needs. Properly understanding those needs and establishing an investment plan for infrastructure and rolling stock may, in some circumstances, be preferable to populist fare policies that require public funds to cover operating deficits instead of improving services. This is a complex matter beyond the scope of our study. Nevertheless, to continue the previous comparison, Barcelona's metro has 12 lines, 198 stations and 158 km of track, whereas Madrid's network extends to 293 km: nearly twice as much, but with only 50% more passengers (660 million compared with 440 million). These figures appear to indicate a Barcelona metro network that is more heavily used and more spatially constrained.

Chart 1 shows the total number of bus and metro passengers in Barcelona and Madrid, together with the combined total for the other five metropolitan areas for which Spain's National Statistics Institute (INE) provides data (Bilbao, Málaga, Palma de Mallorca, Seville and Valencia). Passenger numbers have fully recovered from the pandemic, with recovery slightly stronger in Barcelona than in Madrid (9.2% compared with 6.6%), but clearly below the increase in the other-city group (18%). Over the longer period since 2015, Barcelona has recorded the slowest growth (20%, compared with 22% and 29%, respectively).Chart 1. Metropolitan public transport passengers (buses and metro)1

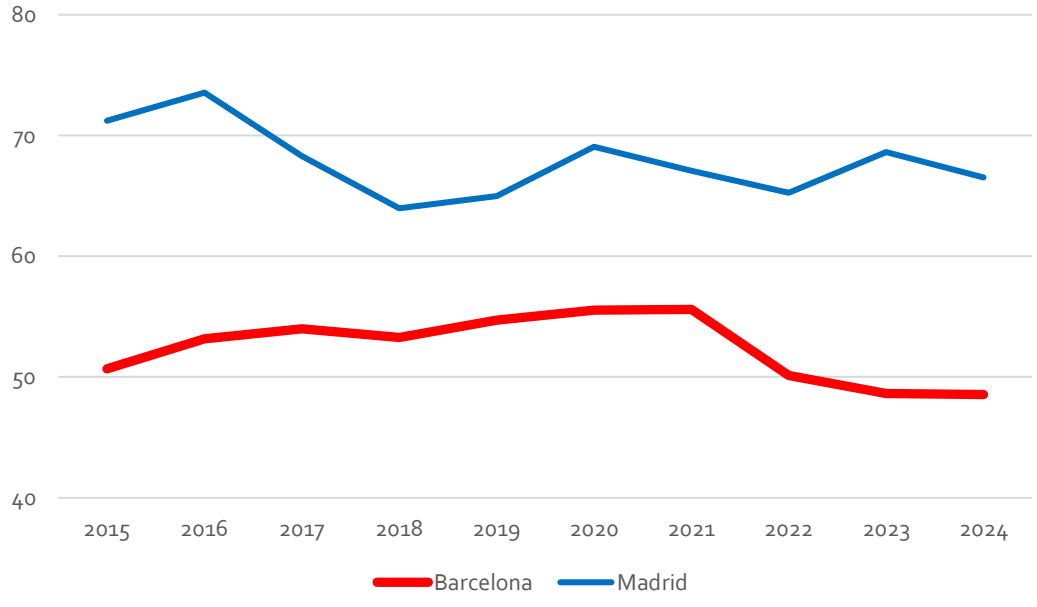
Chart 1. Metropolitan public transport passengers (buses and metro)1



Source: INE, Passenger Transport Statistics (annual figures in thousands).

Looking at the modal composition and focusing on Barcelona and Madrid, Chart 2 shows that buses account for a smaller share of use in the Barcelona area. This gap has widened since 2021, not so much because buses are used less, but because the entire increase shown in the preceding chart has been driven by the metro.Chart 2. Relative use of buses (compared with the metro, %)2

Chart 2. Relative use of buses (compared with the metro, %)2



Source: INE, Passenger Transport Statistics.

3.1.3. Brief description of the fare system

Before describing the fare system in greater detail, it is worth reflecting on the general dimensions against which fares may be assessed:

- Relationship to distance travelled. This is perhaps the most intuitive dimension. If transport takes a passenger from point A to point B, its cost is related to the distance between them, and it may seem reasonable for the fare to reflect that distance. This relationship is sometimes 'simplified' by proposing a price per kilometre, but this does little to simplify matters, since the number of possible combinations would generate millions of different prices. Furthermore, stations and their operation account for a substantial share of costs, so it would be a mistake simply to divide the system's total costs by kilometres travelled. The pollution, space use, noise and other external costs avoided are also greater on longer journeys. A manageable and reasonable way of incorporating distance into fares is to establish bands. For example, the Barcelona area might apply two or three prices depending on whether the distance between a journey's origin and destination, including interchanges, falls below or above a specified kilometre threshold. An alternative argument is that someone making a long journey already 'pays' more in travel time and contributes value when travelling to the centre, whether for employment, shopping, caring or leisure. Should that person pay more in money as well? This question leads to current debates about flat fares and even universal free travel as a particular form of flat fare, with free provision justified by the understanding of mobility as a social right comparable to services such as compulsory education or healthcare.[14]

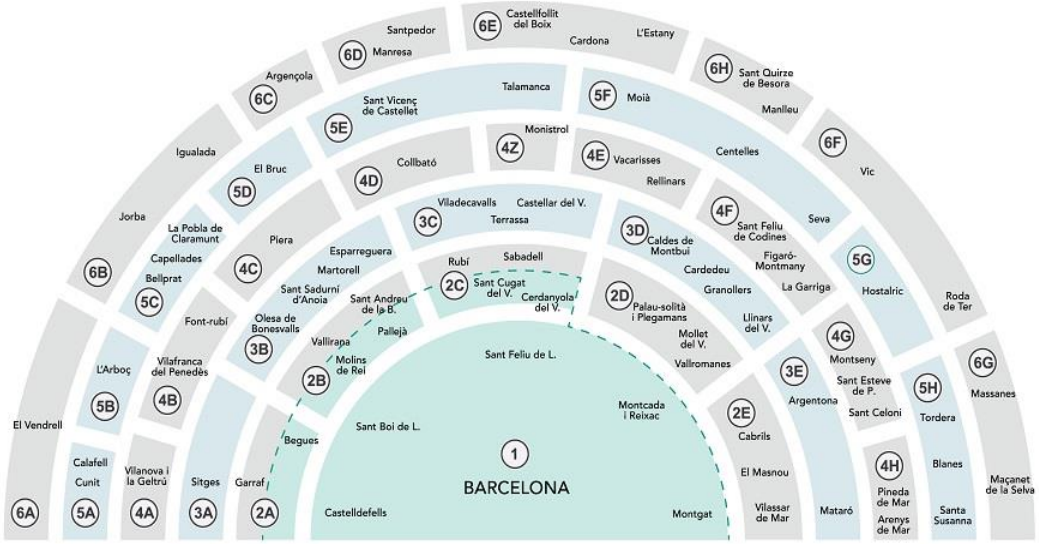
- Another common way to reflect distance without calculating it literally is zoning, which allows fares to vary with the area travelled through. Barcelona's zones are illustrated in Figure 5, with additional complexities: for example, a direct bus journey between neighbouring municipalities may count as a single-zone journey even when the municipalities lie in different zones. Distance-based and zonal approaches cannot correspond precisely. Two journeys of similar length can have different prices under either system: one might cross zone 1 from end to end, while another connects one of its edges to a different zone. Zonal systems reflect a centre-oriented approach, since distance and zone counts coincide when all journeys start or end in the centre. Originally, this meant that all tickets for outer zones were more expensive, on the assumption that passengers were travelling to the more distant centre. Once orbital journeys became an

[14]The expression 'flat fare' can be misleading unless the dimension in which the fare is flat is specified. T-usual zonal passes are flat fares in the sense that additional journeys during the pass's validity period do not increase the passenger's cost, but they must remain within the zones covered by that pass. Some sources, including Rubensson, Susilo and Cats (2020) and the Arthur D. Little Report (2024), use the term to describe the elimination of zones: in that case the fare is flat with respect to distance.

undeniable feature of mobility, zone numbers had to be distinguished from the number of zones covered by a ticket: a three-zone ticket, for example, allows travel across three zones, which need not mean travelling from zone 3 to zone 1. Mobility around the Barcelona area has always been more orbital than in strongly radial systems such as Madrid's. This distinction between a zone's number and the number of zones on a ticket is therefore more natural in Barcelona, and the potential integration of transport throughout Catalonia would make it still more relevant.

– Figure 5. Zones of Barcelona's integrated fare system5[15]

Figure 5. Zones of Barcelona's integrated fare system5



Llistat de municipis inclosos en la tarifa metropolitana

Badalona	1	El Prat de Llobregat	1	Badia del Vallès	2C	La Palma de Cervelló	2B
Barcelona	1	Sant Adrià de Besòs	1	Barberà del Vallès	2C	El Papiol	2B
Castelldefels	1	Sant Boi de Llobregat	1	Begues	2A	Ripollet	2C
Cornellà de Llobregat	1	Sant Feliu de Llobregat	1	Castellbisbal	2B	Sant Andreu de la Barca	2B
Esplugues de Llobregat	1	Sant Joan Despí	1	Cerdanyola del Vallès	2C	Sant Climent de Llobregat	2B
Gavà	1	Sant Just Desvern	1	Cervelló	2B	Sant Cugat del Vallès	2C
L'Hospitalet de Llobregat	1	Santa Coloma de Gramenet	1	Corbera de Llobregat	2B	Sant Vicenç dels Horts	2B
Montcada i Reixac	1	Tiana	1	Molins de Rei	2B	Santa Coloma de Cervelló	2B
Montgat	1	Viladecans	1	Pallejà	2B	Torrelles de Llobregat	2B

When considering the map in Figure 5 and the fare structure, account should also be taken of the population and surface area of each zone. Zone 4Z, for example, contains only Monistrol, a town of 3,200 inhabitants and less than 12 km², meaning that residents must leave their zone for virtually any journey beyond the town. Similar cases are Collbató (4D: 4,828 inhabitants and 18 km²) and El Bruc (5D: 2,268 inhabitants and 47

[15]This may be explained partly by the fact that the centre of a coastal city such as Barcelona is not at the geographical centre of its metropolitan area. It also reflects the strong presence of central government and other employers in central Madrid, and the historically more decentralised pattern of economic activity in Barcelona province, including major industrial centres. Madrid, like other large cities, is increasingly decentralising some journeys associated, for example, with financial services.

km²). As noted, multijourney tickets allow single-zone travel between neighbouring municipalities, but this is hardly a comprehensive solution given the number and size of municipalities. Thirty-six zones seem excessive, particularly when their sizes vary so widely: zone 1 contains the whole of Barcelona and 17 other large municipalities in its inner ring. As we shall see, some zones contribute only a very small share of system revenue.Figure 5. Zones of Barcelona's integrated fare system5

- Relationship to intensity of use. This is the most common form of what economists call price discrimination. Frequent users pay less per journey, generally because substantial fixed costs make it desirable to retain regular travellers, whose choices concern their overall daily mobility rather than each individual trip. Compared with a single-journey ticket, intensity of use can be reflected in several ways. The most common is the monthly flat fare discussed above, but passes allowing a limited number of journeys, with or without an expiry period, and unlimited-use tickets for a few days also differentiate prices according to frequency of use.

- Relationship to individual personal characteristics. Partial or full concessions are commonly available for young and older people, unemployed people and people with disabilities.

- Relationship to group membership. Discounts for large and single-parent families fall into this category, as do companion tickets, although general discounts for groups without family ties are also common. An important distinction is that membership of a group entitled to a concession, such as a family, may allow several cards to be issued for members travelling separately, whereas tickets for other groups provide a discount only when the group travels together. In Barcelona, for example, there is a 70-journey ticket (T-grup) and an eight-journey ticket (T-familiar), both offering broadly similar discounts compared with the single ticket.

- Relationship to time of use. At certain times, public transport becomes congested, and each additional passenger imposes a negative externality on others. This does not occur to the same extent at off-peak times, when an additional journey may impose little extra cost on other passengers or the operator. System capacity is determined by peak demand: numbers of trains and buses, station sizes and staffing levels must accommodate those periods. If a system needed to serve additional passengers exclusively off peak, it could do so at almost no additional cost; even under a cost-based approach, there would therefore be little reason for such passengers to contribute an average share of total costs. This might suggest higher peak-period fares, a position also supported by classical optimal taxation theory (less elastic demand makes a surcharge less distortionary). Yet there are obvious problems of social justice: people travelling at peak times endure considerable inconvenience, suggesting that they must travel then for work. This makes such differentiation politically difficult. Its theoretical basis is also debatable: if private transport is the alternative, its negative externalities are likewise greater at peak times, which could justify a larger subsidy for public transport at precisely

those times. Society might reasonably ask whether everyone needs to travel at the same hour, but the transport system itself has limited power to change this.[16]

- A variation on this issue is the time window built into certain fares, under which travel on several modes counts as a single journey, through permitted interchanges, only when validations occur within a set interval. In Barcelona, interchanges are free within 75 minutes of the first validation for a one-zone ticket, with an extra 15 minutes for each additional zone. This is irrelevant for unlimited passes and applies only to limited-journey products such as T-familiar, T-casual and T-grup.

- A related factor, perhaps better understood as a separate dimension, is the purpose of travel. Journeys for work as opposed to leisure are associated with travel time, but the two distinctions are not identical: not all peak-hour journeys are work-related, and not all weekend journeys are for leisure. There is at least one other major category of travel purpose: care, in the sense discussed in our theoretical framework. Care may be more or less professionalised and produces distinct travel patterns and potentially different fares, as noted in relation to companions.

- Relationship to transport mode. Even within an integrated system, fares may differ by mode, whether because of operating costs or other considerations, such as the association of particular modes with occasional passengers or lower satisfaction levels that make equal charges appear unfair. Barcelona's integrated system applies specific fares to modes particularly associated with tourism, including funiculars and the airport metro line.

With these general considerations in mind, let us return to Barcelona. Table 1 presents the fares in force in March 2025, including all applicable reductions. It allows us to revisit the dimensions of fare-setting discussed above:Table 1. Fares in force from January 2025, after application of reductions1

- With regard to distance, zone 1 is very large: it includes the whole municipality of Barcelona and eleven other municipalities in its inner ring. All travel within this area, which, as we shall see, accounts for most journeys, already has a flat distance-based fare. This makes the increases for other zones perhaps all the more striking, although the price for six zones is generally less than three times that for one zone. An exception is the T-casual, whose six-zone price exceeds the one-zone price by a factor of four.

[16]See, for example, Gwilliam (2002) or Eriksson, Hiselius and Lidestam (2023). Hörcher and Tirachini (2021) provide a review of public transport economics that proposes discounts for off-peak travel.

Table 1. Fares in force from January 2025, after application of reductions1

Zones	1	2	3	4	5	6
TMB single ticket	2,65 (excluding airport)					
T-dia	11,20	17,10	21,50	24,00	26,85	30,05
T-casual (10 journeys)	12,55	24,65	33,55	43,15	49,55	52,70
T-usual (30 days)	22	29,65	41,60	50,90	58,35	62,55
T-usual single-parent/large family (standard category)	17,60	23,70	33,25	40,70	46,75	50,05
T-usual single-parent/large family (special category)	11	14,80	20,80	25,45	29,25	31,30
T-usual unemployment concession	5,50					
T-jove (quarterly)	44,00					
T-jove single-parent/large family (standard category)	35,20					
T-jove single-parent/large family (special category)	22					
T-70/90 single-parent/large family (standard category)	34,95	69	93,90	120,70	138,70	147,45
T-70/90 single-parent/large family (special category)	21,85	43,15	58,70	75,40	86,70	92,15
T-grup (70 journeys, monthly, time-limited)	87,35	172,45	234,75	301,70	346,75	368,70
T-familiar (8 journeys, 30 days)	10,70	20,30	28,80	37,35	42,70	44,85
T-verda	Free for 3 years upon scrapping a car					
Free AMB T-rosa	People with disabilities and low-income residents over 60					
T-4 (10 journeys)	2,25 (with T-rosa, subject to income criteria)					
T-metropolitana	Replaces T-rosa cards and the accompanying-person pass					
T-16	Free for ages 4–16					
Rodalies	Season pass, free					

FM: single-parent families; FN: large families; special category: five or more children.
Time validity: tickets valid for 1 hour 15 minutes in zone 1, plus 15 minutes per additional zone.
70/90 denotes a family-group ticket allowing 70 journeys over 90 days, subject to the interchange time limit.

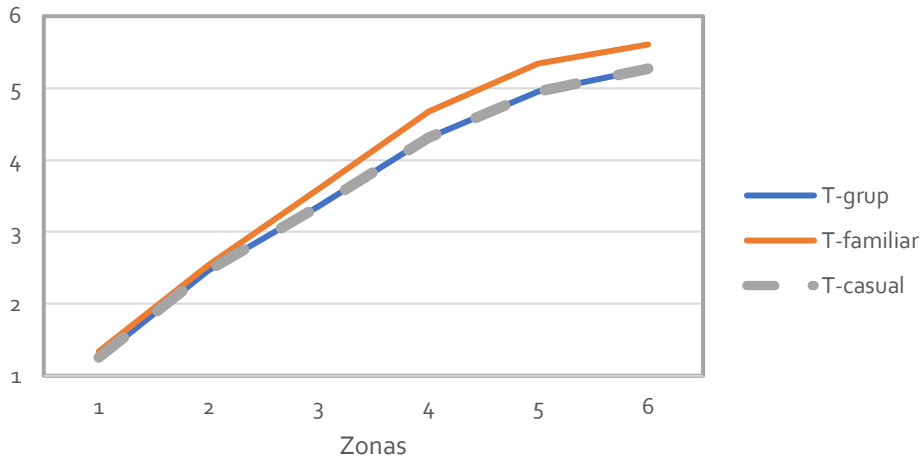
- Frequent use is rewarded in two ways: ten-journey passes (T-casual) and passes allowing unlimited travel for one month (T-usual); the T-dia offers unlimited journeys within one day. Depending on the zones covered, a T-casual costs between 60% and 80% of a T-usual, suggesting that a monthly flat fare becomes attractive at approximately 12–16 validations.

- Turning to personal characteristics, it is striking that free travel for younger passengers ends at 16, while a T-jove costs around €15 per month, twice the Madrid price (€8 up to age 26). In other cities, such as Valencia, travel is free up to age 31. We shall return to the fare debate, but it is also worth noting differences in concessions for older passengers: in

Barcelona, the subsidy depends on income, whereas in Madrid, for example, it does not, although eligibility begins only at age 65.[17][18][19]

By definition, it is impossible to calculate the price per journey for unlimited passes, but such a calculation is informative for the other products. Chart 3 shows the unit price of three different passes by number of zones. The price is identical for the ten individual journeys of the T-casual and the 70 group journeys of the T-grup. The intermediate option, T-familiar, is slightly more expensive: despite its name, it does not require a family relationship, and it offers both a shareable card and a lower minimum number of journeys. Yet the price differences are so small (3% to 8.2%, depending on the zones) that it might make sense to merge all three products into a single intermediate ticket when simplifying the fare structure, for example a 20/30 pass allowing 20 journeys over 30 days and usable by several people. Chart 3. Cost per journey by pass type and number of zones3

Chart 3. Cost per journey by pass type and number of zones3



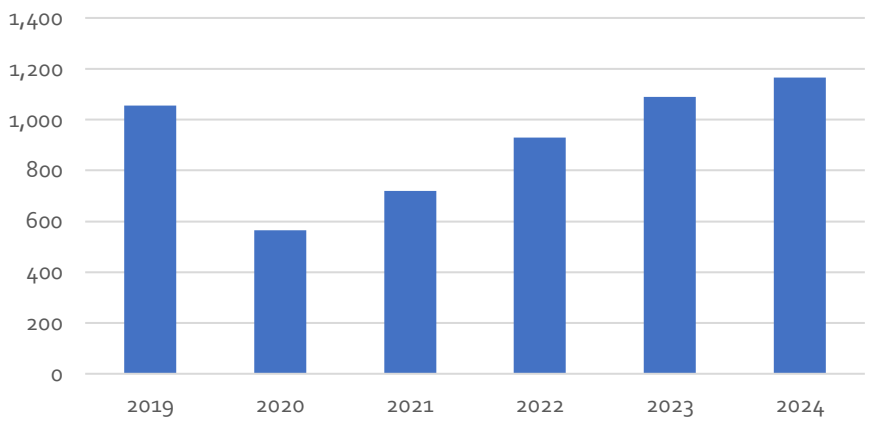
In the preceding discussion, we considered the economic concept of price discrimination as a possible basis for analysing fares. With public transport, however, we must begin from the premise that service provision should not follow a private profit-maximising logic, nor must fares cover costs. Across this system, public subsidies account for more than 60% of revenue. We must therefore ask which objectives the fare structure as a whole should pursue, what justifies such substantial subsidies, and how the objectives of the society financing them should shape the fare system. Before continuing the analysis, we examine the basic elements of the accounts.

3.1.4. Operators' accounts: costs and revenue

[17] https://www.comunidad.madrid/servicios/transporte/abono-joven-todo-madrid-tu-alcance
[18] https://www.gva.es/es/inicio/procedimientos?idproc=22936.
[19] https://www.crtm.es/billetes-y-tarifas/billetes-y-abonos/abono-transportes/abono-plus65/

The starting point for analysing the accounts of the Barcelona area's integrated transport system (STI) is the extent of passenger use: the number of journeys it enables. Chart 4 shows that the total exceeds one billion journeys annually, that pre-pandemic levels were recovered by 2023, and that in 2024 the total was 10.25% above 2019, consistent with the INE figures discussed above. The annual growth shown in the chart reflects three overlapping factors: underlying growth; recovery from the pandemic, which reduced validations by 46%; and the response to the fare reductions established under Royal Decree-Law 11/2022. These factors make extrapolation difficult: growth of 28–29% in 2021–22 was driven by recovery, while much of the 7% increase in 2024 reflects lower fares.Chart 4. Validations in the integrated transport system (millions per year)4

Chart 4. Validations in the integrated transport system (millions per year)4



Source: ATM.

The monthly pattern can be examined in more detail. As in Chart 5, we can also plot the value of ticket sales in euros to show how increased subsidies reduced average direct revenue per validation from almost 70 cents in 2019 to 40 cents in 2024. Subsidies played a central role in this decline, both directly and indirectly. The direct effect is that part of the ticket price is no longer paid by passengers at the point of sale but by the national government and the Generalitat. The indirect effect arises because subsidies vary across ticket types and modes, changing relative prices between ways of travelling. For example, subsidies have made regular Rodalies use free and appear to have encouraged a shift towards that service. Even if subsidy rates were identical across modes, differences between ticket products would still prompt passengers to switch products. Without examining the zones in detail, a traveller who makes twenty validations per month would previously have found it advantageous to buy two T-casual passes, whereas now a T-usual would be preferable.Chart 5. ATM integrated travel passes (monthly data)5[20]

Chart 5. ATM integrated travel passes (monthly data)5

[20]This increase originated in Royal Decree-Law 11/2022, which made Renfe season tickets free and provided central-government funding for 30% of a reduction of at least 50% in the prices of various metropolitan public transport tickets (the remainder being financed by other public authorities). In Barcelona, the products benefiting from this reduction are T-usual, T-jove, T-4 and T70-90. At the time of writing, the subsidies had been extended until 30 June 2025.

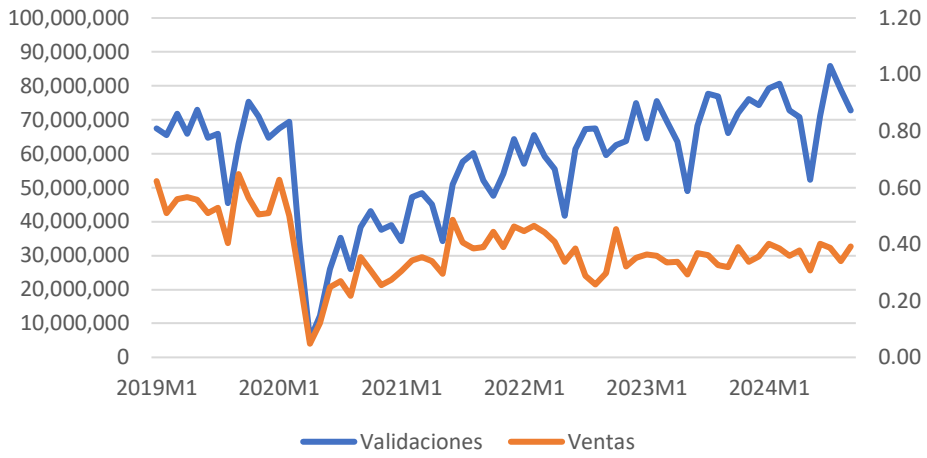
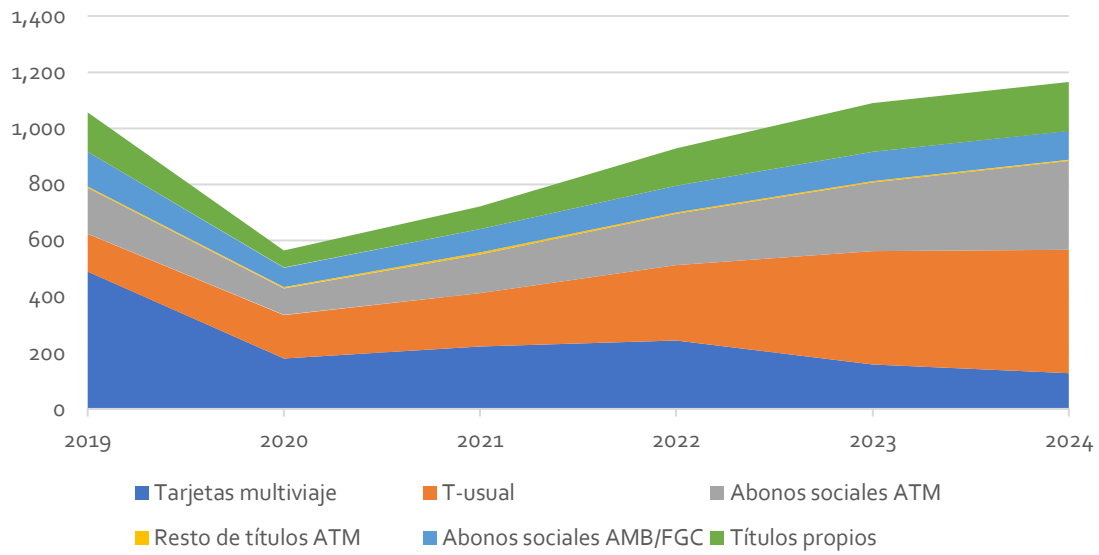


Chart 6 breaks this evolution down by ticket type. Before the pandemic, multijourney passes (T-familiar, T70-90 and especially T-casual) dominated the system, accounting for almost half of all use. They have now been overtaken by monthly flat-fare passes: ATM's T-usual and its discounted variants for young people (T-jove), large and single-parent families, the free T-16 and other concessions together account for 65% of all validations. The explanation for this shift lies in the discounts. It is unfortunate that sex-disaggregated data on ticket use are unavailable, but the distribution of use suggests that these concessions may have gender-differentiated effects.Chart 6. Trends in annual validations by ticket type6[21]

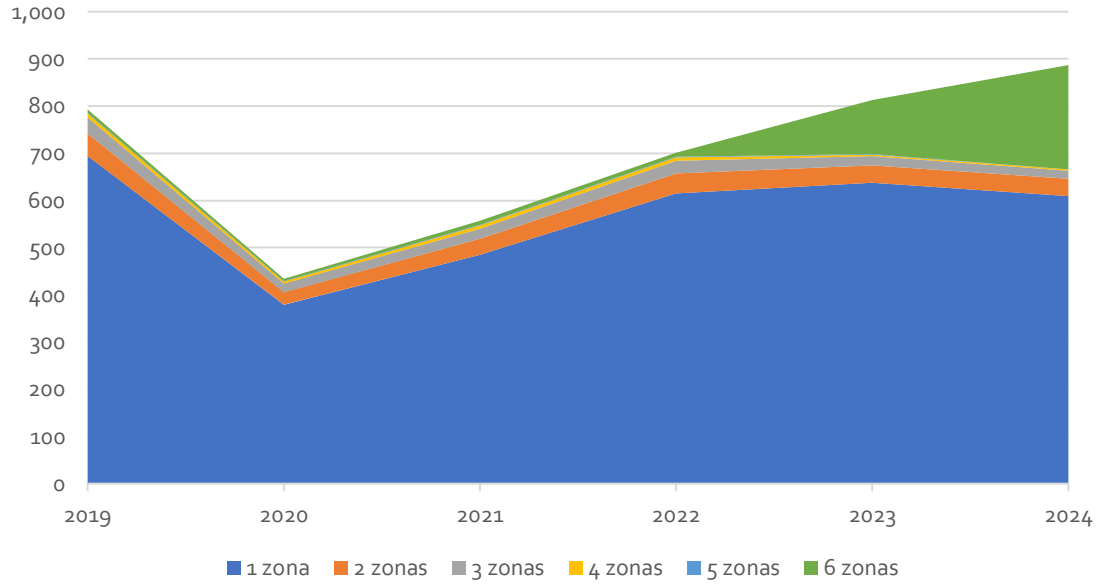
Chart 6. Trends in annual validations by ticket type6

[21]The impact of discounts in Barcelona is analysed in Checa, Bach and Perez (2024).



If we focus on ATM tickets (the first four categories in the preceding chart, which accounted for around 75% of all validated journeys in each of the six years), we can examine how their use has changed. Chart 7 shows the overwhelming dominance of one-zone tickets. In the past two years, however, validations using tickets covering all six zones have risen sharply, reaching almost 25% of the total in 2024. Tickets covering an intermediate number of zones have remained comparatively marginal, with their share tending to fall as the number of zones increases. What explains this change?Chart 7. Annual ATM ticket validations by number of zones7

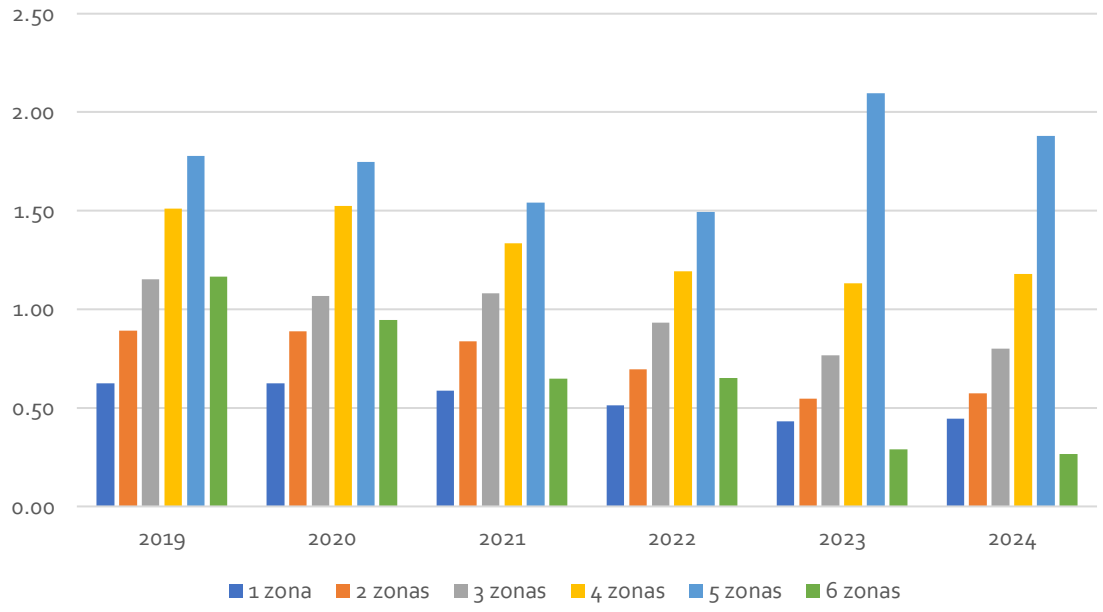
Chart 7. Annual ATM ticket validations by number of zones7



If we consider ticket sales revenue per validation, shown in Chart 8, a broadly increasing scale is evident in 2019: tickets covering more zones generally generated greater expenditure per journey. The exception was tickets valid across all zones, perhaps because longer trips were made

on Rodalies, which costs less than the metro. This pattern has changed markedly in the past two years. Five-zone journeys have become relatively more expensive (and even more expensive in absolute terms in 2023, contrary to the general trend), while six-zone journeys have become so much cheaper that, whereas in 2019 their cost was comparable to a three-zone journey, in 2024 they cost almost half as much as a one-zone journey (27 cents versus 45 cents). Why? Again, free Rodalies travel is a plausible explanation. In any event, zonal price structures raise important questions about fare design. For some passes (T-grup, T-familiar and T-casual), the increase from one zone to two is nearly 100%, while for others (T-usual and T-dia) it is below 50%. The additional cost of service provision is the same, and no clear justification for this discrepancy is apparent.Chart 8. Average revenue per validation by number of zones8

Chart 8. Average revenue per validation by number of zones8



The preceding charts are based on data provided by the ATM, but additional sources, particularly the companies operating the services, are also useful. FGC, for example, publishes disaggregated cost information on its transparency portal, as reproduced in Table 2. These figures show that the cost per passenger fell between 2022 and 2023 even though total costs rose, because passenger numbers increased more rapidly.Table 2. Cost per passenger transported on Barcelona's metropolitan railway2

Table 2. Cost per passenger transported on Barcelona's metropolitan railway2

Item	2022	2023	Difference	%
Operating expenditure				
Supplies	3,3	2,9	-0,4	-12,12

Energy	13,5	5,6	-7,9	-58,52
Staff	58,6	54,6	-4	-6,83
External services	34,1	29	-5,1	-14,96
Change in provisions	0	0	0	
Total excluding train leasing and access charges	**109,5**	**92,1**	**-17,4**	**-15,89**
Taxes	0,1	0,1	0	0,00
Net depreciation	5,6	3,9	-1,7	-30,36
Impairment and gains/losses on disposal of fixed assets	-0,4	0	0,4	-100,00
Other results	0	0	0	
Total other expenditure	5,3	4	-1,3	-24,53
Financial expenditure	6,4	6,2	-0,2	-3,13
Total cost per passenger	**121,2**	**102,4**	**-18,8**	**-15,51**
Passengers (thousands)	**371.679**	**440.074**	**68.395**	**18,40**

Source: current euro cents. Link.Enlace

3.2. Reflections on the public transport fare structure

There is a substantial academic literature on optimal pricing, and emerging intelligent systems allow highly complex combinations of all the factors discussed above. Nevertheless, the effects of complexity itself on passengers and their travel choices deserve consideration. Private collective transport systems have developed dynamic pricing structures in which hardly any passengers on a given flight, for example, pay the same fare, despite travelling on the same route at the same time. Such differences depend less on observable personal characteristics of the kind mentioned above than on the purchasing process: how far in advance a ticket is booked, visits to the booking platform and similar factors. Railway companies operating Spanish high-speed services are adopting comparable pricing models, while vehicle-hire companies, with or without drivers, also use dynamic pricing algorithms. These systems seek to approximate passengers' willingness to pay and relate it to capacity constraints. Prices are therefore higher on journeys with predictably stronger and less price-elastic demand, and rise as departure approaches, particularly where actual demand exceeds the system's forecasts. If the complexity of the current fare structure already presents difficulties for many people, these dynamic systems appear to confront public transport with an apparent choice between predictability and efficiency. [22][23][24]

[22]Part of this literature can be found in Jansson, Holmgren and Ljungberg (2015) or Kaddoura, Kickhöfer, Neumann and Tirachini (2015).

[23]If demand falls short of the forecasts, the system could theoretically reduce prices as departure approaches, offering last-minute tickets, because the marginal cost of selling an otherwise empty seat appears negligible. Such sales strategies are becoming less common, however, because they encourage some travellers to postpone booking, effectively causing the company to compete with itself.

[24]See Andor et al. (2023) for an argument in favour of such public transport pricing systems. Daily routines, examined in Barcelona by García-Sierra et al. (2018), can be seen as incompatible with systems that change prices unexpectedly; similar findings have emerged from experiments such as those by Gagnepain et al. (2024).

Our objective is specific: to analyse the Barcelona metropolitan area's public transport fare structure from a gender perspective. We believe, however, that doing so requires us to consider briefly, first, the forces underlying urbanisation; secondly, the role of public transport in that process; thirdly, what these considerations imply for fare design; and finally, how a gender perspective can be integrated throughout.

We should begin by emphasising that urbanisation is one of the drivers of growth in the twenty-first century, powered by agglomeration economies. The spatial concentration of economic activity reduces the costs of economic and social interaction. Three processes can then reinforce one another: businesses (and individuals) face greater competitive pressure; they can exploit economies of scale more effectively; and they can specialise in particular stages of global value chains, capitalising on their comparative advantages. Proximity to customers, suppliers and competitors produces further advantages in the creation and diffusion of new ideas. International trade, a driver of growth since the seventeenth century, is based on similar dynamics, but cities are now their fullest expression. There is an extensive literature on the subject; we refer readers to Díaz-Lanchas (2021) for a short introduction and to Glaeser (2011) for a classic, accessible and more comprehensive account.[25]

A city's capacity for growth, and the well-being it generates for residents, plainly depend on its design, particularly mobility, which is essential to the interactions underpinning urban life. However commendable initiatives promoting active travel and proximity may be, such as the 15-minute city or the 30-minute metropolis, the choice between public and private transport will remain a fundamental structural feature of cities. Concentrating economic activity and employment in a small central area increases the need to travel, while enhancing the relative advantages of high-capacity public transport over private vehicles. The location and size of social-service facilities, including schools, health services and dependency-care centres, likewise generate different travel needs. Whether those needs are met by public or private transport depends not only on public transport availability and price but also on the characteristics of private vehicle use: restricted-access areas, parking provision and road capacity.

New York and Los Angeles are frequently contrasted to illustrate urban designs favouring public and private transport respectively, and their effects on street width, the transformation of streets into motorways in the latter case, population density, neighbourhoods and housing types. The pressing problem of access to housing in established metropolitan areas such as Barcelona brings the allocation of space in the centre and periphery into focus. Many possible responses necessarily, though not exclusively, involve strengthening public transport.

[25] In a small town, a shop may offer a limited selection of many types of goods, remain small and have little incentive to compete because it is the only shop. A large city, by contrast, can support a highly specialised consultancy—for instance in digital marketing—that is also large and must be good at what it does or competitors will displace it. These are three fundamental dimensions of productivity growth underpinning differences in per capita income and well-being.

The relationship between public transport and housing is complex. On the one hand, proximity to well-connected stations raises house prices, just as new lines increase prices across entire neighbourhoods. On the other, this results from demand shifting towards housing that has become more accessible, both in journey time relative to the past and in price relative to the city centre. Other factors, such as remote working and preferences for online shopping and leisure, extend the geographical range of housing demand linked to a city. These changes accelerated abruptly during the COVID-19 pandemic, but the pandemic merely intensified an earlier trend that had already altered the relationship between housing, transport and the city.[26][27]

Against this background, it may seem paradoxical that US cities can be ranked by the annual hours their drivers lose in traffic jams in an order closely resembling their population size. Does urban design not matter? It certainly does, but in a subtler way. The relevant indicator is not so much hours lost per driver as the proportion of residents who habitually drive, which is much lower in New York than in Los Angeles. Average journey times tend to be longer in larger cities and, in equilibrium, private-vehicle journey times rise accordingly; otherwise, travellers would change mode, putting pressure on infrastructure until an equilibrium similar to arbitrage was restored. Hence the familiar proposition that, in urban mobility, supply creates its own demand. An ideal new road that reduced the cost of a particular journey would attract travellers from other routes and modes, including public transport, until a degree of indifference between alternatives was re-established. We refer to costs rather than time because time is important but not the only component of private cost. If a new road, like Madrid's radial toll roads, charges users, congestion will be lower in equilibrium. Similarly, an increase in 'cheap' central parking spaces would mainly increase the traffic queuing to reach them. Urban mobility is a system in which people choose among alternatives, and changes in the private costs of any component affect decisions throughout the system.[28]

Adding the two main negative externalities of private vehicles—congestion of public space and pollution—suggests that urban transport policy should encourage journeys to shift from private vehicles to public transport. Yet improving public transport can also draw passengers away from sustainable journeys made on foot or by bicycle, as well as generate new mobility. For example, without affordable, high-quality public transport, someone may have to live near their workplace, whereas improved services enable them to choose a more distant home offering better value for money. Public transport allows the metropolitan area to expand. Subsidies can also be justified by their redistributive effects, but their underlying rationale lies in the relationship between urban quality of life, economic dynamism and public transport.

[26] Both effects can be observed, for example, in Wardrip (2011) or Liang, Currie, Koo and Reynolds (2025).
[27] For a long-term view of this relationship, see Ineco (2024), and for a review of the extensive literature, see Ilham et al. (2024).
[28] https://www.forbes.com/sites/jimgorzelany/2025/01/06/heres-where-drivers-suffer-the-nations-longest-traffic-jams-data-shows/

These considerations matter for understanding public transport's role in cities and, in turn, the principles that should inform fare structures. First, there is no reason to tie fares entirely to service-provision costs, because the city itself is the principal beneficiary of high-quality public transport. Nor is it reasonable to calculate the share of costs eligible for subsidy solely from the direct externalities avoided relative to car travel—congestion and pollution—because a city physically could not remain as it is if every public transport journey shifted to private vehicles: there would be insufficient space for the cars, and the city could never have expanded so far. During the 1960s and 1970s, Spain, like many other countries at different stages of development, tried to accommodate ever more traffic in large cities through multi-level interchanges and by pushing pedestrians out of streets and squares, surrendering space to vehicles and parking. It soon became apparent that, in addition to substantially impairing residents' quality of life, this placed an absolute constraint on urban growth: there was simply no room for more cars. It follows that financing public transport solely by internalising the costs of private traffic is also unreasonable. Urban tolls and parking charges have their own justification—there the aim is indeed to internalise costs and reduce harmful effects on urban life. But if good public transport, combined with such policies, succeeds in reducing car use, it would also undermine that source of funding: public transport would become a victim of its own success. The relevant question is who benefits from that success. The answer is the city itself, its residents as a whole and, more particularly, the value of land in its more central areas.

We have so far treated the quality of public transport as a determinant of both residents' quality of life and the city's potential for growth. Both can be brought together in the notion of an attractive city, in every sense: quality attracts economic activity, particularly higher-value-added activity associated with highly specialised workers who can choose where to live; it can also attract mass tourism that may undermine the city's appeal to its own residents. Our purpose is not to explore the decisions cities must take in these areas, but to emphasise that, insofar as public transport is indispensable to economic development in major urban centres, a substantial share of its financing should come from the benefits generated by that development.

The International Transport Forum's (2024) concept of a 'fair price' offers a useful framework. Its essential proposition is to establish principles for pricing—transparency, inclusion, flexibility and affordability. The Forum examines four cases (Bogotá, Los Angeles, Stockholm and Jakarta), but does not consider what proportion of total costs should be covered by fares. That may be the first question to ask, before considering how the burden is distributed among passengers. [29]

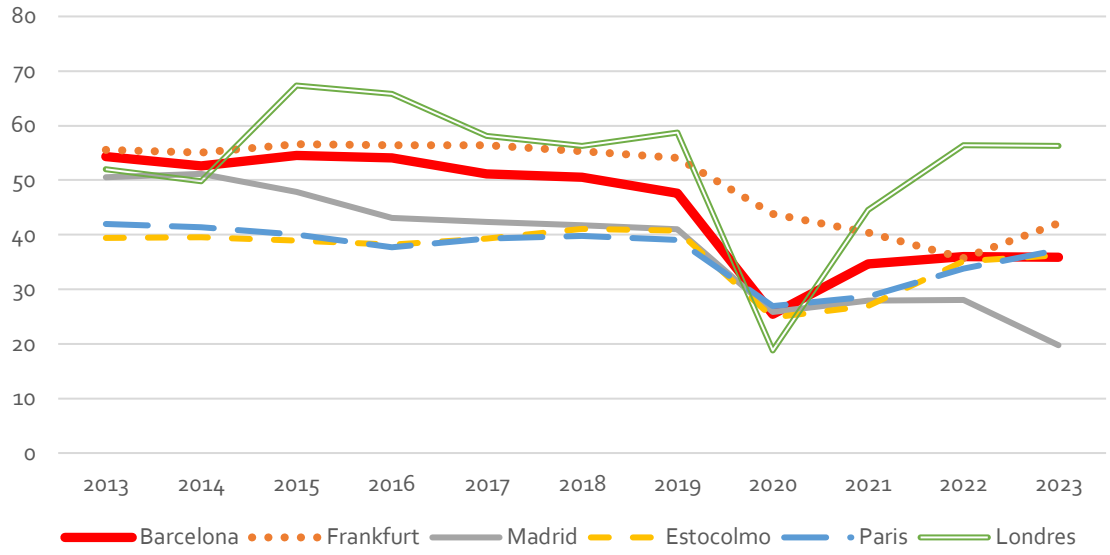
Kustar et al. (2024) examine cities around the world and find that the proportion of public transport operating costs covered by passengers—the farebox recovery ratio—varies enormously, from almost all costs in Rio de Janeiro to virtually none in Houston. The ratio fell during the pandemic, especially in developed countries. Across the 26 cities in their sample, the simple average is 32%, very close to Barcelona's current figure, though this should not be interpreted as a recommendation. The experiences of other cities are nevertheless worth examining.

[29] For a general, albeit somewhat dated, overview of public transport financing, see World Bank (2002).

3.2.1. Comparison with fares in other metropolitan areas

The starting point must be the proportion of total costs recovered through ticket sales. Otherwise, it is easy to compare cheaper and dearer fares across cities without placing those prices in context. The comparison should also cover the years before the pandemic, since countries subsequently introduced additional subsidies intended to be temporary, which distort the most recent figures. Chart 9 shows the trend for the largest transport systems among those included in the EMTA data.Chart 9. Ticket sales revenue (% of total costs)9

Chart 9. Ticket sales revenue (% of total costs)9



Source: authors' calculations using EMTA data.

Alongside Frankfurt, Stockholm and Paris, Barcelona falls within a narrow band of farebox cost recovery, between 35% and 42%. Stockholm and Paris have returned to their pre-pandemic levels, whereas Barcelona and Frankfurt remain about 15 percentage points below them. London and Madrid stand out in this comparison, the former well above and the latter well below these levels of unsubsidised revenue. In London's case, this was already the position before the pandemic, and previous levels have been restored. In Madrid, free Cercanías suburban rail travel has reduced the proportion by 30 percentage points.

For comparisons of fare structures in other metropolitan areas with Barcelona, the excellent work undertaken by Institut Cerdà (2019 and subsequent updates) and the study led by Riol Jurado (2016) deserve particular mention.

3.3. Fares, people and the (lack of a) gender perspective

Current fare structures place the individual at their centre, although sometimes rather implicitly. We are not referring here to discounts based on personal characteristics—young people, older

people, unemployed people, large families or single-parent families, under often complex and somewhat arbitrary rules—but to the mainstay of virtually every system: discounts linked to frequency of use. To understand this widespread practice, we must return to price elasticities in a framework where operators use price discrimination to improve some combination of profits and overall welfare. Regular passengers make a collective decision about a series of journeys, for instance whether and how to commute to work, and are sensitive to the price of that series: hence the rationale for selling journeys as a bundle. Occasional passengers, by contrast, decide separately for each trip. The fact that some occasional passengers live outside the jurisdiction subsidising the system is often an additional argument for charging them more, although special one-day or multi-day passes are also provided for such users.

The redistributive effect must also be considered. Urban public transport passengers tend to have lower incomes than the population average, so public co-financing is likely to have a net inequality-reducing effect. The redistributive effects of a reform can be assessed ex post using the vast amount of user data generated by modern systems, as Wang, Liu and Corcoran (2021) do for Australia. It is important to note that equity effects are often absent from cost–benefit analysis, although recent studies try to combine them. Litman (2025) provides a useful reference on the equity implications of transport policy. Strikingly, the term 'female' occurs only once in the article, in a parenthetical list and in Table 9 of potentially lower-income groups. This approach appears to give almost exclusive priority to income, sometimes even in ways that work against equality: time saved by private-vehicle passengers may be valued more highly than time saved by public transport passengers because the former have higher average productivity or wages. AIReF (2020), for example, provides in Table 6.10 (p. 94) the value of each hour saved by transport mode. It also assigns values to working and non-working time that differ by a factor of two, and by more than three for short-distance buses. This raises the question of how reproductive work, including care, is valued, as discussed in the theoretical framework. Bechauf (2023) examines a particular case in India, but focuses more on appraising investment than on fare design.

Understanding fares as a policy instrument, as discussed in the preceding section, provides grounds for fare structures adapted to carers' needs, including targeted discounts or full or partial exemptions. Once the social and redistributive functions of public transport are recognised, journeys made to provide care and sustain everyday life cannot and should not incur a financial penalty. Care mobility is neither 'residual' nor 'ancillary': it is essential to society's functioning and should be incorporated into fare design through appropriate instruments that safeguard accessibility, continuity and dignity. This framework therefore offers a normative and theoretical justification for requiring care-sensitive fare policy, explicitly recognising care mobility as a right and as a structural dimension of collective well-being. Yet public transport fares do not reflect these differences and may consequently generate economic inequalities.

In other words, Barcelona City Council, the metropolitan transport authorities and the AMB do not have information on how the different mobility patterns of women and men affect the amount passengers spend on public transport. It is unknown whether these patterns impose different financial burdens on women and men in the Barcelona metropolitan area simply because women more often undertake unpaid reproductive work, in addition to paid work where applicable, and therefore make complex journeys, while men more often undertake paid

employment involving linear journeys. This gap in knowledge must be addressed. If women pay more because of the double or triple workload assigned to them by their social role, this would be intrinsically unfair, damaging to their well-being and liable to widen economic gaps between women and men, deepen the feminisation of poverty and compound the gender pay gap for those combining employment with care. It could even raise questions of institutional economic violence. That may sound an excessive characterisation; however, fares are set or regulated by public authorities. If those authorities knowingly maintain a structure that causes women to pay more solely because of their socially assigned care role, such deliberate gender blindness could be characterised as institutional gender-based violence.

Although the literature on mobility and gender has scarcely examined whether public transport fares reflect different gendered mobility patterns, or whether fare structures and eligibility rules generate different financial costs for different kinds of mobility, some studies do show that current fare systems tend to favour passengers making regular, predictable, point-to-point journeys over those making multiple or short trips, including many women with care responsibilities (Zucchini, 2023; Tarnanen, 2022). In this sense, fare structures may become a mechanism of indirect discrimination by failing to recognise care-related mobility as legitimate and relevant to public policy design (FFPT-GURB, 2023).

The first academic platform to include the concept was the Gendered Innovations in Science, Health & Medicine, Engineering and Environment website. This initiative of Stanford University and the European Commission began in 2009. Between 2011 and 2013, the Commission funded an expert group named 'Innovation through Gender/Gendered Innovations' to develop the gender dimension of research and innovation in the European Union. The collaboration subsequently expanded, with considerable impact and reach. The initiative has been a major source for mainstreaming gender research in Europe.30

'The goal of the Gendered Innovations project is to provide scientists and engineers with practical methods for sex and gender analysis. To match the global reach of science and technology, sex and gender analysis methods have been developed through international collaborations. Gendered Innovations involves experts from the United States, the 28 EU Member States and Canada. We have now expanded to Asia.' (Gendered Innovations, 2011; translated from the Spanish text of the report).

The first edition of Gendered Innovations included a case study on the mobility of care, available in its digital PDF version. The second edition of the platform, updated in 2020, incorporated the concept of 'Mobility of Care' into the Smart Mobility case study, which also addresses co-creation and participatory research methods. The study argues that: 'Mobility patterns tend to differ by gender in where, when and why people travel. Transport planning—for both modes and

[30]European Commission and Stanford University (2011–2013), Gendered Innovations in Science, Health & Medicine, Engineering and Environment.
https://genderedinnovations.stanford.edu/https://genderedinnovations.stanford.edu/

infrastructure—often fails to take account of the needs of diverse users. For example, safety concerns may constrain mobility for some women, non-binary people and older people' (Schiebinger et al., 2011; translated from the Spanish text of the report). The platform explains the origins of the concept through supporting evidence and charts, including one showing the percentage of care-related trips concealed within other travel-purpose categories. That chart appears earlier in this report as Illustration 1.31

The corresponding policy response is to identify the problem and bring relevant services closer to those who provide care. Fernández Gallego (2023) notes that the high cost of travelling in terms of time, money, fatigue and stress limits the mobility of women carers and obstructs access not only to leisure and self-care but also to education, training and employment, which are essential to social recognition, political influence, autonomy and the right to the city. As noted earlier, care responsibilities often produce trip-chaining patterns. The policy aim is to create a city of proximity for carers, conceptualised as a 'caring city', providing time and services to those overburdened by care work. By May 2024, Bogotá had 23 operational care blocks (Alcaldía Mayor de Bogotá, 2021; accessed May 2024).

Using German mobility panel data, Vance and Peistrup (2011) show that women are more likely to hold a public transport season ticket, but also face structural constraints—notably the number of children and the distance to work—that shape their travel decisions. This evidence reinforces the case for rethinking fare policy in terms of equity rather than efficiency alone.

At local level, however, while reports such as Institut Metròpoli (IM, 2023) examine fare reductions in Barcelona's metropolitan public transport system, highlighting the social benefits of partially free services and the limits of such policies unless accompanied by structural changes to service provision and system governance, they do not address gender differences.

This situation gives rise to several questions and research hypotheses. We need to examine mobility patterns within the ATM's area of responsibility; whether the zone- and time-based charging system operated through T-mobilitat adversely affects women; whether the range of available tickets reflects the diversity of family arrangements; whether exemptions and fare reductions adequately recognise care work; and other related issues.

The present research examines the gender impact of the ATM and AMB fare systems in the Barcelona metropolitan area, assessing whether the current arrangements are fair and appropriate for reducing these inequalities.

The gender perspective itself warrants separate consideration. The question is not so much whether fares should differ by sex as how gendered differences in mobility, in their many forms, affect the prices that passengers ultimately pay. This perspective does not, of course, displace consideration of other personal circumstances, including vulnerability and ability to pay. Havet,

[31]Schiebinger and Klinge (2013). Gendered Innovations: How Gender Analysis Contributes to Research. Gendered Innovations – Innovation through Gender. European Commission.

Bayart and Bonnel (2021) find gender-specific mobility patterns even when employment status and access to a private vehicle are held constant. Gender considerations are incorporated into the Generalitat de Catalunya's strategic mobility plans. The question is which of these differences are attributable to fare structures. In Barcelona, Pérez Sans et al. (2024) review direct user-data sources and find that sex is either not recorded or not made available in most cases, often on data-protection grounds—a barrier we also encountered. The Spanish Transport and Logistics Observatory (OTLE, 2024) covers a much wider geographical and conceptual scope, including employment in the sector, but provides little information on the effects of different fare structures.[32][33][34]

The preceding analysis may suggest that Barcelona would benefit from flatter fare structures, both in relation to frequency of use and to distance travelled and transport modes used. Studies such as Matas, Raymond and Ruiz (2020) estimate ticket cost per kilometre and find that it is much lower for tickets covering more zones. In our view, one aspect of current fares that merits reconsideration is the relationship between frequency-of-use discounts and zones. If someone holding a T-usual pass for a specified number of zones makes an additional journey within those zones, the marginal cost is zero. But if that person needs to travel outside the zones covered, they are treated as a new passenger and must buy the appropriate single ticket. It would be logical for discounts earned through frequent use to apply to the relationship between the person and the transport system, rather than to the relationship between the person and a zone, as at present. The gender implications are clear: women's mobility is often more complex because it combines paid employment with care and family responsibilities. These differences emerge in the qualitative analysis in later chapters, but are also visible in statistical evidence such as the EMEF.

The survey has already been analysed in considerable detail, particularly by the Mobility Observatory of Catalonia (OMC), which publishes its findings annually. The most recent results are described in OMC (2024). The next section focuses on the findings most relevant to our research question, with the detailed analysis presented in the Appendix.

[32]There are some examples, such as the free buses available only to women in India analysed by Chen et al. (2024). Conversely, the concept of a 'pink tax' has been applied to transport because safety concerns lead women to use taxis more frequently, as Kaufman, Polack and Campbell (2018) show for New York.
[33]Disregarding the recommendations of the EU Gendered Innovations initiative discussed in the previous chapter.
[34]Article 20 of Spain's Organic Law 3/2007 on effective equality between women and men requires public authorities to collect sex-disaggregated data. Compliance with Organic Law 3/2018 on Personal Data Protection and Guarantee of Digital Rights (LOPDGDD) can be achieved by releasing anonymised data and applying robust techniques to prevent re-identification. Properly anonymised data are not considered personal data and consequently fall outside data-protection rules.

3.4. Working-Day Mobility Survey (EMEF)

The EMEF does not contain fare data, but it describes gender-differentiated mobility patterns, their causes and consequences, in which fare structure may play an important part. The 2023 sample is substantial and reasonably balanced by sex: 4,957 men and 5,197 women.

We begin with the time each person devotes to daily travel. The median is five minutes higher for men, and the difference in the mean widens to nine minutes, largely because more women make very short active journeys, principally walking within their neighbourhoods. If we restrict the measure to daily travel time for people whose principal mode is public transport, including walking to and from stops, the difference in average time falls by half (89 minutes for women and 93 minutes for men). Nevertheless, considerably more women than men report public transport as their main mode (3,303 compared with 2,263). For example, among those spending more than two hours a day travelling primarily by public transport, there are 36.5% more women (423 compared with 310 men). The difference was even larger in previous survey waves. This matters because gender analysis often discusses differences between women and men in general, and many women do not identify with such descriptions when their own mobility resembles that of most men. Perhaps we should emphasise more clearly that a gender perspective is not necessarily about differences in averages, but also about groups at the extremes of a distribution for whom such a perspective is particularly necessary.

Two examples illustrate the point. As noted, women's journeys tend to be more complex. The EMEF reveals a small but intriguing indication of this: women are more common among those making an odd number of daily trips, suggesting patterns other than a simple outward-and-return journey. More significantly, among public transport users, women are particularly prevalent among those making four or five journeys each day.

We also examined the relationship between distance travelled and time spent, which points to lower 'efficiency' in women's mobility, although overall differences are not substantial. Again, the most revealing differences concern specific groups rather than averages. For example, one might expect people who identify walking or driving as their principal mode to report no other mode, since both are flexible. Yet 67% of women whose main mode in terms of time is walking also report using other modes, compared with only 16% of men.

The reasons for travelling show what we already knew: women are more prevalent among those making shopping and care-related journeys. We calculated average time and distance for women and men by journey purpose, using categories somewhat more aggregated than in the original data. The averages reveal few important differences, because what matters is the number of people undertaking each journey purpose: there are up to 40% more women than men travelling for care or medical appointments.

We modified the original spatial analysis because the Barcelonès county accounts for a very large share of movements. We therefore separated the municipality of Barcelona from the rest of the

county, producing 13 zones. The high proportion of journeys within the same zone is striking and predominates everywhere except for journeys originating in the rest of Barcelonès, whose principal destination is Barcelona city. For the gender analysis, we used a simpler structure of six concentric rings and found that women travel more within each ring.

Satisfaction with public transport and its price again shows that the key difference is not the mean but the greater variance among women, who are more strongly represented at both the most favourable and the least favourable ends of the distribution. Notably, among four service-satisfaction indicators, price is the only one for which women report a significantly lower average rating than men, both among public transport users and non-users. In any case, price is not a particularly important reason for avoiding public transport: people do not use it because their journeys are short, because it does not serve their travel needs, or, especially among men, simply because they prefer a private vehicle.

One indirect way to assess the relationship between gender, fares and mobility is to examine the effect of the discounts discussed earlier. The 2023 EMEF includes several questions on fare reductions. For example, a slightly higher proportion of women than men report switching ticket type (14.9% compared with 11.8%). Women are also more numerous among those whose relationship with public transport has changed: 64 women compared with 40 men have started using it, while 619 women compared with 401 men use it more than before. These are not large absolute figures, but they indicate roughly 50% more responses among women both on the extensive margin (starting to use public transport) and on the intensive margin (using it more frequently). This clearly indicates a more 'intense' relationship between women and the fare system, which we seek to explore through qualitative analysis.

4. QUALITATIVE ANALYSIS I: IN-DEPTH INTERVIEWS (IDIs)

4.1. Methodological foundations

The methodology employed in this part of ITTG, BCN 2025 draws on grounded theory as developed by Corbin and Strauss (1990), which makes it possible to construct analytical categories inductively from interviewees' accounts. This choice enabled us to capture both areas of agreement and differences among the participating experts, while prioritising the contextual richness of their narratives. Qualitative analysis is not confined to sorting fragments into themes; rather, it seeks to generate interpretative knowledge from emerging patterns, tensions and configurations of meaning constructed in those accounts. This is the approach presented in this chapter and the next.

The need for a qualitative methodology arises not only from the complexity of the phenomenon under study—the relationships between sex/gender, care and public transport fares—but also from the institutional absence of sex-disaggregated data held by the bodies central to examining

fares from a gender perspective, notably the ATM and AMB. Despite established studies documenting differences between women's and men's mobility patterns (Sánchez de Madariaga, 2009; Jirón, 2010; Miralles-Guasch et al., 2016; Power, 2020; Kern, 2020), and despite both organisations issuing personalised travel products, no sex-disaggregated records are available in a form suitable for statistical analysis, as required under Article 20 of Law 3/2007 on effective equality between women and men, in relation to our research question.[35]

[35]In its Catalan version, Article 20 of Organic Law 3/2007 of 22 March on effective equality between women and men (Official State Gazette, no. 71, 23 March 2007), entitled 'Adaptation of statistics and studies', provides: 'In order to give effect to the provisions of this Law and ensure the effective integration of the gender perspective into the ordinary activities of public authorities, those authorities must, when preparing their studies and statistics: (a) systematically include the sex variable in the statistics, surveys and data collection they undertake; (b) establish and include new indicators in statistical operations to improve understanding of differences in the values, roles, situations, conditions, aspirations and needs of women and men, and how these are manifested and interact in the reality under analysis; (c) design and introduce the indicators and mechanisms necessary to understand the impact of other intersecting variables that generate situations of multiple discrimination in different areas of intervention; (d) use samples sufficiently large to allow the different variables to be analysed and cross-tabulated by sex; (e) analyse the available data so as to reveal the different situations, conditions, aspirations and needs of women and men in different areas of intervention; and (f) review and, where appropriate, adapt existing statistical definitions to help recognise and value women's work and prevent negative stereotyping of particular groups of women. Only exceptionally, and by means of a reasoned report approved by the competent authority, may non-compliance with any of the above obligations be justified.' (Translation from the Catalan version reproduced in the source report.)

In these circumstances, qualitative research proved not only the most appropriate strategy, but the only feasible one.

We therefore used two qualitative techniques: in-depth interviews (IDIs) and focus groups (FGs). For the interviews, we selected individuals with established experience of public transport and mobility policy, time use, transport financing and urban planning. The interviews enabled us to understand the complexity of transport in the Barcelona metropolitan area, the institutional rationales underpinning relevant policies and the interpretative frameworks that shape expert discourse on metropolitan fares. They also provided an opportunity to explore subjective perceptions of barriers to and facilitators of transport access, particularly in relation to care mobility and its implications for fares. Since almost all interviewees use public transport themselves, some of their responses reflect their experience as passengers. The women interviewees were participants 1, 2 and 5; two women participated jointly in interview 5 on behalf of the same organisation and are identified as E5.1 and E5.2 in the verbatim transcripts. The male interviewees were participants 3, 4 and 6. Interviewees were selected jointly by Barcelona City Council and the ITTG, BCN 2025 research team. The interview guide was designed exclusively by the research group. The interviews were semi-structured and the guide was adjusted slightly to each participant's profile.

Denzin and Lincoln (2018) highlight the analytical potential of IDIs for exploring rationales, positions and frames of reference concerning public issues. Maxwell (2013) emphasises that validity in qualitative research depends not on statistical representativeness, but on interpretative logic, reflexivity and the coherence of the analysis. Flick (2018) and Miles, Huberman and Saldaña (2014) provide systematic approaches to data reduction and relational analysis, which were also employed in this research.

The analytical richness of this qualitative approach made it possible to identify structural inequalities and patterns of exclusion in mobility that conventional quantitative analysis would not readily reveal. It also enabled an intersectional reading of fare-system impacts, taking account of passengers' income, age, disability, migration status and family circumstances.

It thus enabled us to identify not only existing inequalities in all their complexity, but also specific potential solutions that would remain invisible in a purely quantitative analysis.

Chapter 4, which examines the IDIs, is organised into three main thematic blocks corresponding to sections 2, 3 and 4 of the interview guide reproduced in the annexes: section 4.2, Mobility and specific needs; section 4.3, Fare system and care; and section 4.4, Recommendations for reform.

Block 1 of the interview guide, concerning each interviewee's role and experience in urban mobility, is included only in the interviewee profiles presented in the annexes.

The IDIs were first systematised individually and subsequently brought together through thematic triangulation, enabling the identification of recurring patterns, distinctive features and disagreements between participants. We began by identifying emerging themes and recurring or divergent meanings across the interviews. We then examined how participants conceptualised mobility and fare inequalities, structural features of the system and their gender implications. This made it possible to establish relationships between categories and concepts, connecting the normative, institutional and social dimensions of the issue. Throughout the process, we privileged the contextual and semantic depth of the narratives, attending to the nuances of situated experience and the plurality of interpretations.

Representative quotations were selected to illustrate each line of argument, taking care to preserve the expressive detail and diversity of the participants' voices. Differences between institutional, academic and technical profiles were also considered, including their influence on the proposals put forward. This comparative work allowed interpretations to be tested against contrasting perspectives.

Finally, each thematic block concludes with an interpretative synthesis that brings together the central meanings, situates their implications and draws out directions for improving the fare system from feminist, redistributive and territorial perspectives. Taken together, this strategy has generated a robust body of qualitative evidence, offering valuable analytical insights for rethinking the relationship between fares, mobility and care in structural, relational and transformative terms.

4.2. Mobility and specific needs

4.2.1. Key emerging themes

The IDIs concerning the 'Structure of the transport and mobility system in the Barcelona metropolitan area and the population's specific needs' (Block 2 of the interview guide) provide a nuanced understanding of the intersections between gender, class and urban mobility. One of the most consistent themes is the association between women's mobility and care, revealing the highly fragmented nature of their daily journeys. Alongside this comes the invisibility of that reality in mobility policies and conventional measurement instruments, including surveys.

For example, E1 observes: "If you can walk, which is the simplest, cheapest, most accessible and most economical option, then people walk. Women do it more."

E2 reinforces this perspective: "Women's mobility tends to reflect their dual presence, their dual responsibilities: responsibility for paid work, but also primary responsibility for domestic work and care."

E3 also offers a structural perspective: "When we look at the modal distribution of transport by income and gender, we see a strong correlation, with women's mobility and that of the most vulnerable groups being much more closely associated with particular forms of collective transport."

E6 adds a critical observation about transport infrastructure: "Infrastructure was designed around predominantly male travel patterns. Consequently, women's needs are not reflected in this kind of service infrastructure."

E4 observes: "Women's journeys are shorter, more varied and involve more intermediate stops."

Similarly, E5.1 argues that "Mobility systems still fail to incorporate a gender perspective into their planning and design."

Another theme raised by interviewees was income-based social fare policy. The interviews indicate that, although the metropolitan fare structure includes certain social concessions, these are perceived as insufficient, outdated or poorly publicised. The women interviewed—particularly participants 1, 2 and 5—agree that existing discounts are directed at traditional groups, such as older and unemployed people, while overlooking newer forms of vulnerability, including single mothers, people in precarious employment and low-income households with caring responsibilities.

> "Even €40. I think that is too much for incomes in Spain ... it should cost less than €40, perhaps €20, somewhere between €20 and €30." (E1)
> "We have a fantastic social fare system for older people. But circumstances have changed. There are now young people who are working and are just as badly off." (E2)

Interviewees also highlight administrative complexity and the limited publicity given to existing concessions, both of which restrict effective access:

> "There are fares for unemployed people, but applying for them involves so much paperwork that hardly anyone bothers." (E1)

The most frequent proposals call for a simple basic season ticket combined with progressive discounts according to income and family circumstances:

> "The most egalitarian approach would be a straightforward season-ticket system for everyone, with discounts of 50% or 100% depending on your financial circumstances." (E1)

Another major emerging theme concerns the fact that fare policy is based on data that do not capture differences between women and men or the burden of care. Participants explicitly state that mobility studies and official statistics systematically overlook variables such as sex, age and chained trips involving children or older people.

> "Who decides these fares? Because it is obvious they do not look at whether we are women or whether we care for others." (E1)

> "If they do not measure how many times we get on the bus, how can they design a fair fare?" (E2)

The criticism concerns both the invisibility of these experiences in data production and the practical consequences of this omission, which prevents fare policy from reflecting real travel patterns:

> "What is not measured does not exist. And if there are no data on our journeys, we will not be recognised in the fare structure." (E5.1)
>
> "Mobility studies never record whether the person travelling is a woman, whether she has children with her or whether she has made other trips beforehand." (E3)

From a technical perspective, E4 acknowledges this shortcoming and confirms that sex is not systematically recorded:

> "We do not have statistics tailored specifically to what you are asking for ... nobody has ever requested the sex variable. Our data do not have that box to tick." (E4)

Interviewees identify this gap in statistical production as a structural cause of the exclusion of women carers from fare design.

4.2.2. Patterns and trends identified in the responses

Among the patterns identified is the persistence of a mobility structure shaped by caring responsibilities. The women interviewed agree that their journeys are organised around the needs of others — children, older people and dependent relatives — rather than a single journey undertaken for paid work. This contrasts with the prevailing fare-system model, centred on linear, regular journeys associated with employment.

A second pattern is the gap between institutional mobility policies and the lived experiences of passengers. Planning does not adequately recognise the multiplicity of linked journeys or the need for timetable flexibility characteristic of care mobility.

E3 sums this up as follows:

> "Care-related journeys are fragmented trips that are not recognised as formal mobility."

Finally, there is a strong call to incorporate qualitative indicators and intersectional approaches into the design of transport and fare policies, a point made by interviewees from both technical and academic backgrounds.

From this standpoint, the IDIs reveal a clear pattern: social fares are viewed positively in principle, but their limited effectiveness in practice attracts unanimous criticism. The women interviewed agree that the existing concessions are designed for conventional categories — pensioners and unemployed people — rather than newer forms of poverty, including the working poor or mothers in precarious employment who also undertake care work.

E1 observes that "pensions are sometimes higher than young people's wages", questioning whether age should be the main criterion for fare reductions. E2 notes that "economic circumstances have deteriorated among groups that were not previously considered a priority", whilst E5.1 points out that "many women could benefit, but do not even know about it or cannot manage the application procedures".

Another emerging issue is the importance of producing sex-disaggregated data. The predominant pattern is a clear awareness that, without data broken down by sex and care responsibilities, the fare system cannot be fair or representative. The women interviewed repeatedly complain that "what women do when they travel is not measured" (E2) and that existing reports assume a "generic user who does not exist" (E1). E4 acknowledges that there is no systematic recording of sex or care mobility and that "the statistics do not capture these categories". The lack of data is identified as a direct cause of exclusion.

4.2.3. Relationships between concepts

4.2.3.1. Relationships between the different themes raised by interviewees

The themes discussed in this block form a coherent network of relationships between gender, territory, socioeconomic circumstances and fare design. Interviewees who addressed this issue agree that people living in peripheral areas who also undertake care responsibilities face a double penalty: they need to make multiple journeys and they incur additional costs according to the number of fare zones crossed.

Thus, the zone-based structure of the Barcelona metropolitan area reinforces existing inequalities. As E6 puts it:

"There is a pattern of fare exclusion that is territorial, but also related to gender and class."

The responses reveal clear connections between income, exclusion and accessibility. The absence of income-related progressive fares produces regressive effects, particularly for people in precarious circumstances who do not qualify for assistance. E1 summarises the argument forcefully: "the price of transport is a political price". This highlights the relationship between fare design, social equity and the redistributive capacity of public transport.

From the outset, the experts warn of a direct link between the absence of disaggregated information and unfair design. The inability to identify women's travel patterns — their frequency, timetables and multiple roles — prevents fares and services from being adapted accordingly. As E3 observes, "mobility studies never tell us whether the person travelling is a woman, whether she is accompanied by children or whether she has made other journeys beforehand". Such omissions not only make particular journeys invisible but reproduce structural bias.

4.2.4. Selection of representative quotations

The following are the most relevant quotations provided by interviewees in response to this part of the interview guide.

1. Dual presence and dual responsibilities

> "When we discuss the mobility of men and women, nowadays we should really be talking not so much about men's and women's mobility as about mobility organised according to a feminine or masculine logic. Masculine mobility corresponds to daily life strongly centred on the working day and paid employment, whereas feminine mobility reflects dual presence and dual responsibilities: responsibility for paid work, but also primary responsibility for domestic work and care. This entails much more multidimensional mobility, with more frequent journeys that are shorter and more varied across the territory." (E2)

> *"No, I think ... I don't have the evidence for that, but what I do have evidence for is that women's decisions not to travel to another city for work are driven less by financial considerations than by caring responsibilities. Care responsibilities, the availability of time, weigh much more heavily; in other words, dual presence shapes women's everyday lives. Full availability for paid employment shapes men's everyday lives, and from there you can interpret all the conditions governing mobility." (E2)*

2. The mobility of women and the most vulnerable groups

> "When we examine the modal distribution of transport by income and gender, we see a strong correlation: women's mobility and that of the most vulnerable groups are much more closely associated with particular forms of collective transport. Fare policies therefore affect these groups far more intensely than other sections of the population." (E3)

3. Predominantly masculine travel patterns

> "There was a gap in access to transport service infrastructure. The infrastructure had been designed around predominantly masculine travel patterns. Women's needs were therefore not reflected in this infrastructure, either physical or organisational." (E6)

4. Women's journeys are shorter and more varied

> "Feminine mobility reflects dual presence and dual responsibilities [...]. This entails much more multidimensional mobility, with more frequent journeys that are shorter and more varied across the territory." (E2)

5. Social fares

> "My father has his pensioner's travel card and pays much less ... even though he may well receive more money than someone in precarious employment." (E1)

"The most egalitarian approach would be a straightforward season-ticket system for everyone, with discounts of 50% or 100% depending on financial circumstances." (E1)

6. Sex-disaggregated data

"If they don't measure how often we women get on the bus, how can they set a fair fare?" (E2)

"We don't have statistics specifically matching what you are asking for ... we have never been asked to record sex." (E4)

"What isn't measured doesn't exist. And if there are no data on our journeys, our needs won't be reflected in the fares." (E5.1)

4.2.5. Linking responses to existing theories

The IDI responses are consistent with feminist-economics arguments about the invisibility of reproductive work, discussed in the theoretical framework of ITTG, BCN 2025.

As E2 stresses, "There is a form of women's mobility that is essential to sustaining life, but which is reflected neither in studies nor in fares." This supports the view that the fare structure is rooted in a productivist model whose typical user is assumed to be a man travelling regularly between home and work. As discussed in Chapter 3, this perspective disregards women's mobility patterns, characterised by intermittent and chained journeys and the need for timetable flexibility.

The women interviewed offer a structural critique consistent with feminist economics: urban mobility is not neutral, and access to transport is a condition for redistribution. The absence of income-related fares, highlighted by E1 and E2, reproduces material inequalities associated with both the life course and gender.

Moreover, the absence of disaggregated information reproduces the problem identified by Kern (2020) and Sánchez de Madariaga (2009): urban planning and public policy assume a universal, male, salaried subject who travels between home and work. Interviewees contend that the fare system follows the same logic, preventing recognition of care mobility and multiple linked journeys. This statistical blindness obstructs progress towards gender-sensitive mobility.

4.2.6. Differences between interviewees according to socioeconomic characteristics

Although the women interviewed (1, 2 and 5) provide technical analyses based on their professional experience and expertise, they frequently incorporate experiences associated with care. The men (3, 4 and 6) tend to emphasise structural analysis from a more strictly technical or institutional perspective. These differences produce diverse but complementary approaches to understanding the current fare system's impacts.

Interviewees with technical experience tend to propose operational reforms, whereas those also speaking from everyday experience call for more far-reaching transformations informed by social and gender justice.

The women with academic training and experience in public policy (1, 2 and 5) connect normative frameworks with technical proposals. E1 explicitly advocates a combination of a basic travel pass and income-related reductions. E5.2 and E6, drawing on perspectives closer to social intervention, point out that existing arrangements are inaccessible to many women because of limited information and administrative obstacles. E4 provides an institutional and technical perspective, acknowledging shortcomings in data production. The differences concern less the diagnosis, which is shared, than the approach: technical or political on the one hand, experiential or pragmatic on the other.

4.2.6. Results and conclusions

4.2.6.1. Findings

1. Barriers to and enablers of mobility from a gender perspective
Women face multiple, cumulative barriers: insecurity, fragmented journeys, infrequent services outside standard commuting hours and a lack of planning that reflects care-related travel. Their mobility tends to involve linked, multi-destination routes, in contrast with the conventional linear model of men's mobility.

2. Well-being, time and the structure of the transport system
The transport system has a direct effect on everyday well-being, especially women's. As E2 observes, women experience a heavier overall time burden — between 10 and 15 additional hours per week compared with men — because of the combination of paid employment, care and travel. This burden shapes their travel decisions, their availability for employment farther from home and their access to life opportunities. The 15-minute city emerges as a desirable model, although its limitations become apparent when commuting is taken into account.

3. Key destinations for care mobility
Interviewees identify schools, health centres, day centres, markets and green spaces as significant destinations for care mobility. Yet transport planning does not systematically integrate these facilities. Poor connections between them lead to fragmented and inefficient journeys, penalising people with caring responsibilities.

4. Territorial inequalities and geographical barriers
Interviewees emphasise differences in transport provision between the city of Barcelona and municipalities in the second metropolitan ring. Dispersed services, infrequent departures, poor intermodal integration and excessive journey times particularly affect people living on the periphery who must make multiple journeys. This disadvantages women carers outside the metropolitan core. Fragmented service management and expired contracts in neighbouring municipalities exacerbate these inequalities.

5. Fare systems and care mobility

Although some interviewees view the T-usual favourably as an accessible option for frequent public transport users (including E2), there is broad agreement that the fare system fails to recognise care mobility. They also agree that simplifying fares and investing in modes used disproportionately by women — such as buses — constitute gender policies in their own right.

6. Social fares and concessions

Social fares emerge as a critical issue. Although a flat fare exists within the AMB area, this uniformity is regarded as insufficient to redress inequalities arising from income, place of residence or caring responsibilities. Suggested measures include concessions for journeys accompanying dependants and fares adapted to short care-related trips.

7. Data production and planning without a gender perspective

Several interviewees identify the lack of sex-, age- and care-disaggregated data as a major obstacle to gender-responsive policy. Existing surveys fail to capture short, chained or care-related journeys, distorting diagnosis and reinforcing the invisibility of women's travel.

4.2.6.2. Conclusions

Block 2 confirms that the metropolitan transport system continues to prioritise linear, traditionally masculine commuting patterns. Needs arising from care, territorial segmentation and women's total workload — paid and unpaid — are not adequately incorporated into fare design or network planning. Partial, fragmented measures exist, including flat fares and zone integration, but there is no comprehensive approach combining accessibility, equity and a gender perspective.

Current fares do not merely embody a logic of efficiency: they reproduce historical inequalities. Women are penalised by a system that fails to recognise their travel patterns and responsibilities. The present fare structure does not respond to carers' lived circumstances, and women and vulnerable groups are underrepresented in its design. Gender equity and territorial justice must be central to reform.

The women interviewed agree that a fair fare system should combine universal travel passes with reductions related to income and responsibilities. It should also draw on empirical diagnoses that recognise differences by sex, life stage, income and caring role. As E1 and E5 argue, fair fares can only be achieved if structural inequality is recognised from the earliest technical and political stages of system design.

The Block 2 interviews, whose guide appears in the annexes, reveal two fundamental equity deficits. First, social fares are partial, poorly publicised and based on criteria — age and employment status — that fail to reflect contemporary forms of vulnerability. Secondly, the lack of disaggregated data makes it impossible to recognise differentiated mobility patterns, especially those associated with care. This gap reinforces gender bias in fare design.

Without specific data, it is impossible to adapt the system to actual journeys, and structural inequalities are reproduced. Interviewees call for more than technical adjustments: they advocate a change of model based on proximity, social accessibility and a more equitable distribution of mobility costs. They also urge the inclusion of new measures in surveys and planning tools, so that decisions are no longer based on diagnoses blind to gender and care.

4.3. Fare system and care

This part of ITTG, BCN 2025 is based on a qualitative analysis of six IDIs examining the fare system and the particular mobility needs of women with caring responsibilities (Block 3 of the In-depth Interview Guide, reproduced in Annex 8.2.2).

4.3.1. Key emerging themes

Analysis of the six Block 3 interviews identifies five central themes, recurring with different wording and emphasis but forming a coherent account of interviewees' understanding of the ATM and AMB fare systems.

4.3.1.1. Fare-system complexity as a barrier to access

The metropolitan fare structure is perceived as excessively complicated, causing confusion, anxiety and even discouraging use. The difficulty of understanding zones, travel products and pass validity particularly affects people whose journeys are irregular or do not follow linear patterns.

> "Integrated fares have made the system much harder to understand. For many people it has become so technical that it puts them off using it (...) it's like solving a Sudoku puzzle." (E1)
>
> "You have to do a mental spreadsheet to work out which pass is best for you." (E3)
>
> "Even I don't know which card to use when I have to make several different journeys in one day." (E2)

4.3.1.2. Invisibility of care mobility

The interviews suggest that reproductive and care work, which involves fragmented, linked and unpredictable journeys, is not recognised within the present Barcelona metropolitan fare system. This omission places additional financial, symbolic and practical burdens on those undertaking such journeys, most of whom are women.

> "Travelling to care for someone should be a right, not a financial penalty." (E2)
>
> "We designed the system for long, rational journeys, but that isn't how people actually travel." (E3)
>
> "We don't have a fare designed for someone who makes five journeys a day because they provide care." (E6)

4.3.1.3. Financial penalties for multiple journeys

The current fare system penalises those who must make several journeys each day, even when these form part of the same everyday mobility pattern. This particularly affects carers, because their patterns of movement are not recognised within the validity conditions of existing travel passes.

> "Those who travel the most pay the most. That isn't fair or efficient." (E6)
> "If you make three journeys in an hour, you can no longer use the same ticket. And that happens to me every day." (E2)

4.3.1.4. Territorial inequalities in access and cost

The IDIs show how the zone-based fare system reproduces spatial inequalities: people living in outlying areas pay more for longer journeys, even though services are often less frequent and connections poorer.

> "Living farther away means paying more, even though services are less frequent and worse." (E2)
> "The zone you live in determines whether you can travel at all." (E4)

4.3.1.5. Proposals for fare reform and simplification

All interviewees, despite their different backgrounds, agree that the current fare system needs to be transformed. The call for clearer, simpler and fairer fares is widespread. Proposals range from passes adapted to linked journeys to flat or flexible fares.

> "We should work towards a flat or single fare that removes psychological and financial barriers." (E6)
> "We need fares designed with those of us who chain journeys together in mind." (E2)

4.3.2. Patterns and trends identified in the responses

Beyond the key emerging themes, analysis of the IDIs identifies common patterns and trends running through the different experiences and narratives. These reinforce the preceding findings and help explain how distinct forms of fare exclusion arise in practice.

4.3.2.1. Mainstreaming a gender perspective

The women interviewed and two of the men (E3 and E6) place care work at the centre of the analysis, showing how it gives rise to a type of mobility neglected by the fare system. This critical perspective identifies how fare structures specifically penalise journeys associated with reproductive roles.

> "Fares were designed with men in mind. Anything that doesn't fit the standard worker falls outside the system." (E2)
> "The fare system does not reflect how people who care for others actually travel." (E3)

4.3.2.2. Disconnect between technical design and everyday practice

There is a clear gap between the technical criteria governing travel passes and passengers' lived experiences. This disconnect produces inefficiencies, unnecessary expenditure and disincentives to use public transport for certain groups.

> "Sometimes I take the car myself because public transport doesn't work for my timetable." (E5.1)
> "The system is designed for someone making the same journey every day. But that is no longer the reality." (E6)

4.3.2.3. Shared criticism and calls for structural reform

Whatever their professional or institutional backgrounds, all interviewees agree that the fare system must be fundamentally redesigned. This consensus underscores the urgency of reform guided by equity and gender justice.

> "It isn't a question of adjusting prices, but of thinking about the system in a different way." (E1)
> "Everything needs rethinking. Not just how much it costs, but whom it is designed for." (E4)

4.3.3. Relationships between concepts

Comparative analysis shows that the emerging themes are not isolated but organically interconnected. Their principal relationships are described below.

4.3.3.1. Fare complexity ↔ exclusion of care mobility

A complex fare structure based on rational, productivist assumptions is directly connected with the exclusion of the linked journeys characteristic of care mobility. Interviewees see this as a form of technical design that overlooks the everyday journeys undertaken to sustain life.

> "You have to plan everything in advance if you don't want to lose money, but life cannot be planned like that." (E1)
> "The system is designed for predictable journeys. But care is unpredictable." (E2)
> "It's as though they designed it for someone who travels routinely rather than out of urgent necessity." (E4)

4.3.3.2. Multiple journeys ↔ financial penalty and gender

The need to make several journeys daily, common among carers, is directly associated with greater financial burdens. Both women and men raised this pattern, particularly those aware of social inequalities or with experience of care responsibilities.

> "If you make several short journeys, you are penalised. No ticket takes that into account." (E5.1)
> "People who care for others don't travel in straight lines." (E3)
> "Travelling many times each day is not a luxury; it's a burden." (E6)

4.3.3.3. Territorial segmentation ↔ structural inequality

Fare zones and the extra costs associated with crossing them reinforce existing inequalities. People living far from the centre, often with caring responsibilities, face greater financial and logistical demands.

> "I live in zone 3 and my mother lives in zone 1. Each time I go to see her it costs me a fortune." (E2)
> "Fare zones are a concealed form of territorial class discrimination." (E4)
> "The worse the connection, the higher the cost. It's absurd." (E6)

4.3.4. Selection of representative quotations

4.3.4.1. Key quotations summarising common views

These quotations clearly express themes shared by the interviewees. They were selected because they concisely convey common concerns about fare structures, their unequal impacts and the need for reform.

> **1. Fare complexity as a barrier to entry**
> "You have to do a mental spreadsheet to work out which pass is best for you." (E3)
> "Integrated fares have reduced the complexity of understanding the system." (E1)
> **2. Invisibility of care mobility**
> "Travelling to care for someone should be a right, not a financial penalty." (E2)
> "We don't have a fare designed for someone who makes five journeys a day because they provide care." (E6)
> **3. Territorial inequality as financial exclusion**
> "Living farther away means paying more, even though services are less frequent and worse." (E2)
> "Fare zones are a concealed form of territorial class discrimination." (E4)
> **4. Failure to adapt the system to everyday mobility patterns**
> "The system is designed for predictable journeys. But care is unpredictable." (E2)
> "There is no fare product that takes carers into account." (E6)
> **5. Shared need for structural reform**

"It isn't a question of adjusting prices, but of thinking about the system in a different way." (E1)
"Everything needs rethinking. Not just how much it costs, but whom it is designed for." (E4)

4.3.4.2. Quotations best illustrating the key themes

The following verbatim quotations were selected for their expressive force and their ability to illustrate interviewees' positions on each emerging theme.

1. Fare complexity:
"Even I don't know which card to use when I have to make several different journeys in one day." (E2)
2. Invisibility of care:
"People who care for others don't travel in straight lines." (E3)
3. Financial penalty:
"Those who travel the most pay the most. That isn't fair or efficient." (E6)
4. Territorial inequality:
"The zone you live in determines whether you can travel at all." (E4)
5. Structural reform:
"We should work towards a flat or single fare that removes psychological and financial barriers." (E6)

4.3.5. Linking responses to existing theories

Interview responses are consistent with the theoretical arguments from feminist economics and gender-sensitive mobility studies presented in the theoretical framework: metropolitan transport systems operate according to a functionalist, productivist logic centred on a traditional masculine model of mobility.

However, because very little scholarship examines fare design from a gender perspective, a detailed discussion of that literature is not possible. We therefore present the findings emerging directly from our own interview research.

4.3.5.1. The fare system reproduces the model of the male wage-earner

Interviewees agree that the fare system was designed around a typical passenger making linear, regular, predictable journeys, usually associated with paid employment. It excludes carers whose journeys take place at varying times and involve several destinations.

"Everything is designed for people who go to work and come back. Nothing for those who need to run errands, provide care or accompany someone." (E3)
"It wasn't designed for women or for people who have to fit several tasks together." (E2)
"The fares assume that you work Monday to Friday in one place. That's not my life." (E5.2)

4.3.5.2. Care mobility challenges the existing fare logic

Care-related travel does not follow stable or uniform patterns and is therefore at odds with a fare system that rewards regularity. This contradiction emerged in every interview, through both personal experiences and institutional analyses.

> "No two days in my week are the same. How am I supposed to use a fixed pass?" (E1)
> "The fare system cannot go on treating mobility as something neutral." (E2)
> "There is no fare product that takes carers into account." (E6)

4.3.6. Differences between interviewees according to socioeconomic characteristics

The interviews reveal notable differences according to participants' sociodemographic and professional profiles. These do not necessarily amount to disagreements, but affect their emphases, arguments and proposals.

4.3.6.1. Differences by sex

The women interviewed (1, 2 and 5) tend to focus on the lived experience of mobility, particularly the burden of care. Their accounts repeatedly refer to everyday life, the need to combine multiple responsibilities and the practical effects of fares on these patterns of travel.

The men interviewed (3, 4 and 6), although likewise critical, tend to adopt a more structural, institutional or functional perspective. Their proposals focus more on technical simplification, operational effectiveness and territorial equity.

4.3.6.2. Differences by educational background or institutional role

Those more closely connected to institutions (including interviewees 1, 4 and 5) analyse the system from within, enabling them to offer a more technical perspective. At the same time, they may inadvertently reproduce some of its underlying assumptions.

Interviewees with academic experience or direct experience as passengers (such as 2, 3 and 6) are more critical of the fare system's apparent neutrality. Their contributions help reveal the social dimensions of mobility.

4.3.6.3. Institutional experience versus everyday experience

Those working directly in mobility policy (including E1, E5.1 and E5.2) tend to explain the fare structure in terms of operational constraints. By contrast, E2, speaking from passenger experience, and E3 and E6, men who have reflected critically on its social effects, focus more on the impacts on everyday life.

4.3.6.4. Experience of care as a distinguishing factor

Women who combine paid employment with care responsibilities (E1 and E2) offer a particularly detailed account of how fares affect people travelling for purposes other than paid work. A similar perspective appears among men who have reflected critically on the issue, including E6.

4.3.7. Results and conclusions

4.3.7.1. Findings

The analysis confirms that the existing fare system presents several challenges relating to accessibility, equity, gender equality and sustainability. The main findings are as follows:

1. The existing fare structure is perceived as excessively complex.
2. Fares do not reflect care-related mobility patterns, disproportionately affecting women.
3. Perceptions of inequality and discouragement are more pronounced in outlying areas.
4. There is widespread agreement on the need for structural, rather than merely technical, reform.

4.3.7.2. Conclusions

The interviews support the following conclusions:

1. The current fare system purports to be neutral but reproduces a masculine model of mobility centred on productive employment.
2. Care mobility is neither recognised in institutional arrangements nor reflected in fares, and may even be denied.
3. Zone-based segmentation exacerbates socioeconomic and territorial inequalities.
4. There is consensus on the need for extensive, participatory reform.

4.4. Recommendations for reform arising from the IDIs

This section of ITTG, BCN 2025 draws on qualitative analysis of the six IDIs addressing Block 4 of the In-depth Interview Guide (Annex 8.2.2).

4.4.1. Key emerging themes

Analysis of the six Block 4 interviews reveals recurring themes that structure the specialised knowledge of professionals working in Barcelona metropolitan transport institutions and researchers in mobility, time use and public transport. The evidence highlights the need for a fundamental reconsideration of the principles governing metropolitan fare structures, particularly their effects on care mobility and territorial equity. The main themes are as follows.

4.4.1.1. Simplifying the fare system and achieving greater territorial equity

Interviewees consistently call for a simpler, more comprehensible and fairer fare system. The dominant view is that current complexity causes confusion, fragments the passenger experience and particularly penalises residents of outlying areas.

As E3 puts it, "Yes, I think we need to move towards simplification, definitely."

The same interviewee adds that "today it is inexplicable that fare differences are maintained without social or territorial criteria to justify them".

E4 likewise calls for "fewer zones and greater price equity between them".

4.4.1.2. Financial penalties for journeys crossing fare zones

Current zone-based fares impose additional costs on those travelling daily from peripheral municipalities towards the city centre. This especially affects women making linked journeys for care or employment.

E6 argues that "if we want accessible transport, we must reconsider how we segment fares and remove financial barriers".

Germany's nationwide single-ticket model is cited as an international alternative: "We are exploring models such as the German single ticket to simplify access to public transport." (E3)

4.4.1.3. Night-time travel and perceptions of insecurity

The women interviewed repeatedly report feeling vulnerable when travelling at night, directly affecting their freedom of movement and equal access to transport. E5.1 and E5.2 state emphatically that "fear of travelling alone at night shapes many women's journeys". E2 likewise observes that "insecurity at isolated stations limits the use of night-time public transport".

Even inside vehicles, some experiences cause alarm. As E5.1 recounts, "Things happen inside the carriages, and sometimes they are really unpleasant." Despite measures such as request stops, E5.2 reports that "there is still a sense of structural insecurity in the transport system".

4.4.1.4. Collecting sex-disaggregated data for statistical analysis

Most interviewees regard the collection of sex-disaggregated data as essential to developing gender-responsive fare policy.

The absence of information about passengers' sex, journeys and caring responsibilities prevents a precise assessment of the system's differentiated effects. E5.1 and E5.2, AMB technical officers, acknowledge that "it really is a shame not to be able to cross-reference [ticket] uptake with gender". Although T-mobilitat was initially expected to allow this variable to be incorporated, it

was ultimately "not possible", owing to a lack of institutional commitment, and "gender data are not considered a priority".

4.4.2. Patterns and trends identified in the responses

The six Block 4 IDIs reveal patterns explaining how public transport is used and how current fares affect particular groups differently. The following trends recur across the interviews.

4.4.2.1. Greater complexity and cost for passengers making multiple journeys

Those whose travel does not consist of a single linear journey, but of several linked trips throughout the day — often women combining employment and care — experience the fare system as an additional financial burden. This pattern is especially prominent in the interviews with women.

4.4.2.2. Widespread concern about territorial inequality

People living outside central Barcelona identify an implicit penalty in the existing fare system. They pay more to cross zones whilst having access to less frequent services and more limited routes. This is perceived as an unfair, structural inequality.

4.4.2.3. Demand for more personalised fares

Several interviewees are interested in flexible fares adapted to actual patterns of use, including dedicated passes for carers, solidarity fares or prices adjusted to linked journeys. Although there is no consensus on implementation, awareness of this need is growing.

4.4.2.4. Vulnerability when using transport at night

Women interviewees express clear concerns about safety at night, both in stations and inside vehicles. Insecurity limits their autonomy and travel schedules, and frequently forces them to pay for more expensive alternatives such as taxis.

4.4.2.5. Sex-disaggregated data as a basis for fare policy

The women interviewed strongly agree about the value of sex-disaggregated data and express frustration at their absence. E2 regrets that "strategies do not incorporate the data", even when they are mentioned in diagnostic reports. E5.1 remarks that "not knowing which way to go" is a direct consequence of working "blind" without that variable. Male technical interviewees, such as E4, are more ambivalent or refer to external obstacles, including technological limitations and political priorities. Nevertheless, E3 and E6, who have technical and academic roles, acknowledge that "data should be collected by transport mode and sex" and that this "would represent significant progress".

4.4.3. Relationships between concepts

Across the IDIs, there is a close relationship between themes shaping people's everyday experience of public transport. Far from being isolated questions, these themes form a complex network linking fare design to sex, place of residence, timetables, employment conditions and caring responsibilities. The most important connections are discussed below.

4.4.3.1. Fare simplification ↔ territorial equity

Demands for fare simplification are directly linked to the aspiration for greater territorial equity. Some interviewees draw on personal experience to argue that people in peripheral municipalities see the existing complexity of multiple zones and ticket types as a barrier that particularly penalises those who rely on public transport for everyday journeys.

E3 summarises this as follows: "The more complexity, the more territorial discrimination. A clear, unified system is the foundation of a fair network." E4 similarly argues that "simplifying the model is not merely a technical matter; it is also a way of recognising structural inequalities across the metropolitan area".

4.4.3.2. Care mobility ↔ penalties for linked journeys

Women combining paid employment with caring responsibilities describe journeys involving multiple destinations and schedules rather than linear commuting. Their experience leads them to conclude that a fare system that fails to recognise these patterns places extra costs on those whose journeys help sustain everyday life.

E1 complains that "I have to pay for each journey as though it were independent, but they are part of the same day of work and care". E2 agrees that "fares are designed for people who only travel to and from work, not for those of us who go to three different places to provide care".

4.4.3.3. Night-time insecurity ↔ additional costs ↔ gender inequality

One of the most significant relationships concerns perceived insecurity at night and economic inequality. Women interviewees report having to avoid certain journeys or pay for private alternatives to ensure their safety, imposing additional costs with a clear gender dimension.

E5.1 explains: "I've stopped taking the bus at night because I'm frightened. That means I spend more on taxis, and I have to pay for that myself." This limits freedom of movement and generates indirect financial discrimination by comparison with men, who report greater freedom to use public transport at night.

4.4.3.4. Peripheral residence ↔ reduced access ↔ need for social fares

The interviews reveal that living far from the city centre entails not only higher fares but also less dense and less frequent transport provision. This creates a dual inequality of cost and accessibility. Interviewees highlight the social consequences of this territorial disadvantage.

E6 comments that "if you cannot afford to live in the centre, you not only have to pay more, you also spend longer waiting; that isn't fair". E2 proposes "a solidarity fare for those who depend more on public transport and have lower incomes".

4.4.3.5. Data disaggregation ↔ challenging neutrality ↔ adapting fares to care mobility

The responses show that the absence of sex-disaggregated data not only undermines technical understanding but perpetuates a transport model built around a supposedly "neutral user". This shortcoming prevents the identification of inequalities, fair differentiation between ticket products and the adaptation of fare policies. Statistical invisibility is directly linked to the structural exclusion of women carers. As E5.2 notes, "it is essential, because you don't know which way to go".

4.4.4. Selection of representative quotations

This section presents interviewees' most representative statements, capturing emerging agreements about the fare system. These first-person accounts are important because they bring the knowledge of passengers into technical and academic analysis, allowing us to understand how people with different backgrounds experience current policies.

The following quotations illustrate the emerging themes and express the emotional, reflective and critical dimensions of interviewees' accounts. They clearly crystallise each of the interrelated themes identified throughout the analysis.

4.4.4.1. On the need to simplify the fare system

> "Yes, I think we need to move towards simplification, definitely." (E3)
> "The zone system is complicated, and not everybody understands it. It should be more straightforward." (E2)
> "You shouldn't have to think twice about whether your journey is covered by the T-usual." (E4)
> "Today it is inexplicable that fare differences are maintained without social or territorial criteria to justify them." (E3)

4.4.4.2. On fare inequalities between zones and peripheral residence

> "If you cannot afford to live in the centre, you not only have to pay more, you also spend longer waiting; that isn't fair." (E6)
> "I pay more because I live in an area where services are already less frequent." (E1)

"People living outside the centre are those who depend most on transport, and yet they pay the most." (E2)

4.4.4.3. On care mobility and linked journeys

"I have to pay for each journey as though it were independent, but they are part of the same day of work and care." (E1)
"Fares are designed for people who only travel to and from work, not for those of us who go to three different places to provide care." (E2)
"The T-usual doesn't work if you make several stops during the day. It seems designed only for office workers." (E5.1)

4.4.4.4. On insecurity and night-time travel

"I've stopped taking the bus at night because I'm frightened. That means I spend more on taxis, and I have to pay for that myself." (E5.1)
"Things happen inside the carriages, and sometimes they are really unpleasant." (E5.1)
"At certain times you don't even consider it. You walk or you stay at home." (E2)
"Transport at night isn't for every woman. Very often you simply cannot use it." (E2)

4.4.4.5. On introducing social and care-related criteria into fares

"There should be some kind of pass or assistance for journeys undertaken to provide care, not just to go to work." (E1)
"Flat fares are designed for people who make linear journeys. What about those of us who are travelling all over the place all day?" (E5.1)
"If you are providing care or taking your children to several places, that should count in the system, not lead to a penalty." (E3)
"Care doesn't follow a fixed timetable or route. How do you fit that into a monthly card designed around two journeys?" (E5.1)
"It's not just what is paid, but who pays it and why. And the system isn't being fair about that." (E4)

4.4.4.6. On collecting sex-disaggregated data for statistical analysis and fare-setting, and introducing social and care-related criteria

"It really is a shame not to be able to cross-reference ticket uptake with gender." (E5.2)
"When I found out — and I found out thanks to you — that we didn't have gender data, I thought: how can something as simple as recording gender when someone registers not be possible?" (E5.1) "Yes, I do think data should be collected by transport mode and sex [...]. Yes." (E3) "It's not considered a priority. Among all the mobility data, gender is not prioritised." (E5.1) "You don't know which way to go. And this is fundamental." (E5.2)

On the absence of data and its impact: "We're working more or less blind." (E5.1)
On institutional bias: "It isn't considered a priority." (E5.1)
On the need to include gender: "It would represent significant progress." (E3)

Combining technical and academic knowledge with personal experience, these quotations reveal structural gaps in the existing fare system and opportunities to redesign it in a more inclusive way that responds to diverse patterns of transport use.

4.4.5. Linking responses to existing theories

The interviews reflect feminist-economics arguments presented in the theoretical framework, which contend that urban mobility planning has historically been androcentric, centred on the "standard man": a male wage-earner making two daily journeys, to and from work. This model excludes or marginalises other journeys that sustain life, including those made by women to provide care, obtain supplies or accompany others.

The women interviewees' experiences reinforce this criticism. E1 observes that "we don't have a fare designed for those of us carrying shopping bags, pushchairs and children, and on top of that we have to pay more because we stop in several places". This non-linear, fragmented and often invisible type of travel is fundamental to urban life but is overlooked by the existing fare system.

By contrast, the men interviewed (3, 4 and 6) tend to describe more linear journeys associated with employment, although they too recognise structural inequalities in the system. E3, for example, notes that "if you are providing care or taking your children to several places, that should count in the system, not lead to a penalty". Although he does not provide direct care himself, his observation indicates growing awareness of the need to mainstream care in fare policy.

These accounts support the literature reviewed in the theoretical framework: apparently neutral urban planning reproduces gender inequalities when it fails to incorporate care. By omitting a logic of sustaining life, Barcelona's metropolitan fare system continues to privilege the "standard male user" and neglect those who sustain urban everyday life from more vulnerable and fragmented positions, the "standard female user".

Calls for disaggregated data are directly connected with feminist urban economics. Authors such as Sánchez de Madariaga (2009) and Kern (2020) have argued that mobility policies reproduce gender bias without data revealing differences in use. The interviews reinforce this argument: inclusive planning is impossible without specific information. The absence of such data is not merely a technical omission but reflects an androcentric model prioritising linear, masculine commuting journeys.

4.4.6. Differences between interviewees according to socioeconomic characteristics

Analysis shows that interviewees' sociodemographic profiles — particularly sex, educational background and occupation — substantially shape their perceptions and experiences of public transport fares.

4.4.6.1. Differences between women and men

The women interviewed (1, 2, 5.1 and 5.2) repeatedly express greater concern about the costs of linked journeys, night-time insecurity and the fare system's failure to reflect care mobility. Their accounts are profoundly shaped by their dual roles as workers and carers and their multiple purposes for travelling throughout the day. By contrast, the men interviewed (3, 4 and 6) focus more on technical or structural questions, such as fare zones and economic efficiency, and tend to describe more linear, predictable journeys associated with formal employment.

The women in technical positions (E5.1 and E5.2) express particularly strong frustration at the lack of sex-disaggregated data and a sense of urgency about this omission. Both recall moments when recording the variable would have been technically feasible, including the introduction of T-mobilitat, and criticise the institutional decision not to do so. Their criticism is based on direct knowledge of the system.

The men interviewed (3, 4 and 6), all holding technical, institutional or academic positions, also recognise the importance of collecting gender data, but generally describe it in more moderate terms as a desirable rather than urgent improvement. With the exception of E6, their language does not highlight the structural impact of this absence.

4.4.6.2. Variations by age and occupation

Examining age, gender and life experience together reveals important nuances that enrich the study's qualitative interpretation.

a) Variations by age: Younger interviewees (such as E2 and E5) are more likely to discuss everyday insecurity and fare-related financial vulnerability, whereas older interviewees (such as E3 and E4) offer a more structural, sometimes comparative, perspective on fare models and metropolitan management. This distinction does not undermine the shared demand for simpler, more socially responsive fares.
b) Variations by life experience: Women with caring responsibilities describe complex journeys involving multiple stops, changing schedules and substantial emotional demands. E1, for example, describes a daily routine combining paid employment, accompanying children and shopping, whilst E5.1 combines employment with caring for older relatives. By contrast, the men describe a more functional experience of transport, with direct, relatively uniform journeys that rarely involve domestic responsibilities.
c) Older women interviewees (E5.1 and E5.2) with longer experience of public administration show historical awareness of the problem and of institutional setbacks in integrating a gender perspective into fare planning. Academic interviewees such as E2 situate their critique within a broader structural framework concerning the invisibility of women's mobility in urban and fare design. Younger men or interviewees focused on

technical operations tend to prioritise other system features and are less likely to identify sex disaggregation as a central instrument of structural change.

Shared emerging sensitivities: Despite these differences, some men interviewed (including E3) show empathy regarding gender inequalities in transport and acknowledge that the fare system should take account of "other ways of travelling". This suggests increasing openness to understanding mobility beyond the traditional work–home divide.

4.4.7. Findings and conclusions

4.4.7.1. Findings

In-depth analysis of the interviews reveals fundamental findings providing substantial qualitative evidence about the shortcomings and potential for reform of the present fare system from gender, territorial and social perspectives.

The key findings are summarised below.

a) The existing fare system is perceived as excessively complicated. Women and men alike emphasise the difficulty of understanding fares and travel passes. This creates uncertainty and contributes to the exclusion of people with lower levels of digital literacy or irregular travel patterns. Interviewees call for a simpler, more intuitive, comprehensible and accessible model.
b) Fare zones penalise peripheral residents. Dividing the metropolitan territory into fare zones imposes structural additional costs on those who must travel from municipalities farther from the centre. This particularly affects low-income women, carers and residents of areas with less dense transport provision. Territorial equity is a shared priority.
c) Care mobility is overlooked in fare design. The women describe multiple everyday journeys — to work, shop, take children to school and care for older people — that are not recognised within current travel products. The system is based on a traditionally masculine linear home–work–home model, excluding reproductive mobility essential to sustaining life.
d) Perceived insecurity at night constrains women's freedom of movement. Insecurity on night-time public transport forces many women to change their schedules, avoid routes or pay for alternative services. This limits their autonomy and generates a hidden financial penalty affecting women disproportionately. The absence of specific transport and urban safety measures is identified as a structural source of inequality.
e) There is growing openness to fares based on social criteria. Several interviewees, particularly those concerned about inequality, propose social fares, care passes, prices adapted to linked journeys and usage-related criteria. Although these proposals are not fully coordinated, they reveal a latent demand for solidarity-based personalisation.
f) Existing flat or integrated fares are insufficient to ensure equity. Although the T-usual and other integrated products have advantages, they do not adequately serve passengers

travelling irregularly, at different times or to multiple daily destinations. Current integration does not eliminate structural inequality and may sometimes reinforce it.

g) The system needs to be reconsidered from the standpoint of sustaining life. The interviews show that public transport continues to operate according to a productivist logic that gives secondary importance to care, well-being and social rights. Far from neutral, this model reproduces inequalities of gender and class and therefore requires fundamental transformation.

h) Interviewees broadly agree that sex-disaggregated data are essential for planning public transport. Women in technical positions particularly stress this need and criticise both structural omission and a lack of institutional commitment. Their frustration draws on concrete experiences, including the missed opportunity to collect such data when T-mobilitat was developed. Some male interviewees also recognise the importance of this information without making it a central concern. Its absence is not merely a technical limitation but a form of epistemic exclusion: the system continues to assume a neutral subject, concealing feminised travel patterns and care-related journeys.

4.4.7.2. Conclusions

The conclusions from this interview block are as follows.

1. The current fare system does not meet the principles of equity and social justice. There is widespread agreement that an excessively complicated system penalises more vulnerable groups — carers, women, peripheral residents and those making multiple journeys. A structure centred on zones and linear travel reproduces territorial and gender inequalities.
2. Care mobility continues to be ignored in fare design. Women's accounts reveal a structural aspect of urban travel excluded from fare policy: journeys associated with reproductive work and sustaining life. This mobility is fragmented, demanding in time and space and emotionally intensive, yet remains unrecognised in current prices.
3. Perceived insecurity limits transport use and generates hidden costs. Particularly for women, night-time insecurity restricts travel and forces them to purchase alternative services. This reinforces inequality and represents an invisible gender-related financial penalty that must be acknowledged and addressed.
4. Complexity and territorial fragmentation reinforce metropolitan inequality. The fare system reproduces a geography of privilege centred on the urban core. People living farther away face not only higher fares but also less frequent and lower-quality services. This contributes to social and spatial exclusion extending beyond transport itself.
5. Awareness of the need for personalised fares is emerging. Interviewees from different backgrounds support adapting fares to diverse social circumstances. Care passes, journey-based prices and territorial-justice measures indicate openness to a more flexible, inclusive and solidarity-based model.
6. The absence of sex-disaggregated data constitutes a critical barrier to gender-responsive fare policy. Without this information, measures cannot be designed around differentiated mobility patterns, and any reform risks reproducing existing inequalities.

The interviews show that the data deficit is perceived as a consequence of male-centred institutional priorities, where operational efficiency takes precedence over equity. Recording sex is not merely a technical improvement but a necessary condition for recognising care mobility as a legitimate aspect of urban experience.

5. QUALITATIVE REPORT II: FOCUS GROUP ANALYSIS

5.1. Methodological foundations

This section presents a systematic analysis of the transcripts from three focus groups conducted in the Barcelona metropolitan area. Its purpose is to understand, through qualitative research, how public transport fares affect people with care responsibilities and journeys that sustain everyday life differently. As with the in-depth interviews, the analysis adopts an interpretative qualitative approach inspired by the principles of Grounded Theory developed by Corbin and Strauss (1990), which regards social knowledge as emerging from meanings constructed through interaction between participants.

The analysis therefore goes beyond simple thematic coding to identify patterns, relationships and shared meanings that illuminate the social structures underlying participants' accounts. Grounded Theory provides tools for generating knowledge from the data, rather than merely confirming pre-existing hypotheses, which makes it particularly appropriate where gender and care dimensions are largely absent from conventional public-policy evaluation instruments.

Denzin and Lincoln (2018) argue that qualitative research makes it possible to understand experience from within, gaining access to the narratives, emotions and contexts that shape human behaviour. Maxwell (2013) stresses that validity in such studies depends not on statistical representativeness, but on interpretative depth, reflexivity and analytical coherence. Miles, Huberman and Saldaña (2014) similarly observe that rigorous qualitative enquiry relies on systematic procedures for data reduction, analytical visualisation and the contextual construction of meaning. Flick (2018) highlights its capacity to accommodate diverse social rationalities and subjectivities, particularly when investigating informal practices such as care-related journeys.

Beyond the strict confines of social-science methodology, the use of qualitative methods — and particularly focus groups — also connects scientific research with the idea of education for open government, as recognised by Spain's Law 19/2013 of 9 December on Transparency, Access to Public Information and Good Governance. Through dialogue, collective deliberation and attentive listening to situated experiences, these methods can identify the population's actual needs with considerable precision. This is especially relevant given that poverty and social exclusion disproportionately affect women.

The present analysis accordingly rests on the epistemic legitimacy of qualitative research as a means of understanding complex phenomena, such as care mobility, from a situated, intersectional and critical perspective. The design of the focus groups has enabled us to capture the experiences, tensions and proposals of women and men, both with and without care

responsibilities. Our subsequent analysis has sought to respect this plurality of voices without overlooking the structural inequalities affecting participants.

Within qualitative research, the findings in this section complement the in-depth interview analysis presented in the previous chapter. Interviews and focus groups are essential, complementary methods for understanding meanings, social practices and discursive structures from the perspectives of those involved (Denzin and Lincoln, 2011). Both adopt an interpretative approach that privileges discourse and lived experience, providing access to dimensions invisible to quantitative methods. In this study, combining interviews with experts and focus groups with transport users — women and men with and without care responsibilities — has enabled us to triangulate perspectives, enrich the analysis and strengthen interpretative validity.

The in-depth interviews, discussed in the previous chapter, provide a setting for individual reflection in which participants can develop their own interpretations, experiences and assessments. This method is particularly useful for exploring specialist knowledge, technical or institutional experience and personal positions on complex issues (Corbin and Strauss, 2008; Taylor and Bogdan, 1987). We interviewed professionals with experience in urban planning, mobility, public administration and fare analysis, thereby obtaining a structural understanding of the system from those involved in its design or evaluation. The interviews provided detailed accounts of the historical evolution of fares, the absence of sex-disaggregated data and tensions between equity and efficiency in public policy. These accounts informed much of the discussion guide used for the focus groups analysed in this chapter.

The focus groups, in turn, have enabled us to explore how views about the functioning and pricing of Barcelona metropolitan public transport, and its relationship with care mobility, are collectively constructed, negotiated, reinforced or challenged through interaction (Morgan, 1997). Group 1 consisted entirely of women whose journeys were associated with paid employment and who had no care responsibilities. Group 2 comprised women combining paid employment with care. Group 3 consisted exclusively of men: P11, P13 and P14 combined employment with care, while P12 and P15 had no care responsibilities. This segmentation was essential to identifying how care responsibilities and gender shape experiences of public transport and the differential effects of fares.

Through discussions between people with shared experiences — women carers, employed men without care responsibilities and employed women without care responsibilities — we were able to identify common patterns, generational divides, normative contradictions and everyday tensions less apparent in the interviews, despite substantial convergence of views, especially among interviewees who were also transport users. Focus groups also enabled us to examine how everyday language articulates forms of domination or resistance that have become normalised in social practice (Kamberelis and Dimitriadis, 2005), including the organisation of care.

The two methods complement each other: in-depth interviews gave us a structural account of the conditions shaping metropolitan public transport in Barcelona, while focus groups offered access to the lived, situated and relational dimensions of everyday travel and fare use.

Specifically, the interviews helped reconstruct the institutional logic underlying the exclusion of care mobility; the focus groups revealed how that exclusion is experienced first-hand through fragmented journeys, financial penalties and the absence of suitable ticket products.

This methodological triangulation does not seek to validate findings as though they were quantitative measurements. Rather, it broadens the interpretative field and captures the complexity of the subject. As Flick (2004) notes, qualitative research does not aim to find one single truth but to explore the production of multiple meanings in particular settings. Bringing together expert and passenger perspectives, institutional accounts and everyday experience, and technical and lived discourses has been central to ensuring analytical robustness and developing recommendations supported by empirical evidence and social legitimacy.

This synthesis presents integrated and comparative findings from the three focus groups conducted as part of the qualitative research on fares and mobility in the Barcelona metropolitan area, adopting an intersectional gender perspective. The groups have captured the diversity of mobility trajectories and public transport use among employed women, with and without care responsibilities, and among men. The analysis follows a common structure informed by the sections developed within Grounded Theory.

5.2. Key emerging themes

The following recurrent, cross-cutting themes were identified and coded across the three focus groups.

The principal themes emerging from the focus-group analysis are:

- **Structural barriers to mobility: deficiencies in the Rodalies–Renfe suburban rail system repeatedly emerge as obstacles to everyday travel, including late trains, cancellations and inaccessible stations.**
    - "I live in Terrassa and have to travel across three zones to get to Barcelona, and the difference in fares is noticeable … but what stresses me most is not knowing when the train will come." (P7, Group 2)
    - "Sometimes you are standing there by the lift and do not know whether it will come down or where it is … how is someone with a disability supposed to get up here?" (P7, Group 2)

- **Fare differentiation and perceptions of high prices: people providing care, whose journeys are fragmented and varied, are particularly affected by a rigid zone- and usage-based fare structure.**
    - "I pay €56 a month, and that will double when the subsidies are withdrawn. It is extremely expensive for the service we get." (P8, Group 2)
    - "I think there should be a flat fare across the metropolitan area … in Berlin, for example, there is not such a big difference depending on where you live." (P14, Group 3)

- **Territorial inequality: where people live translates into greater financial and time burdens, particularly for those travelling from peripheral areas or zones 3–5 for employment or care.**
    - "I travel for work and to see my brother, but from Vilanova the journey takes two and a half hours." (P8, Group 2)

- **Assessment of concessions and proposals for fairer pricing: passes are valued, but participants call for wider criteria, including frequency of use, income, care responsibilities and off-peak travel.**
    - "I think public transport should be discounted for people using it to go to work every day, because that is not the same as taking it now and again." (P9, Group 2)

- **Gender inequalities and care: women with care responsibilities describe denser travel patterns, multiple stops (school, work and medical appointments), discontinuous schedules and a greater need for planning, all of which increase the cost and vulnerability associated with their journeys.**
    - "You have to drop the child at school, go to the doctor, go to work ... all in one journey." (P9, Group 2)
    - "My husband drives everywhere. I, on the other hand, organise my journeys in advance, make more connections and plan everything." (P2, Group 1)

- **Mobility and sustainability: criticism emerges of the inconsistency between climate-policy rhetoric and actual investment in collective transport.**
    - "They talk about sustainability, but they do not even repair the tracks or trains. Then they expect us not to drive." (P8, Group 2)

- **Preference for the Catalan Government railways over Renfe: they are regarded as more reliable, frequent and comfortable.**
- **Information systems and fare complexity: participants acknowledge that information is available, but find the multiplicity of fares confusing.**
- **Proposals for improvement: a flat metropolitan fare, income- or care-related concessions, reintroduction of shareable passes and improved accessibility.**

5.3. Patterns and trends identified in responses

This section first considers the conceptual themes shared by all three focus groups and then summarises areas of convergence and divergence between the participant profiles.

The cross-cutting analysis identifies several conceptual dimensions present across all three groups, beyond differences by sex or caring status. They allow participants' accounts to be understood structurally, in relation to social, territorial and fare conditions shaping public transport use:

- **Mobility and productivity: people undertaking linear work-related journeys regard the system as functional and good value. This perception predominates among those without care responsibilities.**
- **Mobility and care: fragmented, chained and variable journeys are found across all participant profiles involving care responsibilities and create friction with a fare system that fails to recognise them.**
- **Fare rigidity and flexibility: all groups, to varying degrees, call for ticket products that can better accommodate non-standard travel patterns.**
- **Invisibility and recognition: women carers explicitly understand fare-related exclusion as an injustice, whereas men with care responsibilities do not necessarily conceptualise it this way, even when they experience it.**
- **Territorial dimension: living in peripheral zones or areas with limited intermodal provision generates a shared experience of fare inequality across participant profiles.**

These dimensions, which emerge from the empirical research, allow mobility experiences to be interpreted not as individual deviations but as expressions of fare planning centred on an idealised passenger who does not reflect the actual diversity of journeys.

The following section summarises both the main themes shared by all three groups and those that distinguish their experiences.

The common themes are as follows:

- Across all focus groups, people providing care — women and men alike — describe more complex, fragmented and costly journeys.
- There is widespread criticism of the rigidity of products such as the T-usual, which are poorly suited to non-linear travel.
- A lack of integration between operators and fare zones is perceived as a common barrier.
- Participants share a need for more flexible, personalised or adaptable products suited to unconventional mobility patterns.
- Women carers describe interstitial mobility: they combine multiple destinations within connected journeys and adjust their schedules to other people's needs.
- Men without care responsibilities describe single-purpose, linear journeys: home-to-work travel or occasional leisure journeys.
- There is widespread frustration at the mismatch between fares paid and service quality.

The distinguishing themes are as follows:

- Women providing care articulate their experiences in terms of structural injustice and gender inequality.
- Men providing care describe similar patterns but do not necessarily interpret them through the lens of structural inequality.
- Women without care responsibilities also experience disadvantages arising from chained journeys, but do not always associate these with care; instead, they link them to sustaining their own everyday lives.

- Men without care responsibilities consider the system functional and economical when it suits their productive home–work–home mobility pattern.
- Car use is normalised as a "solution" to public transport inefficiency, particularly among younger men in Group 3.

5.4. Relationships between concepts

- There is a direct relationship between transport costs and service quality: people are prepared to pay where they perceive tangible improvements.
- Everyday travel for employment and care is associated with demands for better-adapted passes, including greater flexibility, duration and accessibility.
- Poor transport quality shapes mobility decisions affecting everyday life, particularly for women with care responsibilities.
- Care mobility requires greater timetable flexibility and integrated ticketing, yet zone-based pricing penalises discontinuous journeys.
- The variety of fare products interacts with territorial inequality; many passengers develop their own coping strategies, such as combining passes or driving to an intermediate station.
- Limited information and fare complexity discourage public transport use among people with little spare time or low digital literacy.
- Driving is not always a matter of preference, but sometimes a response to structural inefficiency. Poor Rodalies services and high fares increase dependence on private cars, undermining sustainability goals.

5.5. Representative quotations

5.5.1. Key quotations summarising common views

- "With T-mobilitat, you can use the trains and all forms of transport, but of course it is only until you turn 30 … when I turn 31 I do not know whether I will feel the same." (E3, Group 1) → illustrates generational and income-related gaps in access to affordable fares.
- "I have to work out how to make it as cheap as possible. I load zone 2 and travel as often as I like." (P5, Group 1) → shows how people making more journeys and bearing greater responsibilities (care and employment) seek out the most economical passes.
- "My wife has a free card because she earns less. I have no objection. It makes sense for people with less to pay less." (P14, Group 3) → supports income-related pricing, which could underpin policies responsive to social and gender inequalities.
- "To visit my mother I have to combine the metro, tram and bus on the same day. There is no pass that really suits me." (P4, Group 1)
- "When there is no one to give you a lift, you have to think everything through. If I cannot make it, no one takes the child." (P10, Group 2)

- "I use Renfe because I do not have a car, but it is a lottery. Every day brings a surprise." (P13, Group 3)
- "At home my wife organises all the children's journeys. I go to work and come back." (P12, Group 3)
- "Living far away and caring for someone is expensive: time, tickets, stress … all of it." (P8, Group 2)

5.5.2. Quotations best illustrating key themes

- **Care mobility:**

  "I am travelling all over Barcelona at any time, on any day." (P1, Group 1)

  "You have to take the child to school, go to the doctor, go to work … all in one journey." (P9, Group 2)

- **Insecurity and differences by sex:**

  "I, for example, would never walk home alone at night. I will always need transport." (P4, Group 1)

  "They have more options, like cycling or using a scooter … I would not use either." (P1, Group 1)

- **Fares and the care burden:**

  "People who travel more should pay less. If it is for work or to go to hospital, it should not cost the same as travelling for leisure." (P14, Group 3)

  "A fare for people who care for others would be important. We do not go to just one place a day, but to many." (P4, Group 1)

5.6. Linking responses to existing theories

- The accounts of women carers reinforce findings from the feminist studies discussed in the theoretical framework. The focus groups show that women make multiple journeys shaped by their care responsibilities, making them intensive but disadvantaged users of public transport. The empirical findings support feminist accounts of care mobility: multiple, fragmented journeys influenced by caring for others, with a greater prevalence among women.

- By contrast, men without care responsibilities enjoy more direct mobility, closely aligned with the efficiency criteria informing fare-system design. The study confirms a distinction between linear, direct travel associated with productive employment (more prevalent among men) and the more complex combination of journeys characteristic of people who provide care.

- The imbalance between accessibility, service quality and fare structure particularly disadvantages people with non-standard mobility needs, including women carers and those living further from the city.

5.7. Differences between participants

The differences within the male group are revealing. P14 (Group 3), for example, clearly explains how he organises mobility not only around his own needs but also those of his wife and other relatives: "My wife has a free card because she earns less. I have no objection. It makes sense for people with less to pay less." His perspective reflects an understanding of fare justice close to that expressed by women carers in Group 2.

P13 (Group 3), who also provides care, explains how family responsibilities shape travel planning. He describes how Renfe timetables affect his ability to fulfil these obligations, particularly when combining work with accompanying relatives to the airport or medical services.

P11 (Group 3) demonstrates a clear awareness of accessibility issues connected with both his disability and his family responsibilities. His use of the T-Metropolitana card and positive assessment of reduced-fare passes echoes the accounts of Group 2 women combining care and employment.

By contrast, P12 and P15, the two men in Group 3 without family care responsibilities, concentrate on optimising their own time and costs. P15 openly anticipates switching to a private car when he ceases to qualify for the T-Jove, less because of price than because of the time saved: "When I have a car, I will drive because of the time it saves me … I think the fare is all right, but comfort and time matter too." (P15, Group 3). P12 reports no structural obstacles to his journeys and values the flexibility and low cost of the T-Jove.

This internal segmentation shows that care responsibilities decisively influence perceptions of the fare system and the types of demands expressed. Men with care responsibilities, like women carers, make more fragmented journeys, face greater restrictions and display greater support for redistributive, flexible fares. Men without care responsibilities, by contrast, approach public transport more instrumentally, prioritising individual efficiency over the common good or a collective right to mobility.

From these observations, a preliminary summary is as follows:

- Group 1 (women without care responsibilities) places greater value on the T-usual and frequent-use fares, while criticising the lack of intermodal integration.
- Group 2 (women with care responsibilities) clearly calls for fares that recognise both the number and diversity of daily journeys.

- Group 3 (men) is divided according to caring status: those with care responsibilities (P11, P13 and P14) express views closer to Group 2 women, whereas those without them favour individual efficiency and car use.

5.7.1. Significant differences by profile

- **Women with care responsibilities (Group 2) displayed fragmented, non-linear mobility patterns involving multiple stops (work, school, doctor, shopping).**
    - This entails more journeys each day and potentially higher costs without access to flat-rate fares or knowledge of available concessions.
- **Men without care responsibilities (P11 and P14, Group 3) described direct, predictable mobility associated exclusively with work and involving few daily journeys.**
    - This entails less dependence on public transport and a greater perception of efficiency for individual journeys.
- **Participants caring for dependent people, such as P10 in Group 2 or P14 in Group 3, emphasised physical and structural barriers, including missing lifts or ramps, which make travel more difficult and costly.**

5.7.2. Variation by age, gender and experience

- Younger women (P2, P3 and P4 in Group 1) make greater use of concessions such as the T-Jove, but anticipate difficulties once they become ineligible.
- Adult and older women with care responsibilities believe that fares should take income and family responsibilities into account, rather than age alone.
- **Older men (P13 and P14 in Group 3) propose a flat metropolitan fare, but tend to frame this in technical or tax-justice terms, whereas women link it to gender and care justice.**

5.8. Results and conclusions

The focus groups reveal that current metropolitan public transport fares in Barcelona do not adequately recognise mobility patterns associated with care, which are more prevalent among women. People with care responsibilities, particularly the women in Group 2, make more journeys each day, at variable times and using combinations of routes and modes. Their multiple, fragmented and dense travel patterns contrast with the linear journeys of those travelling solely for paid employment.

Current fares therefore reproduce a mobility model designed for homogeneous, predictable journeys, favouring those travelling for paid employment without care responsibilities. People undertaking care mobility — principally women — make more journeys, at more varied times and under less favourable conditions, resulting in higher cumulative costs.

The fare system rewards regular, linear travel through products such as the T-usual and T-Jove, while penalising fragmented mobility where passengers cannot access concessions or integrated fares. This disproportionately affects people who provide care.

The following conclusions can therefore be drawn:

- Current fares are not neutral: their effects differ by sex, age, income and care responsibilities.
- People with care responsibilities, particularly women, incur greater direct and indirect costs in their everyday mobility.
- Informational and structural barriers aggravate fare-related exclusion, including lack of awareness of concessions, zonal differences and age limits.
- Demands for fare justice are expressed most strongly by women and by people whose journeys depend on care responsibilities.
- Public transport fares do not recognise the value or structure of care mobility, disadvantaging those most dependent on collective transport.
- Fare inequality intersects with inequalities of gender, territory, age and economic resources.
- The current approach renders invisible the everyday contribution of care mobility to sustaining life in the city.

6. CONCLUSIONS: PREMISES, EMERGING THEMES AND PROPOSALS

The quantitative and qualitative analyses presented in ITTG, BCN 2025 give rise to a set of premises (item 1), key themes (items 2 and 3) and proposals (items 4 and 5), as follows:

1. Care mobility
2. The importance of sex-disaggregated data for quantitative analysis
3. Transport fares as political prices
4. Simplification of public transport fares
5. Public transport fares from a gender perspective

This chapter presents the results organised into thematic categories, supported where appropriate by verbatim quotations and interpretative analysis.

6.1. Care mobility

Care mobility differs in many respects from travel undertaken for employment or leisure. The literature review, the analysis of the Working-Day Mobility Survey (EMEF) and the qualitative work through in-depth interviews (IDIs) and focus groups (FGs) all reveal the nature of these

differences. They relate not only to the people undertaking the journeys, but also to travel times, frequencies, accompanying others and the diversity of routes. The distinction between care mobility and other work-related travel should not, however, be understood as absolute. The two may take place separately, but are often combined by the same people, most of whom are women, further increasing the differences between mobility patterns.

The current system has essentially been designed around simple journeys, in which a passenger travels from one point to another and the zones crossed, frequency of travel and personal characteristics determine the appropriate ticket or pass. If that person makes more complex or occasional journeys, each must be assessed separately according to the same model, as though undertaken by a different passenger. Two journeys within one fare zone may be added together in determining whether a T-usual or T-casual ticket is worthwhile; journeys involving different zones cannot. This problem has been aggravated by increased subsidies concentrated on unlimited-use passes, creating a relative disadvantage for occasional-use tickets.

The fare system should place the individual passenger at the centre of pricing decisions. If care mobility involves more varied journeys, but not more journeys or greater distances, than repetitive mobility, it does not entail additional costs for the system and should not entail additional costs for the passenger. Moreover, if care-related trips are made more frequently during off-peak hours, reducing operating costs, that benefit should be reflected in lower costs for passengers with these mobility patterns.

6.2. Importance of sex-disaggregated data for quantitative analysis

In relation to metropolitan transport fares, our analysis of the in-depth interviews identifies the invisibility of sex-disaggregated data, and the absence of other information concerning care responsibilities, as a structural obstacle.

A recurring concern expressed in almost all the interviews is the inadequacy of information on Barcelona metropolitan transport fares incorporating variables such as sex, age, occupation or care responsibilities. There is near-consensus that this data gap directly prevents the identification of specific mobility patterns associated with care or precarious circumstances and, as a result, makes it impossible to quantify the additional costs of care mobility.[36]

[36]This constitutes a failure to comply with Article 20 of Organic Law 3/2007 on effective equality between women and men, as well as the European Commission recommendations presented in the theoretical framework under the Gendered Innovations initiative launched in 2009. One of the initiative's principal

As noted, one of the most persistent and sensitive issues in the study of inequalities in urban mobility is the absence of sex- and gender-disaggregated data. Every participant in the in-depth interviews conducted for this study — passengers, institutional representatives, technical specialists and academics — identified the lack of segmented information as a major impediment to fare policies and transport planning that genuinely recognise care mobility and the unequal distribution of transport use.

Several interviewees, especially those with technical expertise, stress that existing analytical systems, such as origin–destination studies, fail to capture the fragmented, multi-purpose journeys characteristic of care mobility or to identify who undertakes them. Another central problem is the absence of intersectional approaches to data collection: variables such as gender, income, place of residence, age and migration status are not analysed in combination.

The invisibility of sex-disaggregated data and the absence of information about care prevent public policies from being adapted to real needs. These gaps also perpetuate the invisibility of care work and consequently reproduce structural inequalities in transport access. In response, several interviewees propose changing how mobility data are collected and processed, including through qualitative and participatory methods.

The lack of disaggregated information prevents policies from reflecting real needs. As interviewee E1 explains: "Without knowing how many people make multiple journeys or who accompanies dependent people, it is impossible to design fair fares."

Moreover, this gap perpetuates the invisibility of care work and reproduces structural inequalities in access to transport. E2 puts it this way: "It is as if women travel for leisure. There is no distinction between travelling for work, for care, or to take your grandfather to the doctor."

Another key issue is the absence of an intersectional approach to data collection: variables such as gender, income, residence, age and migration status are not combined. As E6 explains: "There were hardly any measures at the general level, let alone measures at the individual level. [...] It does not form part of the analysis of urban transport policy in Seville." (E6)

Against this background, several interviewees propose changing the collection and processing of mobility information, incorporating qualitative and participatory methods.

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recommendations is to disaggregate mobility data by sex throughout EU countries, in order to obtain accurate evidence on women's and men's mobility patterns and on care-related mobility, and thereby adapt urban design accordingly. http://genderedinnovations.stanford.edu/case-studies/mobility.html#tabs-2http://genderedinnovations.stanford.edu/case-studies/mobility.html - tabs-2

Across the interviews there is almost universal agreement that the existing public transport data infrastructure is incapable of capturing the realities of mobility associated with gender and care. This lack of data not only restricts equity-based planning, but also reinforces structural blindness towards those who travel outside conventional patterns associated with productive employment.

Remedying this requires substantial reform of information collection and processing systems: including gender- and care-related variables, developing new questions for origin–destination studies and employing qualitative techniques, including interviews and exploratory walks, to recover passengers' perspectives.

Importantly, the absence of sex-disaggregated data cannot be justified institutionally by invoking Organic Law 3/2018 of 5 December on Personal Data Protection and the Guarantee of Digital Rights, since properly anonymised data, as explained earlier, do not fall within its scope. On the contrary, collecting statistics disaggregated by sex is a requirement of Article 20 of Organic Law 3/2007 of 22 March on Effective Equality between Women and Men.

The interviews therefore reveal almost universal agreement that the existing public transport data infrastructure cannot capture mobility patterns related to gender and care. This absence of information not only limits equity-based planning, but also reinforces structural blindness towards people whose journeys do not correspond to conventional, employment-related travel. Addressing this requires profound changes to data collection and processing: incorporating gender- and care-related variables, introducing new questions into origin–destination studies and using qualitative methods such as interviews and exploratory walks to incorporate the perspectives of transport users.

6.3. Transport fares as political prices: fares as a policy instrument for accessibility from a gender perspective

The term "political price" refers to a price that is not determined exclusively by market logic, but established or adjusted by public decision-making to pursue equity, gender equality, social justice, accessibility or social transformation. We adopt González-Hernández's (2002) understanding of political prices as prices determined by state intervention rather than market logic, where a good or service is considered something that should be within reach of the entire population.

Following the literature cited, urban transport fares are not "private prices" in the technical sense. Rather, they are contributions of a parafiscal character, associated with services organised not to satisfy "a sum of individual utilities" but to fulfil collective structural purposes.

This means that transport fares do not express an exchange relationship (the commutative principle), as market prices do, but instead respond to the contributory principle of public law, in a manner comparable to a levy:

In other words, the price reflects a political decision to promote particular uses of public transport, secure accessibility or achieve specific environmental, social, territorial-equity or gender-related outcomes, even where this entails partial or complete funding from public resources.

A substantial proportion of interviewees agree that public transport prices should reflect political decisions aimed at guaranteeing universal access. From this standpoint, price ceases to be a merely technical variable and becomes an instrument of social policy.

Within this discussion, the question of fare-free public transport becomes a central point at which the political character of pricing is particularly clear. Views range from support for its feasibility on social grounds to concern that it may be populist or unsustainable without a sound funding structure.

Some interviewees with technical backgrounds are more reluctant to regard transport fares as a political instrument, emphasising the need to cover operating costs and maintain the system's financial sustainability. This position reveals tensions between economic logic and social objectives.

Nevertheless, the views of several interviewees show that public transport fares are also understood as a reflection of governments' policy priorities. Where transport is considered an essential good, fares become a subject of ideological contestation.

The interview analysis shows that the concept of political prices in public transport is not only present but essential to understanding tensions between technical criteria and social-equity decisions. While some technical specialists defend the system's financial balance, others — particularly women transport users and those with political responsibilities — call for fares more responsive to territorial, economic and gender inequalities. In this context, transport pricing is recognised as a legitimate field of political debate and a central instrument for building a fair and sustainable mobility system.

6.4. Simplifying fares from a gender perspective

One of the criticisms most frequently raised in the in-depth interviews and focus groups concerns the excessive complexity of the fare system. The existence of numerous zones, passes and eligibility rules is experienced as a deterrent by passengers, whether or not they are also transport professionals.

The interviews show that fare design particularly disadvantages people undertaking care-related journeys, including many women who chain multiple trips together in a single day. In addition, the current zoning system means that living further from the centre — often in lower-income neighbourhoods — entails higher fares, disproportionately affecting people with fewer resources: "The further away you live, the more you pay for transport, and that creates a financial barrier" (E4).

Interviewees propose several possible responses. Some favour reducing the number of fare zones and introducing more affordable flat-rate fares; others call for recognition of emerging travel patterns associated with teleworking and new forms of employment, in which frequency of use is no longer the main determinant of public transport demand.

The analysis of both the interviews and focus groups reinforces the need to reform the fare system from the standpoint of social and gender justice. Participants call for a simpler model that is easier to understand, fairer and better suited to everyday needs, especially for people whose journeys are fragmented or whose homes are further from the centre. They also demand sex-disaggregated data to measure and correct discriminatory effects. Improving safety on night-time transport, reviewing free-travel policies in specific circumstances and adopting fare models sensitive to care mobility are further proposals arising from this rigorous qualitative analysis.

Perceived insecurity is another crucial factor affecting women differently. Interviewees explicitly describe how fear restricts travel at certain times: "Travelling at night on public transport can sometimes be frightening, depending on where your stop is or where you have to get off" (E5.1). "If you travel at night on public transport, you are frightened. And that feeling does not go away until you get home" (E5.1). "Being a woman working nights is not the same as being a man working nights. It makes mobility much more difficult and creates a safety barrier that men do not face in the same way" (E5.2).

The focus groups show that insecurity in women's mobility also has fare-related consequences, increasing the cost of their journeys. Participant P04 (FG1) explains: "For example, it would never occur to me to walk home alone. So I will always need transport at night ... but a man might not even think about that situation and, if he has to walk for 20 or 30 minutes, he just does it alone at night. And if men do not do that, it is for other reasons — laziness or whatever — but basically not because they are afraid to walk alone at night." Participant P01 (FG1) adds: "I do not think it is the same, because they have more options, such as cycling or using a scooter. I am 53 and I would not get on one of those things, but a man might, if he is willing to take the risk of riding a bicycle or scooter. So I have no choice but to take the metro, and that means we face inequality in transport. And when I get on the train, I see that most of the passengers are women, of all ages, from girls to older women."

Insecurity in women's mobility is of great importance not only because it restricts their personal autonomy, but also because it introduces a hidden bias into fare decisions: equity cannot be assessed solely by reference to prices, but must also take account of genuine accessibility.

6.5. Fares and care mobility: proposals

This final conclusion, which also constitutes a set of proposals, is organised around the three dimensions requested by Barcelona City Council: (1) evidence of discrimination against people who provide care; (2) the policy mechanisms producing these inequalities; and (3) proposals for

fare reform from a gender and care perspective. Each subsection is supported by verbatim quotations from participants.

6.5.1. Evidence of discrimination against carers under the current fare system

Both the in-depth interviews and focus groups indicate that the fare system penalises those who provide care, particularly women. This disadvantage operates on three levels: financial (the cost of multiple journeys), organisational (inflexible ticket products) and symbolic (the invisibility of their journeys).

- P8 (Group 2): "When I have to pay the full amount, it will be almost €120 a month."
- P9 (Group 2): "I take my child somewhere, go shopping, go to work … one after the other, all using the same card."
- P10 (Group 2): "The person accompanying him is not going for any other reason. They are going for him. They come as a package."
- E1: "Women spend more time travelling, even though they cover shorter distances."
- E2: "Women's mobility reflects a double presence: employment and care."

6.5.2. Policy mechanisms that produce these inequalities

The existing fare structure reproduces gender inequalities through several policy mechanisms: zoning, a productivist approach to mobility, lack of transparency, insufficient intermodal planning and the absence of sex-disaggregated data.

- P14 (Group 3): "Renfe's ten-journey ticket has to be used within a month."
- P7 (Group 2): "The system is designed for someone who goes to work and comes back. I make lots of stops."
- E5.2: "If you have to make three connections within one service, the frequencies are so low that you run out of time."
- E4: "Our data do not have that flag. We do not know whether the traveller is a man or a woman."
- E6: "Stops at care-related destinations are not taken into account. And that excludes people."
- E3: "The transport system is adult-centred. And buses, which are used more by women, receive less investment."

6.5.3. Proposals for fare reform from a gender and care perspective

In summary, the proposals emerging from the methodological exercises described above — in-depth interviews and focus groups — are as follows:

1. **Include care responsibilities in fare design: introduce specific tickets or concessions for people with dependent family members.**

2. **Develop flexible passes for multiple journeys at varying times, without penalising changes of mode or transfers within an extended time window.**
3. **Introduce a flat-rate metropolitan fare, without distinctions between zones, at least for everyday journeys associated with employment and care.**
4. **Reintroduce shareable or family passes to facilitate group travel by families and carers.**
5. **Promote information campaigns aimed at women with care responsibilities, using accessible digital and physical channels.**
6. **Evaluate fare impacts using equity indicators disaggregated by sex, mobility pattern and income level.**

These proposals are grounded in participants' concrete experiences and provide a sound empirical basis for redesigning fares from a gender and care perspective.
Although diverse, the proposals share a common aim: redesigning fare policy to incorporate equity, recognition of care mobility, and territorial and economic redistribution. The principal measures include:

- A flat-rate metropolitan fare:
  P14 (Group 3): "Barcelona and its metropolitan area should count as a single zone."
  E3: "There is no social or territorial justification for six zones."
- Shareable and adaptable passes:
  P9 (Group 2): "I do not know how many times I will need to go out during the month."
  E5.1: "An accompanying-person pass to go to the doctor — why not for taking children to school?"
  E1: "Monthly passes costing between €20 and €30 with unlimited journeys."
- Socially differentiated and usage-based fares:
  P13 (Group 3): "I would not mind paying more if it helped other people."
  E5.2: "Care-related journeys, which are shorter, should qualify for reduced fares."
- Dedicated routes or concessions according to journey purpose:
  E6: "A fast route stopping at schools and hospitals, free at key times."
- Gender-responsive data collection:
  E5.1: "We are working in the dark because we do not have the data."
  E4: "We have no breakdown by sex. If the City Council asks for it, we can examine the possibility."

Taken together, the accounts of passengers and experts reveal structural discrimination against people with care responsibilities within the metropolitan fare system. The convergence of lived experience in focus groups and institutional or academic analysis through in-depth interviews supports the urgent need for fare reform from a gender and care perspective. Such reform should recognise diverse journey patterns, provide concessions for journeys that sustain everyday life and secure fair access to public transport.

Ultimately, on the basis of this research and our understanding of public transport fares as political prices, we consider that any proposal must take account of budgetary realities. The

research team therefore puts forward three complementary proposals to Barcelona City Council, addressing occasional and regular transport use through an intersectional gender perspective.

1. Integrate all fare zones into a single zone for every public transport ticket, with a basic unlimited-use monthly pass priced below €50. This corresponds to the price of the German nationwide pass at the time of the study and to the unsubsidised price of a two-zone pass in Barcelona. The difficulty is that the unsubsidised one-zone pass costs €35.20 (it was €40 in 2022, excluding the Catalan Government subsidy), so a higher unified fare might appear excessively expensive. Nevertheless, inflation since 2022 and the benefit of being able to travel beyond zone 1 without additional payment should justify the change.https://www.elperiodico.com/es/barcelona/20191204/tarifas-2022-transporte-metropolitano-barcelona-7762206

Under this flat-rate system, existing fare concessions should be linked to income. This is already the case for older people, although the age thresholds vary between municipalities and should be standardised.https://www.amb.cat/es/web/amb/seu-electronica/tramits/detall/-/tramit/solicitud-de-la-t-metropolitana-tarjeta-rosa/17176884/11696

2. If a single zone is considered to separate fares too greatly from the cost of service provision, mechanisms should be introduced to attach usage-based discounts to the individual passenger rather than to a particular ticket. The system currently offers several forms of discount to reward frequent travellers, but these are tied to specific zones. If a regular passenger has to make a journey beyond their usual zone, their pass is no longer valid and they are treated as a new, occasional customer. Our research indicates that this disadvantages women relative to men, since women often need to manage different tickets for journeys of different purposes and frequencies. The system should encourage public transport use as a whole, not the use of one particular ticket within one particular zone.

3. Consolidate limited-use monthly tickets into a product offering approximately 20 journeys for €20, replacing the T-casual and the various municipal bus passes, and allowing more occasional passengers to benefit from their lower intensity of use. If transferable between passengers, it could also replace the T-familiar and T-grup. The current system contains an excessive variety of products, ranging from single tickets to unlimited-use passes. This complicates fare structures and, at current prices, discourages occasional or medium-intensity public transport use — mobility associated with people who normally choose active modes of travel but need to make longer journeys several times a week. Such mobility has traditionally been associated with women, although teleworking and the growing retired population are extending it to other groups.

Reforming the fare system from a gender perspective is not simply a requirement of social justice, but a condition for moving towards a genuinely caring and sustainable city. ITTG, BCN 2025 offers an analytical framework and concrete measures which make it possible, for the first time, to reveal and address a form of structural inequality that has hitherto remained invisible.

This study provides a starting point for rethinking the metropolitan fare system in the interests of social justice. Doing so means putting equality between women and men at the forefront through an intersectional perspective, and taking account of their individual and collective well-being.

A caring city is also designed through its fares.

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8. ANNEXES

8.1. Quantitative report

8.1.1. Working-Day Mobility Survey (EMEF)

We begin with a brief description of the survey, before analysing individual variables — journey duration, area and satisfaction — and exploring cross-tabulations that may help address our research objective.

The survey has been conducted annually since 2004, providing a useful longitudinal perspective, although our analysis focuses on the 2023 questionnaire and results (the detailed findings were published in late October 2024). The 2023 questionnaire is extensive, running to 14 pages. Each year, the Catalan Mobility Observatory (OMC), which publishes the survey promoted by the ATM and conducted by Institut Metròpoli (IM), provides the following freely accessible resources on its website:[37]

- Aggregated results and specific reports covering different territories or modes, such as cycling. Regarding gender, these present only total numbers of journeys (slightly more for women), trip stages (also more for women), modes, purposes and age groups. Although this may appear substantial, certain details are missing — cycling and walking times are reported, for example, but not gender-disaggregated totals. A survey of this kind permits much more detailed analysis, which we have not found in the academic literature, perhaps because it would be regarded as excessively descriptive. This is a gap that our research could help fill.
- Two open public-use datasets for 2021, 2022 and 2023: journeys (42,121 records with 52 original and derived variables) and opinions (formerly individuals, comprising 10,154 records and 138 variables in 2023). The journey dataset records the county and metropolitan area of origin and destination.
- The original datasets are available upon request with supporting justification.

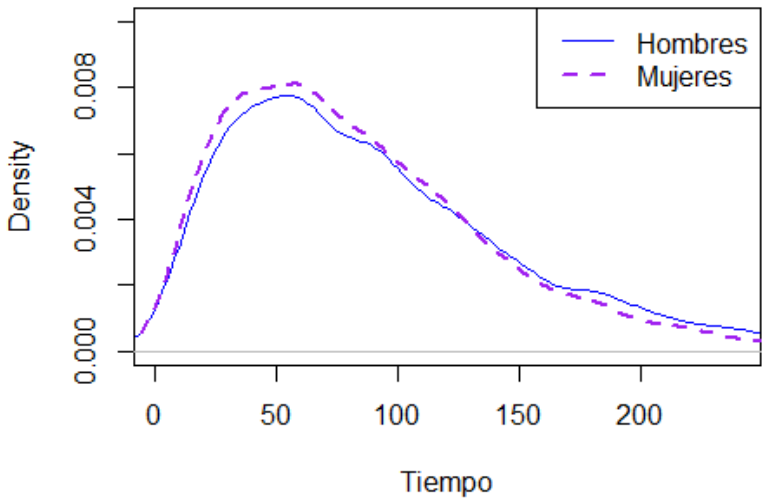
[37] https://www.omc.cat/documents/662112/1628687/Q%C3%BCestionari+EMEF+2023.pdf/9d3dae71-d9d5-631a-765b-93babbeb559d?t=1729230670038

As a starting point, we merged the two datasets, because each respondent in the journey dataset has an anonymised identifier matching the one in the individual dataset. We can also separate observations for women and men, as this is the central concern of our analysis.

8.1.1.1. Journey duration

Figure 10 shows the distribution of daily travel time for men and women using kernel smoothing. It reveals a higher proportion of women making relatively short journeys, particularly among those travelling between 45 and 75 minutes per day, and a correspondingly lower proportion spending three to four hours travelling.

Figure 10. Total journey durations10

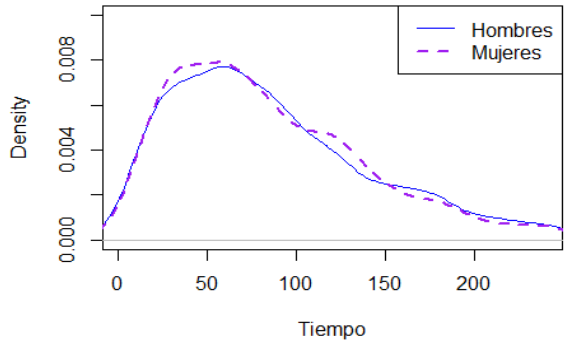


Another approach is to calculate means and other summary statistics:

	Hombres	**Mujeres**
Media	96.34529	87.28952
Mediana	80	75

Both the mean and median are significantly higher for men, but it is important to remember that these figures represent total travel time across all modes and purposes. We could examine the time women and men spend on public transport, but also the total travel time of public transport users: any difference might indicate a network design that requires one group to spend more time walking. The former would require selecting respondents who recorded codes 2–10 or 23–24 for any journey in V03G, V03H or V03I. The latter appears more useful. We therefore selected those reporting public transport as their principal mode in V03GR3 and summed all their travel time.

Figure 11. Total travel time of public transport users11



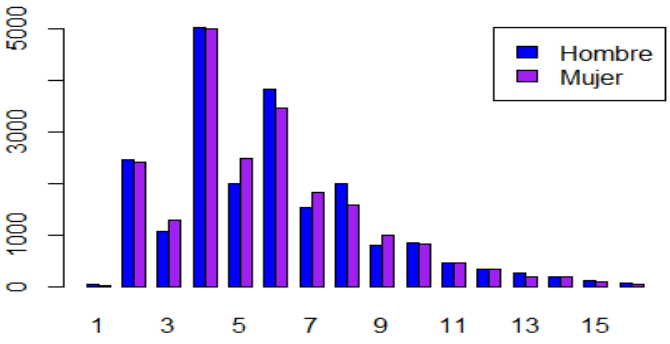
Although the total sample is fairly balanced by sex (4,957 men and 5,197 women), considerably more respondents whose main mode is public transport are women (3,303 versus 2,263 men). Thus, among those spending more than two hours daily travelling primarily by public transport, there are 36.5% more women (423 compared with 310 men; the difference was 43% in 2022).

8.1.1.2. Duration and number of journeys

Another way of measuring mobility complexity is to count journeys rather than measure their duration. This can be examined in several ways.

– For all respondents

Figure 12. Number of journeys12

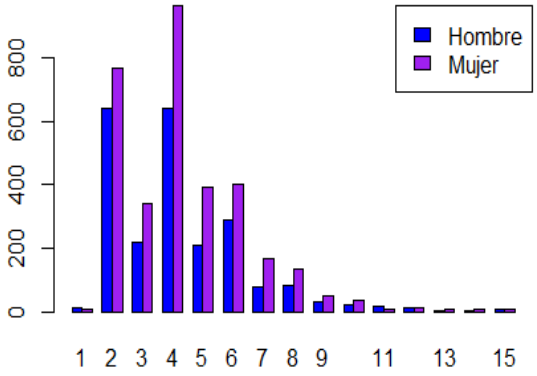


Women's greater representation among people making an odd number of journeys suggests a more complex travel pattern than a straightforward outward-and-return journey, although the differences are small and some respondents may not have counted both legs. Mean journey numbers are similar by gender (5.7), but higher than the ratio obtained by dividing the sizes of the two datasets, which should theoretically yield the same number because they contain people and journeys respectively. Some respondents probably report more journeys than they subsequently describe, but this is not a particularly important issue.

– For people whose mobility is based on public transport

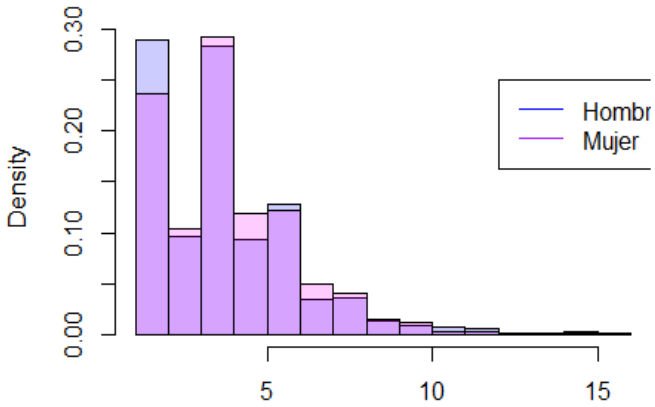
We again focus on public transport users. Figure 13 shows that women are more numerous across all journey counts, as would be expected given that they form the majority of people whose main mode is public transport. Nevertheless, their predominance is particularly marked among those making four or five journeys per day.Figure 13. Number of journeys (public transport users)13

Figure 13. Number of journeys (public transport users)13



The same pattern can be considered in reverse, by examining the frequency of each journey count within each sex, as shown in Figure 14.Figure 14. Number of journeys (public transport users)14

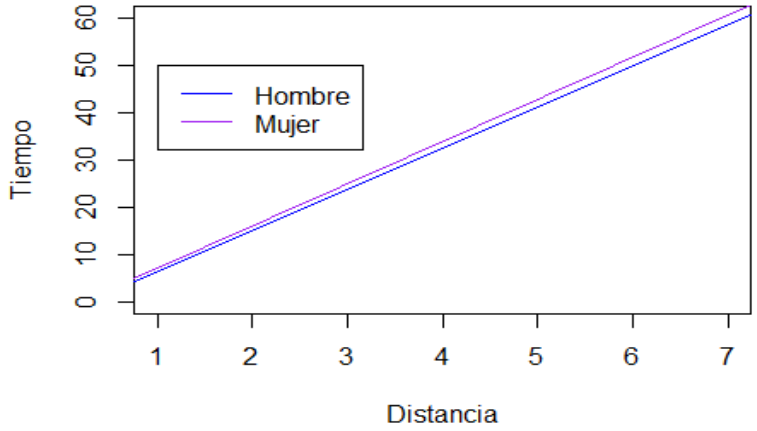
Figure 14. Number of journeys (public transport users)14



8.1.1.3. Relationship between time and distance travelled

Time alone may not be decisive: differences should perhaps be assessed in relation to distance travelled, since this could reveal disadvantages arising from network design rather than simply the amount of travel. If shorter journeys take just as long, the transport system may not be designed for those mobility patterns. The published survey results include an ordinal measure of distance between origins and destinations, allowing a regression of distance on time and an examination of whether sex is statistically significant, as illustrated in Figure 15.Figure 15. Relationship between distance and travel time by sex15

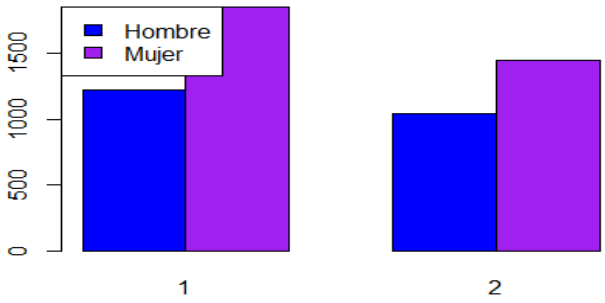
Figure 15. Relationship between distance and travel time by sex15



8.1.2. Multimodality

Multimodality also provides an indicator of journey complexity.

Figure 16. Number of transport modes (non-professional public transport users)16



The means are very similar (1.44 for women and 1.46 for men). The variable takes the value one where all journeys use the same mode, or two where several modes are used, but it reveals little about complexity.

Respondents identify their main mode (V03G) and, where applicable, their second and third modes. The relationship between them can be examined. For example, we might expect those travelling mainly by car or on foot to report no second mode, since both provide door-to-door travel. Most modes are too infrequent for their figures to be informative, but the difference among respondents whose main mode is "Walking" is striking: men generally report no additional mode, whereas most women do.

Table 3. Probability of multimodality by main transport mode and sex3

Modo	Hombres	Mujeres
Total	6.20	8.12
Caminando	15.79	66.67
Autobús empresa	0.00	11.11
Autobús escolar	10.00	18.18

Autocar (excursiones privadas)	28.39	27.61
Autobús TMB	29.06	32.06
Metro	50.00	33.90
Tranvía	59.35	58.97
FGC	55.38	56.93
Rodalies Renfe	66.67	75.00
Renfe regional	14.86	10.47
Taxi (Uber, Cabify)	1.99	2.60
Coche como conductora	6.32	5.62
Coche como acompañante	1.49	3.35
Moto como conductora	18.75	6.98
Moto como acompañante	2.45	0.00
Furgoneta	6.06	7.01
Bicicleta	13.64	0.00
Vehicles for people with reduced mobility	4.07	0.00
Patinete y similares	1.40	3.85
Ciclomotor como acompañante	1.72	
Camión	31.39	30.50
Otros autobuses (urbano no TMB o interurbano)	57.14	28.57

8.1.3. Duration, purpose and mode

Indicator 70 of Institut Metròpoli (2024) examines the time and distance of daily journeys by women and men according to journey purpose (V03A). The survey includes 18 purposes but also groups these into three categories — return to accommodation, occupational and personal — allowing us to propose an intermediate level of aggregation. Returning home accounts for nearly half of all journeys and can be grouped with travelling elsewhere to sleep. Everyday and occasional shopping can be combined with collecting e-commerce parcels. Caring for older people and children can be grouped with accompanying or collecting them; work-related errands and meals that are not leisure activities can be grouped with employment. The 18 categories are thereby reduced to nine. Figure 17 shows disaggregated journey purposes and Figure 18 our intermediate aggregation. As expected, women predominate in journeys for care (caring for or accompanying people), shopping and medical appointments.Figure 17. Journeys by destination or purpose17Figure 18. Journeys by destination or purpose (grouped)18

Figure 17. Journeys by destination or purpose17

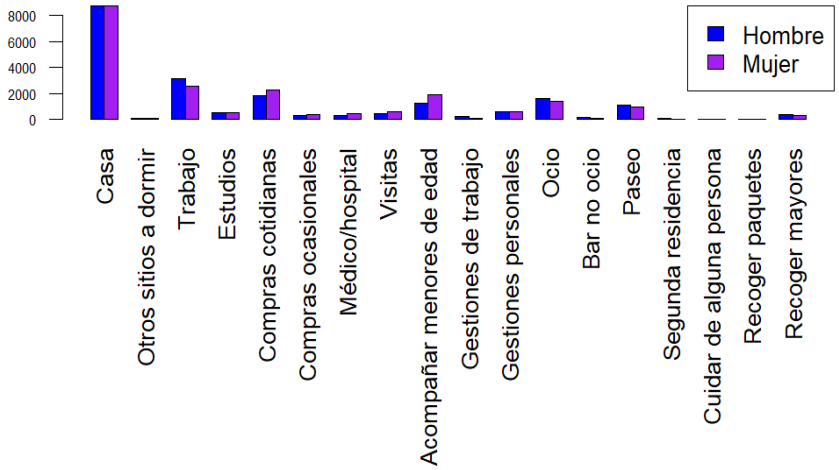
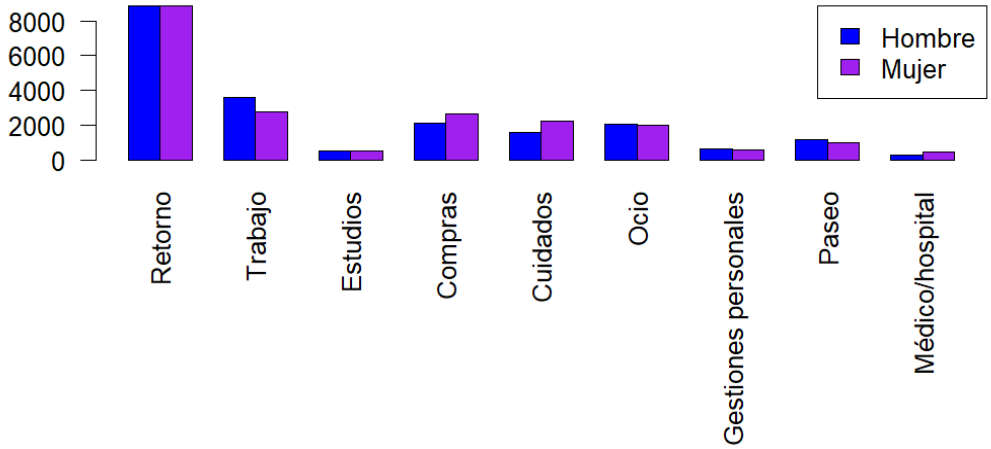


Figure 18. Journeys by destination or purpose (grouped)18



We then describe the average times and distances travelled by women and men for each purpose, alongside the number of journeys. Table 4 includes standard deviations for travel time, but distance is provided only as an integer category, not in kilometres; Table 5 therefore reports mean category levels. The largest differences concern the number of people making journeys for each purpose, as already noted.Table 4. Journey times4[38]Table 5. Journey distances5

Table 4. Journey times4

[38]This is a non-linear index taking the value 1 for distances of less than 500 metres and 7 for distances exceeding 100 kilometres.

Motivos	Número		Media		Desviación típica	
	Hombres	**Mujeres**	**Hombres**	**Mujeres**	**Hombres**	**Mujeres**
Retorno	8.895	8.867	21.99	20.43	27.06	27.84
Trabajo	3.613	2.760	26.58	24.19	28.61	22.13
Estudios	518	536	29.54	29.97	26.46	25.34
Compras	2.139	2.650	11.49	12.32	11.81	13.06
Acompañar o cuidar a personas	1.615	2.256	14.77	13.61	13.59	13.01
Ocio	2.096	2.038	19.31	18.40	27.72	21.45
Gestiones personales	625	589	16.93	15.84	22.58	19.05
Paseo	1.168	1.008	30.02	27.97	25.88	24.65
Médico/hospital	286	462	24.22	21.86	17.88	18.26

Table 5. Journey distances5

Motivos	Media	
	Hombres	**Mujeres**
Retorno	2,62	2,36
Trabajo	3,53	3,13
Estudios	2,18	2,01
Compras	2,62	2,36
Acompañar o cuidar a personas	3,53	3,13
Ocio	2,18	2,01
Gestiones personales	2,62	2,36
Paseo	3,53	3,13
Médico/hospital	2,18	2,01

In general, differences in distance are small and correspond to reported differences in time. Figure 19 shows mode frequencies by sex.Figure 19. Transport mode19

Figure 19. Transport mode19

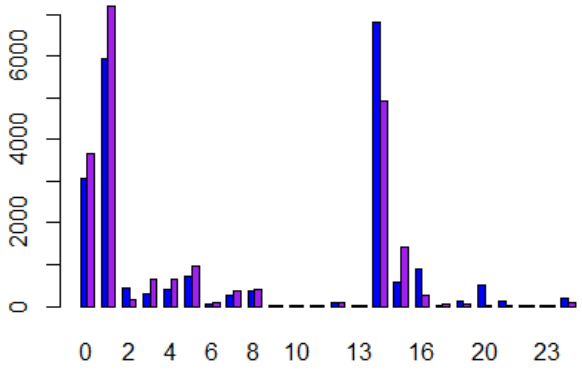


Table 6. Transport mode6

Modos	Hombres	Mujeres
Pie menos de 5min	3.073	3.678

Pie más de 5 min	5.934	7.195
Bicicleta	428	152
AutobúsTMB	293	666
Otros bus	418	666
Metro	735	963
Tramvia	59	98
FGC	247	363
Rodalies	374	401
Bus empresa	21	7
Bus escolar	8	12
Autocar	15	17
Taxi	76	86
Tren regional	6	8
Coche como conductora	6.826	4.926
Coche como acompañante	589	1.428
Moto como conductora	878	266
Moto como acompañante	15	41
Ciclomotor como conductora	141	52
Furgoneta	492	6
Camión	116	34
Otros medios públicos	11	16
Otros vehículos privados	14	1

8.1.4. Area

The area of origin and destination can be incorporated into any analysis of journeys. Respondents provide their home address, although its level of detail is unclear, but not their destination address. We therefore need to work with aggregated areas.

In analysing counties, we separated Barcelona from the rest of Barcelonès because of their considerable quantitative importance, resulting in 13 areas. For visualisation, Barcelona and the remainder of its county are listed first, and we have attempted to order the others roughly from nearest to farthest. An arbitrary partition of a two-dimensional space cannot strictly be ordered along a single dimension, not least because Barcelonès surrounds Barcelona; this is simply the rationale for an ordering that is of little substantive consequence. We first examine the distribution of all journeys between the 13 counties in Table 7. The predominance of journeys within each county is striking, with intra-county travel accounting for the majority in almost every case, exceptTable 7. Territorial distribution of all journeys7

Table 7. Territorial distribution of all journeys7

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	8.414	506	23	101	25	361	131	511	59	32	39	23	17
2	8.953	2.958	2	24	2	64	57	201	13	9	5	24	1
3	23	3	1.630	27	39	14	1	5	0	0	1	3	9

4	100	24	29	2.046	30	154	41	36	1	3	3	5	2
5	26	1	40	31	1.055	18	0	4	0	0	0	75	2
6	354	67	11	157	20	4.771	34	135	6	11	11	25	5
7	128	57	2	41	0	37	2.067	19	1	1	0	1	2
8	506	191	8	33	3	141	19	5.236	32	37	61	1	2
9	57	12	0	1	1	5	1	35	1.311	47	5	2	0
10	38	8	0	2	0	12	1	37	49	1.297	17	2	0
11	42	5	1	2	0	11	0	57	5	18	1.366	15	1
12	22	1	4	5	77	26	1	16	2	2	16	1.587	62
13	15	1	9	3	2	4	1	2	0	0	0	62	1.370

Zones

1	Barcelona	8	Baix Llobregat
2	Resto.Barcelonès	9	Garraf
3	Osona	10	Alt Penedès
4	Vallès.Oriental	11	Anoia
5	Moianès	12	Bages
6	Vallès Occidental	13	Berguedà
7	Maresme		

Thirteen areas produce excessively large, uninformative tables because most cells are of little interest. An alternative is to work with the six areas identified by the CAMB variable. First, we examine travel between these areas and whether the patterns differ by sex.[39]

Table 8. Journeys between grouped areas: totals8

	BCN	**R.corona**	**R.AMB**	**R.RMB**	**R.SIMMB**	**F.SIMMB**
BCN	8414	947	310	486	127	46
R.corona	935	5577	308	293	40	22
R.AMB	308	295	3262	395	37	20
R.RMB	479	297	390	10177	201	102
R.SIMMB	128	37	33	201	7428	82
F.SIMMB	43	21	20	117	82	461

Origin and destination totals are similar because passengers generally return from the places they visit. This cannot be analysed for the "main" journey because the survey records place of residence but not the destination of that journey. Breaking the figures down by sex produces the following tables.

[39]Barcelona; the remainder of the first ring; the remainder of the Barcelona Metropolitan Area; the remainder of the Barcelona Metropolitan Region; the remainder of the Integrated System; and journeys originating or ending outside that system.

Table 9. Journeys by area: men9

	BCN	R.corona	R.AMB	R.RMB	R.SIMMB	F.SIMMB
BCN	4.068	515	163	277	73	31
R.corona	507	2.670	167	185	23	14
R.AMB	155	160	1.554	235	21	15
R.RMB	276	187	229	4.859	128	66
R.SIMMB	75	21	19	129	3.615	52
F.SIMMB	29	13	13	76	54	281

Table 10. Journeys by area: women10

	BCN	R.corona	R.AMB	R.RMB	R.SIMMB	F.SIMMB
BCN	4346	432	147	209	54	15
R.corona	428	2.907	141	108	17	8
R.AMB	153	135	1.708	160	16	5
R.RMB	203	110	161	5.318	73	36
R.SIMMB	53	16	14	72	3.813	30
F.SIMMB	14	8	7	41	180	180

Table 11. Journeys by area: difference (women minus men)11

	BCN	R.corona	R.AMB	R.RMB	R.SIMMB	F.SIMMB
BCN	278	-83	-16	-68	-19	-16
R.corona	-79	237	-26	-77	-6	-6
R.AMB	-2	-25	154	-75	-5	-10
R.RMB	-73	-77	-68	459	-55	-30
R.SIMMB	-22	-5	-5	-57	198	-22
F.SIMMB	-15	-5	-6	-35	-26	-101

8.1.5. Perceptions of the service

Questions V07 assess the quantity of services within municipalities (A), services between municipalities (B), service quality (C) and value for money (D). We exclude 'don't know/no answer' responses to obtain ratings from 0 to 10, and examine both the entire sample and respondents reporting public transport use. Table 12 summarises average ratings. These are generally high, and higher among users than in the full sample (and hence than among non-users). Mean ratings are very similar by sex and generally higher for women, with one exception: price.Table 12. Public transport ratings (mean score from 0 to 10)12

Table 12. Public transport ratings (mean score from 0 to 10)12

	Usan el transporte público		Todas las respuestas	
	Hombres	Mujeres	Hombres	Mujeres
Dentro del municipio	7,43	7,45	6,31	6,35
Entre municipios	6,93	6,95	6,07	6,08
Calidad	7,19	7,24	6,39	6,45
Precio	6,15	6	5,15	5,0

We do not reproduce the eight paired histograms of response distributions for these ratings. In general, their similar means once again conceal differences in the underlying distributions. By way of example, and because price is of particular interest, Figure 20 illustrates satisfaction with fares among all respondents, while Figure 21 considers only public transport users.Figure 20. Distribution of satisfaction with public transport fares20Figure 21. Satisfaction with public transport fares among users21

Figure 20. Distribution of satisfaction with public transport fares20

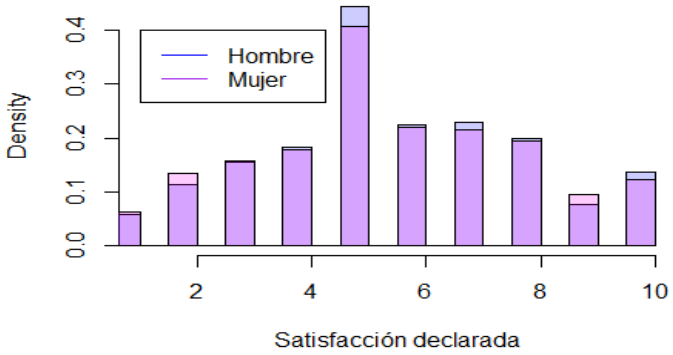
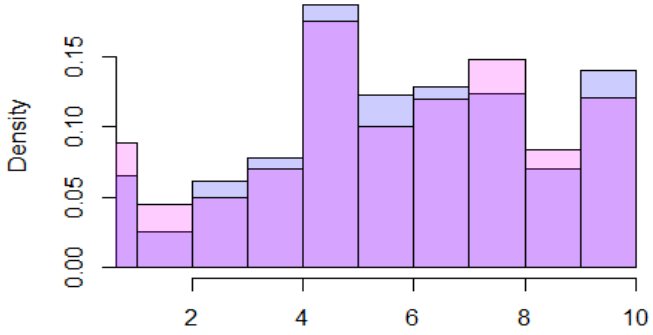


Figure 21. Satisfaction with public transport fares among users21



The next step would be to identify respondents dissatisfied with public transport. Satisfaction could be related to other variables as well as sex, including journey duration. Table 13 shows that less satisfied respondents spend somewhat longer travelling, but the difference appears negligible in both groups.Table 13. Average journey duration by satisfaction and sex13

Table 13. Average journey duration by satisfaction and sex13

Satisfacción	Hombres	Mujeres
0	47.81053	42.47208
1	58.90000	43.69663
2	48.96491	40.28966
3	46.01471	42.95000
4	51.58382	36.65625

5	42.45433	42.13982
6	37.87132	40.30031
7	46.89510	39.49219
8	42.14599	41.89895
9	45.04516	38.15926
10	41.66346	35.65039

8.1.6. Reasons for using or not using particular modes

Questions V16–V19 ask why respondents use or avoid different transport modes. They may give up to three answers, but we focus on the first. Figure 22 and Table 14 show the main reason for not using public transport. Two reasons stand out: what might be described as a positive one (no need to use it, category 9) and a negative one (inadequate provision, category 2). Overall, we know that more men do not use public transport, for almost every reason; the greatest difference concerns category 6 (preference for private transport), with more than twice as many men. Conversely, women are more likely than men to avoid it only because their destinations are nearby or because of reduced mobility. Price is not a major reported reason for non-use, although this does not imply that fare redesign could not improve conditions for existing users.Figure 22. Reasons for not using public transport22Table 14. Reasons for not using public transport14

Figure 22. Reasons for not using public transport22

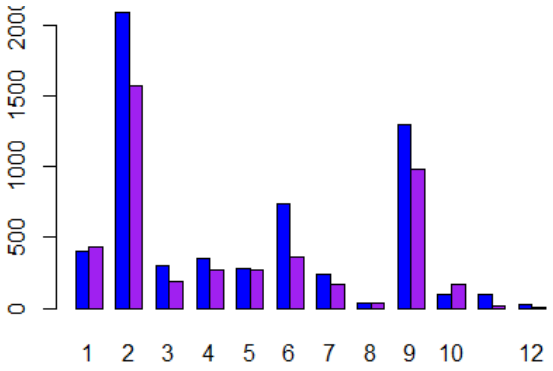


Table 14. Reasons for not using public transport14

Motivos	Hombres	Mujeres
Voy cerca	402	431
Oferta inadecuada	2093	1579
Lento	300	191
Incómodo	349	269

Frecuencia/Puntualidad	278	269
Prefiero el transporte privado	737	366
Caro	243	172
Desconozco la red	38	36
No me hace falta	1295	985
Movilidad reducida	94	171
Necesito utilizar el vehículo privado por trabajo	93	13
Inseguro	27	8

These results must be interpreted cautiously. They report frequencies in the survey, but because more men do not use public transport they may be misleading if interpreted as conditional probabilities. Men in this group may face obstacles that cannot be addressed by transport policy, given the nature of their destinations, whereas women's circumstances may be more amenable to change. Although route design may appear independent of fares, very high subsidies and operating deficits can raise quality concerns if operators lack incentives to meet passenger needs and complaints do not reach decision-makers. We now consider the effects of fare reductions, which relate to this discussion.

8.1.7. Discounts

The 2023 EMEF includes several questions about fare reductions: how they have affected use (V32), whether respondents have changed ticket type (V33) and to which ticket (V34). For example, a somewhat higher proportion of women than men report changing ticket type (14.9% versus 11.8%).

More women also report changing their use of public transport: 64 women versus 40 men have started using it, and 619 women versus 401 men use it more than before. These figures are not large, but represent approximately 50% more responses among women both on the extensive margin (starting to use public transport) and intensive margin (using it more). This suggests a more "intense" relationship with the fare system, which the qualitative analysis seeks to explore.

8.2. Technical details of the in-depth interviews (IDIs)

The in-depth interviews were conducted online between 25 February and 5 March 2024 using the University of Murcia's institutional Zoom platform, owing to logistical considerations and the qualitative nature of the study, in line with research on remote interviewing (Stewart & Shamdasani, 2017). Each interview lasted approximately one hour, and all participants gave informed consent to the recording and subsequent analysis of its contents.

8.2.1. Interviewee profiles

Interviewees were selected through theoretical and purposive sampling to ensure diversity in sex, occupation and involvement in mobility policy. Four women (E1, E2, E5.1 and E5.2) and three men (E3, E4 and E6) participated, all with substantial knowledge of public transport and varied perspectives on fares and everyday mobility. E1, E5.1, E5.2 and E4 were selected by staff of Barcelona City Council's Directorate of Feminism and LGBTI Services; E2, E3 and E6 were selected by the University of Murcia research team. E5.1 and E5.2 belong to the same organisation and participated jointly, and are therefore considered a single interview unit. The semi-structured interview guide was prepared by the University of Murcia team and adapted to each participant's profile. All analyses were conducted by the research team responsible for ITTG, BCN 2025.

Technical details of the interviewees

Participants were recruited according to two criteria:

a. Academic or research-centre expertise in public transport and mobility.

b. Professional technical or policy knowledge of mobility and transport in the Barcelona metropolitan area.

a. Academics and professionals

1. Interview: Interviewee 2 (E2) | Sex: Woman | Age: 47 | Occupation: University lecturer in Sociology | Institution: Universitat Autònoma de Barcelona | Profile: Academia
2. Interview: Interviewee 3 (E3) | Sex: Man | Age: 61 | Occupation: University lecturer in Sociology | Institution: Universitat Autònoma de Barcelona, Institut Metròpoli | Profile: Academia
3. Interview: Interviewee 6 (E6) | Sex: Man | Occupation: University lecturer, researcher and public-sector employee | Institution: Pablo de Olavide University | Profile: Academic, Economics

b. Technical and policy professionals

1. Interview: Interviewee 1 (E1) | Sex: Woman
   Age: 44 | Occupation: Politician and environmental scientist | Institution: Mobility and Strategy Department (BR, Barcelona Regional, Urban Development Agency) | Profile: Technical/policy
2. Interview: Interviewee 4 (E4) | Sex: Man | Occupation: Senior or management staff member at TMB (Transports Metropolitans de Barcelona) | Institution: Transports Metropolitans de Barcelona | Profile: Technical/policy
3. Interview: Interviewees 5.1 and 5.2 (E5.1 and E5.2)
   Sex: Woman / Woman | Occupation: Civil engineers | Institution: Barcelona Metropolitan Area (AMB) | Profile: Technical/policy

8.2.2. Interview guide

The in-depth interviews were designed as semi-structured conversations. They opened with an introduction (A), followed by four thematic blocks (B), and closed with conclusions and suggestions (C).

Sections A and C, common to all interviews, are presented below.

A. Introduction

- Presentation of the interviewer, explanation of the interview's purpose and the wider research, and a brief introduction to the study.
- Explanation of the commitment to confidentiality and the intended use of interview information.
- Obtaining informed consent.

Thematic blocks (B)

Block 1: Interviewee's role and experience in urban mobility

Objective: To understand the interviewee's role in mobility and general assessment of the transport system.

Block 2: Gender perspective on mobility

Objective: To examine the structure of transport provision and mobility in the Barcelona metropolitan area.

Block 3: Impact of fares on women's access to transport

Objective: To determine whether the fare system recognises the specific mobility needs of women and people with caring responsibilities.

Block 4: Recommendations and proposals to improve fares

Objective: To gather suggestions for changes to fare policy that would promote gender equality and equal access for passengers travelling for employment and care-related purposes.

C. Closing the interview

- Do you think we have overlooked any issue of particular relevance to you concerning the subject we have discussed?
- Thank the interviewee for their time and contribution.
- Remind the interviewee about confidentiality and the use of the information provided.
- Offer to send a summary of the study's findings.

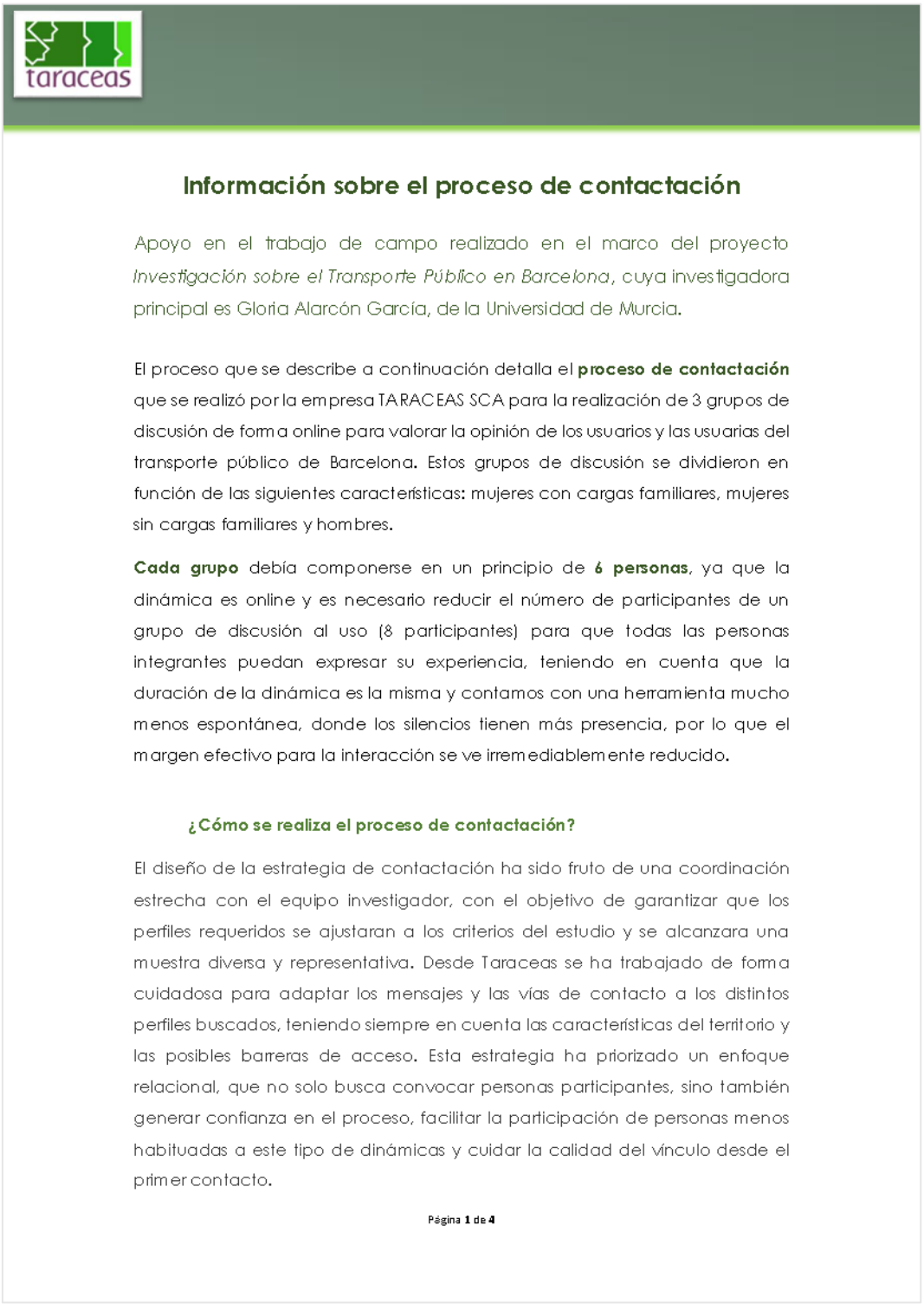
8.3. Technical details of the focus groups (FGs)

After several unsuccessful attempts to recruit professionals based geographically closer to the research setting, the team contracted an organisation located elsewhere to recruit and moderate the focus groups. The assignment was awarded to the Taraceas co-operative.

Recruitment by Taraceas began in February. Following several meetings to define participant profiles, the focus groups were held on 25 and 28 March and 8 April 2025. The first and third sessions took place from 7.30 to 9 p.m., and the second from 10 a.m. to midday.

Once the groups had been conducted, the research team analysed their findings and integrated them with the IDI analysis to produce the results presented in ITTG, BCN 2025.

8.3.1. Recruitment process



taraceas

Información sobre el proceso de contactación

Apoyo en el trabajo de campo realizado en el marco del proyecto *Investigación sobre el Transporte Público en Barcelona*, cuya investigadora principal es Gloria Alarcón García, de la Universidad de Murcia.

El proceso que se describe a continuación detalla el **proceso de contactación** que se realizó por la empresa TARACEAS SCA para la realización de 3 grupos de discusión de forma online para valorar la opinión de los usuarios y las usuarias del transporte público de Barcelona. Estos grupos de discusión se dividieron en función de las siguientes características: mujeres con cargas familiares, mujeres sin cargas familiares y hombres.

Cada grupo debía componerse en un principio de **6 personas**, ya que la dinámica es online y es necesario reducir el número de participantes de un grupo de discusión al uso (8 participantes) para que todas las personas integrantes puedan expresar su experiencia, teniendo en cuenta que la duración de la dinámica es la misma y contamos con una herramienta mucho menos espontánea, donde los silencios tienen más presencia, por lo que el margen efectivo para la interacción se ve irremediablemente reducido.

¿Cómo se realiza el proceso de contactación?

El diseño de la estrategia de contactación ha sido fruto de una coordinación estrecha con el equipo investigador, con el objetivo de garantizar que los perfiles requeridos se ajustaran a los criterios del estudio y se alcanzara una muestra diversa y representativa. Desde Taraceas se ha trabajado de forma cuidadosa para adaptar los mensajes y las vías de contacto a los distintos perfiles buscados, teniendo siempre en cuenta las características del territorio y las posibles barreras de acceso. Esta estrategia ha priorizado un enfoque relacional, que no solo busca convocar personas participantes, sino también generar confianza en el proceso, facilitar la participación de personas menos habituadas a este tipo de dinámicas y cuidar la calidad del vínculo desde el primer contacto.

Página **1** de **4**

A partir de este enfoque se definieron y desplegaron distintas vías de difusión y contacto, combinando métodos digitales, redes comunitarias y colaboraciones institucionales para ampliar el alcance y garantizar la diversidad del perfil participante. Para ello, el equipo de Taraceas mantuvo una coordinación interna constante, ajustando tareas, mensajes y canales según la evolución del trabajo de campo y las necesidades que iban surgiendo.

Para todo lo anterior, las diferentes vías y estrategias utilizadas por Taraceas son las siguientes:

1ª. **A través de personas residentes en Barcelona que han participado en otros de nuestros proyectos** -pudiendo verificar que las propuestas de colaboración en investigación que se ofrecen son reales- actuando como anfitrionas presentando el estudio a personas de su entorno que encajen con el perfil buscado y que no están habituadas a participar en este tipo de investigaciones de manera que recogemos una opinión fresca y no influenciada.

2º. **A través anuncios en nuestras propias RRSS.** Desde Taraceas damos difusión al anuncio de la contactación dirigida a personas usuarias del transporte público a través de nuestras redes sociales, lo que favorece que quienes nos siguen contribuyan a su vez a la difusión del proyecto en su entorno cercano.

3º. **A través de RRSS.** Taraceas utiliza hashtags, el posicionamiento de cuentas, grupos de usuarios, seguidores de asociaciones, equipos deportivos de diversas disciplinas, etc., así como otros contenidos de perfiles públicos para maximizar la difusión del anuncio, asegurando que llegue al mayor número posible de personas de manera directa, siempre respetando el territorio al que nos dirigimos.

4º. **Mediante llamadas telefónicas y/o correos electrónicos** a entidades, asociaciones, y otras organizaciones con sede en la provincia de Barcelona, con el fin de explicarles el proyecto y facilitarles la difusión entre sus asociados y asociadas o usuarios y usuarias.

5º. **Mediante la localización y/o identificación de personas** que, por diversas razones, actúan como **dinamizadoras** de población en su territorio.

Una vez la persona interesada se presenta, se pone en contacto con el personal de Taraceas. El equipo realiza una primera llamada para proporcionar información detallada:

- En qué consiste un grupo de discusión
- Duración y temática a tratar
- Tipo de gratificación y entrega de esta
- Resolución de posibles dudas que la persona pueda presentar.

Si la persona mantiene su interés, se procede a realizar las preguntas correspondientes al perfil, el cual se remite de manera anonimizada al equipo investigador para proceder a realizar una selección. Una vez realizada esta selección de perfiles por el equipo de investigación, realizamos una segunda llamada para pedirles disponibilidad durante la semana y establecer día y hora del grupo de discusión de acuerdo con la disposición de la mayoría de los y las participantes.

Una vez definido el día y la hora, les enviamos, según su preferencia, a través de WhatsApp o correo electrónico, la confirmación del grupo de discusión, incluyendo el link de la reunión y el enlace de acceso a la política de protección de datos (alojado en la página web de Taraceas); este último, con el fin de obtener su consentimiento tanto para participar en el proyecto como para permitir la grabación de la sesión para su posterior análisis.

Datos

Se estima que al menos **190 personas** han sido informadas sobre el proyecto, de las cuales **60** han aceptado participar, habiéndose recogido su perfil. Además, un total de **165 entidades, asociaciones y otras organizaciones del territorio** han sido contactadas.

El número final de participantes se detalla en la siguiente tabla:

Tabla 1. Número de personas participantes en cada grupo de discusión.

	GD1 Mujeres Sin cargas	GD2 Mujeres con carga	GD3 Hombres
Personas que finalmente han participado	5	4*	5

*En la grabación aparece una persona más que abandona al poco tiempo de iniciar el grupo.

Fuente: elaboración propia a partir de los datos del proceso de contactación.

Durante esta contactación hemos encontrado un gran **hándicap** para representar a las personas usuarias de las **zonas tarifarias 5 y 6 del metro de Barcelona.** Al residir en áreas significativamente alejadas del núcleo urbano, estas personas desarrollan su vida diaria en su propio municipio y/o en localidades cercanas, lo que favorece el uso del transporte privado por resultar más accesible y cómodo; como consecuencia, el uso del transporte público hacía Barcelona, en estas zonas, es residual (utilizando el transporte público únicamente para desplazarse por su propio municipio y los más cercanos).

Este fenómeno que ha supuesto una barrera estructural para representar a personas residentes de las zonas tarifarias mencionadas evidencia un patrón de **segregación funcional del territorio**, en el que las infraestructuras metropolitanas no logran ofrecer un servicio competitivo en la periferia, si las personas de estas zonas no necesitan ir asiduamente a Barcelona por trabajo o formación (en cuyo caso sí que existen tarifas concretas que lo hacen más accesible, pero no siempre es el caso). Las situaciones con las que nos hemos encontrado en el proceso de contactación es que la mayoría de las personas que viven en zonas alejadas de Barcelona buscan desarrollar todas sus actividades diarias (incluyendo el empleo) cerca de sus zonas de residencia, realizando viajes esporádicos a la ciudad de Barcelona.

8.3.2. Composition of focus-group participants

The focus groups were designed as follows:

1. One group composed exclusively of women in paid employment without caring responsibilities.
2. A second group composed exclusively of women combining paid employment with caring responsibilities.
3. A group of men, half combining paid employment and caring responsibilities and half undertaking only paid employment without caring responsibilities.

Participants were recruited according to the following criteria:

a. Use of public transport
b. Representation of different age cohorts
c. Migrant status
d. Residence in different metropolitan areas
e. Dependants or care responsibilities for children
f. Employment outside the home

Final recruitment depended on the availability of those contacted.

8.3.3. Profiles of participants in FG1

- **P1: 52, Colombian, caring responsibilities (four adult children in Colombia), woman, hourly-paid cleaner, income below €500, no reduced mobility.**
- **P2: 21, Peruvian, no caring responsibilities, woman, not employed, income below €500, no reduced mobility.**
- **P3: 29, African background and Spanish nationality, no caring responsibilities, woman, waitress, income €1,500–1,999, no reduced mobility.**
- **P4: 23, German, no caring responsibilities, woman, working and studying, administrative assistant and waitress, income €500–999, no reduced mobility.**
- **P5: 38, Argentine, no caring responsibilities, woman, domestic work and childminding, income €1,000–1,499, no reduced mobility.**
- **P6: 47, Honduran, caring responsibilities (three children in country of origin), woman, older-person care worker, income €500–999, no reduced mobility.**

8.3.4. Profiles of participants in FG2

- **P7: 48, Panamanian and Spanish, one daughter living with her, woman, systems engineer working remotely, income €1,500–1,999, no reduced mobility, lives in Terrassa (zone 3).**
- **P8: 47, Chilean, one son, woman, researcher, income €2,500–2,999, no reduced mobility, lives in Vilanova i la Geltrú (zone 4) and works in Barcelona.**
- **P9: 60, Spanish, three children (one adult living with her), woman, teacher, income €2,000–2,499, no reduced mobility, lives in Barcelona (zone 1).**
- **P10: 62, Spanish, two children (one with reduced mobility living with her), retired teacher, income €2,000–2,499, child with reduced mobility, lives in Terrassa (zone 3).**

8.3.5. Profiles of participants in FG3

- **P11: 42, lives in Barcelona (zone 1), Spanish, no caring responsibilities, income €1,000–1,499, has reduced mobility.**
- **P12: 25, lives in Guinardó (zones 4 and 5), Venezuelan, one dependent daughter under 18, cook, income €1,000–1,499, no reduced mobility.**
- **P13: 57, lives in Cerdanyola del Vallès (zone 2), Spanish, one dependent son under 18, scientific researcher, income €2,500–2,999, no reduced mobility.**
- **P14: 66, retired teacher and writer, lives in Terrassa (zone 3), Spanish, one dependent son living with him, income €2,000–2,499, no reduced mobility.**
- **P15: 21, student, lives in Terrassa (zone 3), Spanish, no caring responsibilities, income below €500, no reduced mobility.**

8.3.6. Focus-group moderation guide

Propuesta de guion
Movilidad en Barcelona



NOTA: las preguntas se le hace a todos los perfiles y en el análisis de las respuesta se observará la diferencia según perfiles, por eso no se plantean preguntas diferentes según perfil, sino preguntas que puedan ser contestadas por todos los perfiles y que después permitan la comparación en las respuestas.

¿Qué tipo de desplazamientos realizáis?

- Personales
  - Servicios públicos
  - Por persona a cargo
  - Habituales del hogar
- Profesionales (trabajo / formación)

¿Qué tipo de transporte utilizáis en vuestro desplazamiento (centrar en lo público)? ¿Cuál es el motivo de elegir uno u otro?

- Calidad
- Frecuencia
- Proximidad
- Seguridad
- Coste

¿Cuál es vuestra opinión sobre cuánto os cuesta desplazaros en transporte público? Esperar respuesta espontánea y después explorar

- Precio por viaje
- Trayectos múltiples
- Necesidad de utilizar diferentes transportes

¿Qué dificultades encontráis en el sistema tarifario actual del transporte público a la hora de desplazaros? Esperar respuesta espontánea y después explorar

- Falta de información o información compleja de entender

- Diferencias según zonas/itinerarios
- Diferencias según horario (diurno/nocturno)
- Diferenciación según perfil - ¿a quién beneficia actualmente? (mujeres, personas del extrarradio, jóvenes, personas mayores,…)

- **¿Cómo afecta la estructura tarifaria a vuestros desplazamientos? ¿qué habéis tenido que cambiar en vuestra cotidianidad por el coste?**
  - Explorar los casos en los que hay trayectos encadenados

- **¿Qué proponéis para mejorar la estructura tarifaría del transporte público en Barcelona? Esperar respuesta espontánea y después explorar:**
  - Gratuidad
  - Tarifas planas o con diferenciación
    - En caso de diferenciación, ¿cuáles deberían ser los criterios de diferenciación?
  - Sencillez vs opciones (tarifas flexibles)
  - Frecuencia de uso
  - Franjas horarias
  - Usar inteligencia artificial para que ajuste la necesidad de la persona a las opciones disponibles

- **En una sola frase, ¿qué tendría que ofrecer el servicio de transporte público de Barcelona para que lo utilizaras más? Respuesta espontánea**