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Mobility and Transport Connectivity Series

She Drives Change:

A Toolkit for Redefining Opportunities for Women in Transport



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She Drives Change: A Toolkit for Redefining Opportunities for Women in Transport

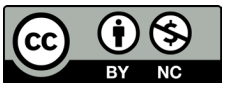
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Foreword

Transport is an essential bridge between people, opportunity, jobs and essential services. When it works well, people can seamlessly get to where they are going without a second thought. Unfortunately, transport systems rarely work well, for everyone, all of the time.

Even while a greater number of countries invest in transport, especially in rapidly growing cities, not everyone benefits. Too often, systems are not built with the needs of everyone in mind and some people, particularly women, are left out.

The fact is that transport is not gender-neutral: men and women have different needs and travel patterns that require urgent attention. Men are more likely to drive private cars, while women are more likely to use public transport, often encountering barriers such as harassment, unsafe routes and poorly linked systems. Most of men's trips are direct, and for work, while women often "trip chain:" make multiple stops in a single journey to manage household and caregiving responsibilities.

With improved mobility, more women can access employment, education, and healthcare, which boosts their quality of life and that of their children. In this way, transport systems that address women's unique mobility needs help foster economic growth. They also support positive environmental outcomes, such as improved local air quality.

Women are significantly underrepresented in the global transport sector workforce, especially in mid and high-skilled technical roles and among management. Barriers to women's participation in the transport sector are present within each stage of the employment lifecycle, including in relation to women's attraction, recruitment, and retention; policies and practices in the workplace; and leadership and career progression. Regulatory frameworks in some economies also hinder women's participation by restricting access to specific jobs in transport. These disparities lead to inefficiencies and talent misallocation, which erode employers' ability to improve decision-making, innovation, and financial performance.

As we work towards more equitable and efficient transportation systems, it is crucial to address the disparities that exist between women and men in the sector. *She Drives Change: A Toolkit for Redefining Opportunities for Women in Transport* serves as a vital resource for transport professionals and policymakers dedicated to bridging these disparities. This toolkit offers a structured approach to identifying and addressing the unique challenges women face across various transport subsectors, including urban transport, rural and peri-urban roads, rail, aviation, maritime transport, and economic corridors.

The toolkit is built upon the World Bank's deep commitment to creating opportunities for women. It provides analysis of common barriers, a set of actionable interventions designed to address these challenges and indicators to track progress. By recognizing and addressing the unique barriers women face in the transport sector, we can unlock their full potential, enhance their contributions to the economy, and create the sector that is both innovative and equitable for all.



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Global Director, Transport



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Preface

About this Toolkit

She Drives Change: A Toolkit for Redefining Opportunities for Women in Transport is a comprehensive resource designed to empower transport sector professionals and policy makers to address disparities in mobility, employment, and entrepreneurship between women and men within the transport sector. The objective of this toolkit is to provide users with a structured approach to identifying and addressing gaps between men and women in various transport subsectors, including urban transport, rural and peri-urban roads, rail, aviation, maritime transport, and economic corridors. The toolkit presents specific interventions and indicators tailored to each subsector. The toolkit draws primarily from the World Bank's project experience and several other cases provided by other organizations.

How to Use the Toolkit:

- Chapter 1 discusses the rationale behind the inclusion of a woman's perspective when designing transport operations, highlighting the benefits and necessity of such an approach.
- Chapters 2–7 explore sector-specific interventions in six transport subsectors: urban transport, rural and peri-urban roads, rail transport, aviation, maritime transport, and economic corridors.

Online Interactive Toolkit:

A digital version of this toolkit is available at www.shedriveschange.org (as of July 2025). This online, interactive version serves as a dynamic and continuously evolving resource, ensuring that users have access to the most up-to-date and relevant examples. As a living document, the online toolkit will not be static; rather, it will be updated with new insights, best practices, and innovative approaches as they emerge, making it an indispensable resource for transport planners and gender specialists.

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Abbreviations

BRT	Bus Rapid Transit
CCTV	Closed-Circuit Television
DIME	Development Impact Evaluation
ESG	Environmental, Social, and Governance
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GPL	Gender and Policy Lab
HR	Human Resources
ICCC	Integrated Command and Control Centre
IT	Information Technologies
IWT	Inland Water Transport
MoUs	Memoranda of Understanding
MTC	Metropolitan Transport Corporation
NGO	Non-Governmental Organization
NTP	National Transport Policy
PPE	Personal Protective Equipment
QII	Quality Infrastructure Investment
SEAP	Structured Engineering Apprenticeship Program
SHGs	Self-Help Groups
SMEs	Small and Medium-Sized Enterprises
SMS	Short Message Service
SOPs	Standard Operating Protocols
STEM	Science, Technology, Engineering and Mathematics
TTL	Task Team Leader
TVET	Technical and Vocational Education and Training
WBG	World Bank Group
WENP	Women Entrepreneurs Networking Platform

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The Case for Unlocking the Potential for Women in Transport



Photo credit: World Bank

Transportation costs, safety concerns, and limited access disproportionately affect women, hindering their ability to work, attend school, and access health care and other essential services. Overcoming these challenges could significantly boost women's economic participation and contributions to gross domestic product (GDP) while enhancing human capital for themselves and for future generations. Addressing mobility barriers also supports transport decarbonization goals. Women rely more on public transport and walking than men, making it essential to improve public transport affordability, accessibility, and safety to retain the green dividends of women's current travel patterns and encourage others—primarily men—to shift from private vehicle use. Addressing mobility barriers affecting women and men differently can also benefit transport service providers by increasing ridership and improving transport service outcomes.

Women are significantly underrepresented in the global transport sector workforce, accounting for approximately 12 percent of transportation and storage workers worldwide (Kurshitashvili et al. 2025). Women's participation varies by subsector. Globally, women comprise only 5 percent of workers in land transport, 10 percent in water transport, 21 percent in warehousing and transportation support activities, and 38 percent in aviation. Barriers to women's participation in the transport sector are present within each stage of the employment life cycle, including in relation to women's attraction, recruitment, and retention; policies and practices in the workplace; and leadership and career progression. Regulatory frameworks also hinder women's participation by restricting access to specific jobs in transport. For example, women are legally prohibited from working in specific transport jobs in 12 countries, 20 countries restrict women from night work, and 45 economies ban women from hazardous jobs (World Bank 2024). These restrictions limit employment opportunities and reinforce outdated stereotypes about the suitability of transport roles for women, leading to inefficiencies and talent misallocation, which erode employers' ability to improve decision-making, innovation, and financial performance.

Rationale and Benefits

Operations that address the constraints faced by women in transport offer both intrinsic and instrumental benefits. Intrinsically, they empower individuals, especially women, by enhancing agency, freedom, and choice in mobility, and ensuring equitable access to jobs and essential services, which fosters personal growth and improves quality of life. Instrumentally, user-centric transport systems could increase efficiency, revenue, and user satisfaction by attracting a more diverse customer base and improving accessibility and could boost women's economic contributions to GDP. They also support environmental sustainability through low-carbon solutions and operational efficiency, while boosting company performance and alleviating labor shortages. Ultimately, incorporating women's considerations into transport operations is key to building efficient and sustainable mobility systems. Box 1.1 emphasizes the benefits of addressing the constraints women face in transport operations.

Box 1.1. A World of Reasons to Unlock Women's Potential in Transport

Why address women's mobility barriers?

Agency, Freedom, and Choice

- Mobility barriers stand as a major factor influencing the daily lives of billions of women and girls globally—significantly reducing their life quality and life chances. Mobility empowers both women and men to make choices that influence their lives and give individuals greater freedom in terms of time and space, enabling them to take control of their personal and professional lives.

Access to Health, Education, Jobs, and Leisure

- Adequate mobility allows women and men to access jobs and vital services such as health care and education. Without suitable transport options, individuals—particularly women—are often forced to forgo employment opportunities that are essential for their growth and that of their families.

Economic Benefits

- Ensuring equitable access to transportation for both women and men can unlock substantial economic potential by increasing labor force participation, boosting productivity, and fostering inclusive growth.

Environmental Benefits

- Promoting sustainable transport options like public transit, walking, and other low-carbon mobility choices, which currently more women than men rely on, can significantly reduce carbon emissions. By addressing the specific mobility needs of all demographics, we can foster more sustainable travel patterns that support environmental goals and help mitigate climate change.

Service Provider Advantages

- User-centric transport services that cater to the distinct needs of women and men can improve operational efficiency and attract a wider customer base, increasing revenues.

Why promote women's employment in transport?

Economic Benefits

- Promoting women at all levels of the transport sector, especially in traditionally male-dominated, well-paid, high-skilled technical and managerial roles, helps expand the female labor force, which is crucial for driving economic growth.

Business Benefits

- Promoting women can enhance the performance of transport companies. Teams that include both women and men, particularly at the senior leadership level, often perform better. Women play a crucial role in client relationship management, which is essential for public-facing roles like passenger transport. Companies with a more balanced representation of women and men are also better aligned with the communities they serve, gaining greater respect and trust from the public.

Demographic Benefits

- In many regions, the transport sector faces labor shortages due to aging populations. Increasing the share of women in the workforce is essential for sustaining growth and ensuring access to a large, qualified talent pool, which is crucial for the industry's future.

Environmental Benefits

- The transition to sustainable transport systems requires fresh perspectives, and women bring valuable insights and skills essential for the energy transition. These include promoting modal shifts and advancing sustainability goals. Women, particularly those in leadership, are adept at driving eco-friendly practices and environmental protection measures, underscoring the importance of having both women's and men's perspectives in the decision-making process.

Why address women's entrepreneurship barriers?

Economic Benefits

- Women-owned and managed businesses are critical engines of job creation and innovation. Enabling more women to start and grow businesses in the transport sector boosts labor force participation, unlocks underutilized talent and drives more resilient economies.

Service and Sector Benefits

- Women-led enterprises in transport can improve transport service quality and responsiveness by better addressing the diverse needs of transport users.

Addressing Systemic Barriers

- Tackling the barriers women face in transport entrepreneurship through targeted interventions strengthens the pipeline of women-led enterprises and ensures more equitable participation in the sector's value chains.

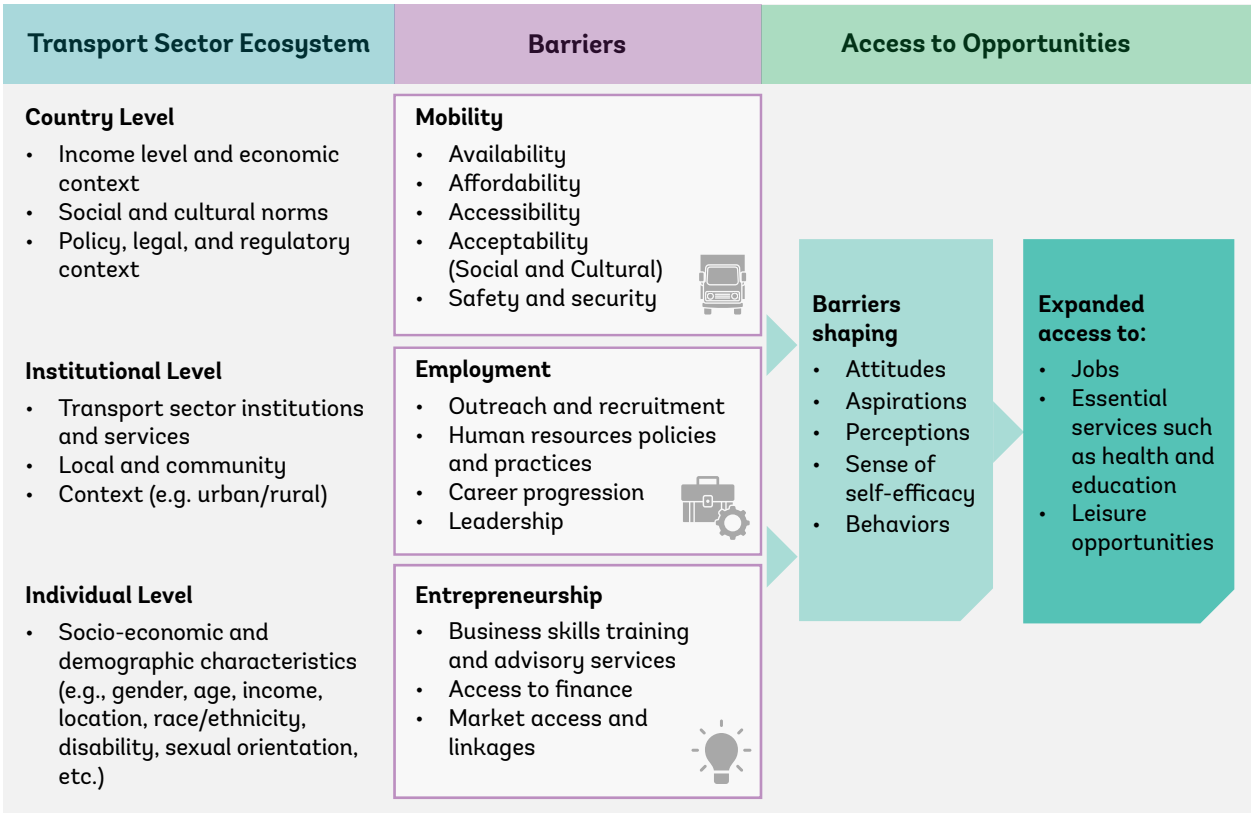
Promoting women's employment

- Supporting women in starting entrepreneurial ventures within the transport sector has a proven multiplying effect. Women-led transport businesses are often more likely to employ a higher proportion of women, thereby creating additional job opportunities for female workers

A Framework for Action

Figure 1.1 presents a comprehensive framework that conceptualizes how transportation systems interact with country-, institutional-, and individual-level factors to shape disproportionate barriers for women. This framework helps identify entry points for interventions that address disparities between women and men in mobility, employment, and entrepreneurship in transport sector operations, ultimately improving access to economic opportunities and essential services for women as well as men.

Figure 1.1. Conceptual framework for identifying interventions in transport sector operations that addresses disparities between women and men in mobility, employment, and entrepreneurship



Source: Adapted from similar frameworks developed by the research team.

The framework is structured around three key dimensions: environmental factors in the transport ecosystem that shape barriers affecting women and men differently; barriers that span mobility, employment, and entrepreneurship; and access to opportunities that can be achieved by addressing these challenges. Together, these dimensions offer a comprehensive approach to understanding and tackling the unique challenges women face in the sector, along with the benefits of overcoming them.

Transport Sector Ecosystem

This first dimension addresses the transport sector ecosystem and the various environmental factors that shape access opportunities for women and men. These factors can be divided into country, institutional, and individual characteristics:

- **Country:** This encompasses the national environment, including income and regional disparities, as well as the normative, policy, and legal frameworks that can either constrain or facilitate women's access to economic opportunities and essential services. Policies and legal frameworks can either support or hinder women's access to opportunities, including within the transport sector. For instance, in some countries, laws restrict women from certain transport jobs or roles deemed hazardous or from working at night, under the pretext of protection.
- **Institutional:** This refers to the local environment at the community level, which includes institutions that can either support or hinder women's mobility and economic activities. The community context—whether urban or rural—can impose constraints that influence women's decisions about if, when, where, and how to travel. This level also includes institutions responsible for decision-making and planning, particularly those that may perpetuate or challenge outdated biases in transport systems, ultimately impacting women's mobility and employment opportunities.
- **Individual:** This focuses on individual characteristics, such as gender, age, race and ethnicity, personal income, disability, or education, just to name a few, as well as factors related to power and agency, including capabilities, aspirations, and self-confidence. For instance, the needs of a woman with a disability living in a rural part of a country with poor public transportation will be qualitatively different from those of a nondisabled woman in a city with at least some options for urban transportation. In a similar vein, an elderly, low-income man with limited mobility would have more acutely pronounced mobility needs than an able-bodied young man with the resources to afford private transportation.

Barriers

The second dimension addresses three key barriers that arise from differences between men and women in transport sector operations: mobility, formal employment, and entrepreneurship. These barriers interact with the contextual country, institutional and individual factors to determine how women and men utilize transport systems, pursue employment opportunities, and engage in entrepreneurship. Ultimately, these dynamics influence women's behaviors, self-efficacy, opportunities, and ultimately, outcomes.

The Mobility Barrier

The first barrier relates to mobility, which encompasses the challenges women and men face based on their circumstances, needs, and choices. Mobility refers to the ability to move freely and safely within one's environment, facilitated by accessible, secure, and affordable transport infrastructure and services that cater to their specific needs and enable full participation in social, economic, and civic activities. The mobility barrier can be categorized into five areas, irrespective of transport mode or trip nature:

- **Availability:** This refers to the connectivity and coverage of the transport system. In rural areas, the availability of transport infrastructure (for example, roads and pathways) may be more critical, while in urban settings, the availability of transport services (for example, public transportation, shared transport) is more salient. Often, public transport either does not serve any internal routes in the communities, is only available at certain times—only during daytime, for example—or the service is excessively infrequent. This results in women walking long distances or taking informal modes of transport to cover feeder roads, which can be expensive and unsafe. A lack of evening transport options means that many women working in the service sector are less likely to take night-shift jobs.
- **Affordability:** This encompasses travel costs and the extent to which individuals can afford to travel when and where they want. It includes both direct (financial) costs and the opportunity costs of potential consumption that must be forgone for mandatory trips. Women's complex daily trips, including those undertaken for caretaking purposes, take time away from other activities, such as productive work or leisure, and result in higher travel costs. Safety concerns disproportionally impact low-income women who often prioritize safety over affordability and who are willing to pay more for transport modes that provide a greater sense of safety. These additional travel costs mean that women pay disproportionally more than men for caretaking, safety, and other reasons.
- **Accessibility (including physical accessibility):** Accessibility encompasses not only the ease with which individuals can use the transport system but also the spatial interaction between mobility and land use. While physical accessibility considers how different individuals—such as able-bodied persons, parents with young children, pregnant women, the elderly, or individuals with disabilities—navigate the transport system, a broader definition of accessibility accounts for how land use and the proximity of services impact mobility. Evidence shows that closeness to essential services is particularly relevant for women's time poverty and overall mobility. While both dimensions are important, this toolkit primarily focuses on physical accessibility.
- **Acceptability (social and cultural):** Acceptability in transport refers to the degree to which transportation services, infrastructure, and policies are socially, culturally, and behaviorally suitable for different user groups. It encompasses both physical factors—such as comfort, safety, and reliability—and social norms, which shape public attitudes, perceptions, and expectations about who can access and use various transport modes. Acceptability also considers the influence of societal norms on mobility choices, including differing judgments and behavioral reactions to men and women using public and private transport systems. Ensuring high acceptability means addressing barriers that limit equitable access and fostering an environment where all individuals can travel freely and safely.
- **Safety and personal security:** "Safety," for the purposes of this toolkit, refers to infrastructure deficiencies on roads, stations, and trains that could lead to accidents or risky settings, such as potholes in roads, big gaps between the train and the platform, or unsafe staircases; while "personal security" refers to vulnerability to sexual harassment, physical or verbal assault, robbery with use of force, and other crimes. This toolkit addresses both safety and personal security concerns.

The Employment Barrier

The formal employment barrier includes the many challenges in creating and expanding job opportunities for women across various skill levels while attracting and retaining diverse talent. This barrier can be categorized into four areas aimed at enhancing equitable employment opportunities in the transport sector:

- **Outreach and recruitment:** This involves the processes and strategies used to draw both female and male talent into the transport sector. It includes methods for raising awareness and generating interest among potential candidates, emphasizing the importance of fostering an applicant pool composed of both men and women that reflects the community's demographics and skill sets.
- **Human resource (HR) policies and practices:** This refers to policies supporting flexible work, childcare access, and safe, respectful work environments, which are critical for women's retention.
- **Career progression:** This category focuses on the factors that influence an employee's ability to grow within the organization and their decision to remain long-term. It encompasses access to professional development opportunities, mentorship, promotion pathways, and employee engagement initiatives.
- **Leadership:** This dimension includes the structures and dynamics that guide organizational management. It emphasizes the representation of diverse individuals in leadership roles, which is essential for shaping organizational culture and influencing strategic direction.

The Entrepreneurship Barrier

The entrepreneurship barrier refers to the challenges women face in accessing opportunities in the transport sector, hindering their ability to start and grow businesses. This barrier can be categorized into three areas that enhance economic participation and foster equitable job opportunities:

- **Business skills and advisory services:** This focuses on equipping women with the right training and mentorship that can enhance their ability to navigate entrepreneurship and leverage opportunities in transport-related businesses.
- **Access to finance:** This addresses difficulties in obtaining the funding and financial resources necessary for women seeking to enter and grow within transport-related industries. It includes issues such as limited access to credit, lack of collateral, and biases in lending practices that disproportionately affect women and marginalized entrepreneurs.
- **Access to markets and linkages:** This pertains to supporting women entrepreneurs in building networks and market connections—including access to trade fairs, business associations, and transport sector partnerships—that can help them scale their businesses and improve supply chain integration.

Transport sector projects play a crucial role in fostering women's entrepreneurship and economic empowerment by addressing their financial and skills constraints and access to market barriers. Transport investments can unlock new economic opportunities for women entrepreneurs and

contribute to broader economic growth. Additionally, economic corridor and trade facilitation initiatives offer strategic entry points for reducing financial barriers faced by women entrepreneurs. These projects can improve access to financial services by partnering with financial institutions to establish banking solutions at transport hubs and border crossings, enabling women traders to secure funding, process transactions, and grow their businesses. Transport operations can also strengthen public procurement by including provisions that encourage women-owned businesses to participate in supply chains and access contracts in transport infrastructure development and maintenance. Providing business training, financial literacy programs, and mentorship further equips women with the skills needed to scale their enterprises.

Beyond financial access, transport projects also play a direct role in creating safer and more accessible mobility options for women entrepreneurs. Reliable transport networks improve last-mile connectivity; enhance public transport security; and ensure that women can safely reach markets, financial institutions, and business hubs—critical factors for sustaining and expanding their businesses.

A Results Chain to Addressing the Constraints Women Face in Transport Operations

A robust results chain is crucial for effectively addressing gender disparities in mobility, employment, and entrepreneurship opportunities within transport operations. The World Bank Group (WBG) has placed significant emphasis on measuring results to guarantee the effectiveness and accountability of its gender equality initiatives, as highlighted in the WBG Gender Strategy for 2024–2030 (WBG 2024). By identifying gender gaps, implementing targeted actions, and monitoring outcomes, teams can design more impactful interventions. Since 2017, the World Bank has utilized a "Gender Tag" for its operations, which follows three key steps:

1. **Identifying Gaps (Analysis)**

   Task teams must first identify a relevant gender gap within the project's context. This gap could relate to unequal access to mobility, employment, and/or entrepreneurship. For instance, in transport projects, this might include women's mobility constraints and limited access to transportation, and underrepresentation in the transport workforce.

2. **Implementing Actions to Address Gaps (Actions)**

   Concrete actions must be outlined to address the identified gaps. These actions should be integrated into the project's core components and aim for sustainable impact. For example, in transport operations, these actions might include increasing safety measures for women in public transportation or creating employment opportunities for women in the sector.

3. **Monitoring and Measuring Outcomes (M&E)**

   To track progress, measurable indicators at output and outcome levels are suggested to monitor how effectively the project closes the gap(s). They are incorporated into the project's results framework to ensure accountability.

Disclaimer

This toolkit provides targeted interventions and indicators to improve transport planning and operations by addressing gender differences in mobility access, usage, and employment opportunities. However, these interventions and indicators do not automatically meet the criteria for gender tagging in World Bank transport operations. World Bank teams should continue consulting with Global Practice (GP) specialists and the Gender Group to ensure alignment with the latest tagging requirements.

The toolkit does not strictly follow the Gender Tag methodology for several reasons:

- **Evolving methodology:** The tagging framework is continuously updated, and indicators previously eligible for tagging may no longer qualify.
- **Broader scope:** The toolkit covers a wide range of transport interventions, many of which extend beyond the scope of gender tagging, addressing other critical gender inequalities in transport projects.
- **Context-specific tagging:** Gender tagging depends on the specific context of each project and country. Simply applying current tagging criteria would ignore broader socioeconomic factors.

The toolkit advocates for the removal of unnecessary barriers to ensure that all qualified individuals—men and women alike—have a fair opportunity to succeed and that efforts to increase women's participation in the transport sector are rooted in meritocracy. The focus is on expanding access—not lowering expectations, and removing obstacles—not reducing requirements, ultimately fostering a stronger, more competitive transport workforce for the future.

The following chapters (chapters 2–7) explore targeted interventions aimed at addressing the constraints women face across six transport subsectors: urban transport, rural and peri-urban roads, rail transport, aviation, maritime transport, and economic corridors. For each subsector, the focus is on specific challenges in three key areas: mobility, employment, and entrepreneurship. The depth of discussion of each topic varies depending on its relevance to the subsector. Each chapter presents a range of interventions tailored to the subsector, with corresponding output and outcome indicators. These indicators should be treated as a menu of options for consideration, which should be tailored to specific country and project context, rather than the mandatory set that should work in each context.

Additionally, the chapters draw on practical experiences and insights from the implementation of initiatives that address disparities between men and women in mobility, employment, and entrepreneurship in the transport sector. Projects that have effectively addressed or are addressing these disparities are showcased through examples and what works. Importantly, common challenges faced during these initiatives are also discussed, alongside solutions developed to overcome them.

Projects were chosen based on their adoption of innovative approaches that address disparities between men and women in transport. A strong results chain was a key criterion, meaning the selected projects clearly articulated the specific constraint, incorporated targeted interventions, and included indicators in the results framework to measure progress in reducing the gap. To ensure variety and broad applicability, examples were selected from different transport subsectors and various geographic regions, highlighting a range of contexts and solutions. Additionally, preference was given to projects with several years of implementation, ensuring that sufficient time had passed to demonstrate tangible results and lessons.

The toolkit is primarily based on a review of the World Bank's transport portfolio, supplemented by a few examples shared by other development agencies. While some indicators may be difficult to adopt due to the lack of baseline data or challenges in measuring results, the toolkit provides a comprehensive list of both tested and aspirational indicators for practitioners to consider when data availability allows.

2

Urban Transport



Photo credit: Adobe Stock

Urban transport operations focus on enhancing urban mobility and accessibility in various cities around the globe. These operations aim to improve the efficiency, effectiveness, and safety of urban public transport systems in an environmentally sustainable manner. Objectives include the development of a diverse range of transit solutions, such as bus rapid transit (BRT) corridors, metro systems, suburban rail, multimodal urban transit systems, and urban logistics. Furthermore, the projects support the transition to cleaner technologies, including electric and hydrogen-powered vehicles, contributing to the reduction of greenhouse gas emissions. Efforts also address climate resilience, road safety, and institutional capacity building in the transport sector. By targeting key corridors, feeder lines, and integrated transit networks, these operations strive to increase access to economic and social opportunities, enhance the quality of life for urban residents, and support sustainable urban development.

Mobility

In urban areas, disproportionate mobility barriers often faced by women are intrinsically linked to availability, affordability, physical accessibility, social and cultural acceptability, and safety of transport.

A global literature shows some clear patterns of public transport usage for women and men. Women tend to travel shorter distances in a limited geographical radius and are more likely to travel with dependents during off-peak hours for unpaid care work. This is often referred to as mobility of care.[1] Given the need to balance household and work responsibilities, women typically combine multiple tasks, necessitating several short trips, which is called trip chaining. Mobility of care involves complex trip chaining, which affects women's transport choices and limits their employment options. Consequently, women end up paying higher fares for frequently changing direction, modes of transport, and breaking their journeys.

The paucity of sex-disaggregated data prevents urban transport planners and operations staff in public transport authorities from fully understanding different mobility barriers faced by women and men. Women also have off-peak needs that are often underserved. Thus, there is a need for a city-level analysis—built on sex-disaggregated mobility data—to understand different mobility patterns and provide services to cater to the needs of all.

[1] The term recognizes, quantifies, and makes visible travel associated with caretaking responsibilities and home-related tasks needed for the reproduction of life and sustainment of family.

Availability

Availability of transport remains a critical issue, particularly during off-peak hours when many women travel. While urban areas generally have better developed transport infrastructure, the quality and frequency of services often fail to meet women's specific needs. For instance, irregular bus schedules during early mornings or late evenings can force women to wait for extended periods in potentially unsafe environments at transit stops. First- and last-mile connectivity presents additional challenges, with women encountering poorly lit streets when commuting between home and transit stops. This issue is particularly acute in informal settlements or peripheral urban areas where public transport coverage is sparse. The lack of dedicated cycling lanes and secure parking at rail or bus stations further limits mobility options, discouraging women from using bicycles as a viable transport alternative to cover their first- and last-mile needs. Table 2.1 highlights possible interventions and indicators to track progress, and Case Study 1 shows interventions from Morocco.

Table 2.1. Enhancing Transport Availability for Women in Urban Systems

Interventions	Output Indicators	Outcome Indicators
Data collection to construct baselines: Undertake a study to collect sex-disaggregated data on mobility needs, focusing on: • Travel patterns (travel mode, duration, frequency, and purpose, and first- and last-mile connectivity). • Travel preferences and perceptions of affordability, availability, accessibility, safety, and personal security. • Overall satisfaction with the urban transport and suggestions for improvements.	• A survey to collect and analyze data about public transport usage and needs, travel patterns, frequency, modes of transportation, trip purposes, travel times, and distances, broken down by sex and other demographic and socioeconomic factors.	• Number/percentage of women using formal public transport services. • Number/percentage of women switching from informal to formal and safe, more reliable public transport modes. • Number/percentage of women using improved cycle and walking paths. • Number/percentage of women reporting improved accessibility to jobs and essential services due to the introduction or improvement of transport services.
Bus corridors: Develop bus corridors with real-time information and enhanced security measures for improved access and passenger safety.	• Number of bus services introduced on routes. • Number of informal services integrated into a formal structure.	

Interventions	Output Indicators	Outcome Indicators
Bus service availability and schedules: Enhance bus service availability and schedules to align with women's travel patterns, ensuring reliable and frequent service, based on the study findings. **Availability of information:** Ensure wide availability of signs and instructions for directions, station names, route maps, and help desks to aid navigation.	• Number/percentage of public transport services adjusted to meet women's mobility needs. • Number/percentage of transit points (bus stops, metro stations, and so on) with real-time information boards established, as a share of all transit points.	
Demand-responsive transport services: Implement flexible transport options, such as ride-sharing or on-demand shuttles, especially in underserved areas to bridge the first- and last-mile connectivity.	• Number of demand-responsive transport services introduced. • Number of on-demand shuttles or ride-sharing services in underserved areas.	
Integrated multimodal transport hubs: Establish transport hubs that facilitate seamless transfers between different modes of transport, ensuring safe and convenient connections.	• Number of multimodal hubs established.	
Cycle networks and walking paths: Design and maintain well-lit, accessible, and safe walking and cycling paths leading to transit stops, also covering informal settlements and peripheral urban areas.	• Number/percentage of female (and male) cyclists using the cycle network per week.	

Case Study 01

Meeting the Transportation Needs of Women in Urban Morocco[2]

The Challenge

With up to 65 percent of Moroccans now living in cities—a number set to rise to 70 percent by 2050—urbanization is creating opportunities for economic growth and connectivity. Yet women and low-income communities face significant challenges in this changing landscape. Congested roads, unreliable public transport, and limited access to jobs and services highlight the need for a new approach to urban movement.

A 2017 World Bank–funded survey[3] identified several barriers to women's access to urban transport, with safety concerns being a significant issue. Many women expressed worries about their personal security and stated that they would use public transport more often if security was improved. Ninety percent of women indicated that better service, greater reliability, shorter wait times, and improved facilities would also increase their use of public transport. The presence of other women on public transport was another key factor, with women reporting feeling more comfortable when surrounded by other women, whether passengers or employees.

The Intervention

To support this effort, the World Bank has committed US$350 million through the Morocco Urban Transport Program and its additional financing.[4] The program aims to create accessible bus rapid transit (BRT) systems for all—women and men alike. Key initiatives include:

- **BRT services:** This involves offering more frequent service and schedules that fit women's travel patterns.
- **Female-friendly infrastructure:** This includes ramps, handlebars, and lower grades that make it easier to walk. Storage space for packages, bags, and strollers, convenience stores, and clean, safe public restrooms are equally important. Easy-to-use transfer stations and fare integration systems specifically cater to women, who typically take more multileg trips than men do.
- **Training:** Operators, local stakeholders, and transit authorities trained to create a conducive travel environment for women.
- **Codes of conduct:** Clearly defined rules to promote safety during transit.

Casablanca launched its BRT Line 1 in March 2024. Agadir's BRT is expected by mid-2025.

[2] The team thanks Nabil Samir, World Bank's Task Team Leader for his input into this case study.
[3] World Bank. 2017. Morocco Urban Transport Social Survey, Funded by the Umbrella Facility of Gender Equality (UFGE), Washington DC. Internal document.
[4] Morocco Urban Transport Project (P4R) and its Additional Financing (P149653 and P173048) 2015–2025.

To date, 100,000 daily users, including approximately 45 percent of women, are benefiting from the new, safe, reliable, clean, and modern public transport system. This number is projected to increase to 130,000 daily users with the introduction of the new BRT system in Agadir, set to launch in November 2025.

Lessons Learned

- **Sex-disaggregated data:** Sex-disaggregated mobility data permits transport authorities to develop design and track progress.
- **Infrastructure design that addresses women's needs:** Female-friendly BRT infrastructure, accessible facilities, and frequent service that fit with women's needs significantly boosts female ridership.
- **Private sector influence:** The hiring of female bus drivers was driven by private companies as part of an Environmental, Social, and Governance (ESG) commitment, highlighting the role of the private sector in promoting changes.

Affordability

Affordability poses another significant barrier to women's mobility. To stay mobile, women are frequently forced to pay higher costs for alternative transportation options like taxis or private services, despite earning lower wages and having lower employment rates than men. Economic disparities make regular use of public transport a financial burden for many women. This is exacerbated by fare structures that do not account for women's typical travel patterns. For example, a woman who needs to drop children at school, go to work, and then shop for groceries might have to pay for multiple single trip tickets, making the cumulative cost prohibitively expensive. Safety concerns often force women to opt for more expensive transport options, such as taxis or ride-sharing services, especially at night or in areas perceived as unsafe. This is effectively equivalent to levying a "pink tax"—which is the extra amount women pay for certain products or services, in this case, transportation—that can significantly limit women's mobility and access to opportunities, particularly for low-income women who may forgo a job or school due to high transport costs. Table 2.2 highlights possible interventions and the corresponding indicators, and Case Study 2 presents interventions from Rio de Janeiro, Brazil.

Table 2.2. Addressing Affordability Barriers for Women in Urban Transport

Interventions	Output Indicators	Outcome Indicators
Subsidized fares: Introduce discounted public transportation fares for low-income women to make transport more affordable.	• Number/percentage of eligible women benefiting from subsidized transport fares.	• Number/percentage of women using public transportation as a result of the subsidized fares. • Number/percentage of women commuters who report savings on public transport by X percent. • Percentage of transport cost savings (percent of monthly income) reported by women commuters.
Off-peak discounts accommodating women's trip chaining patterns: Provide women and their dependents with multitrip and family passes during peak hours, like early morning school drop-off and late afternoon pick up, to accommodate the various needs associated with mobility of care.	• Number/percentage of eligible women/their dependents using group/flexible transport fares. • Multiride or family passes that allow multiple people (for example, a woman and her dependents) to travel at a reduced collective fare during peak hours.	
Integrated ticketing systems: Implement seamless ticketing solutions that allow passengers to use a single ticket or payment method across multiple modes of public transport.	• Percentage of public transport services that have implemented integrated ticketing systems.	
Real-time fare information: Develop mobile apps and kiosks that provide up-to-date fare details and ticket purchasing options, helping to minimize uncertainty and enhance convenience. Integrate fare information into apps and kiosks.	• Number of transport hubs equipped with real-time fare information kiosks or app access.	

Case Study 02

Increasing Affordability of Transport for Women in Rio de Janeiro through the Cartão Move Mulher Program[5]

The Challenge

Improving affordability for vulnerable women is essential for fostering independence and facilitating access to essential services. For women in situations of domestic violence and economic vulnerability, transportation costs can be a significant barrier to seeking help or escaping abusive environments. Affordable and accessible transport empowers women to access support networks, justice services, and social protection mechanisms, creating pathways to safety and self-reliance.

Rio de Janeiro faces a persistent challenge with gender-based violence (GBV), including high rates of domestic violence and feminicides. Many women, particularly those in remote or low-income areas, lack the means to escape abuse or access specialized support services. The city's Specialized Network for Combating Violence Against Women, comprising facilities like the Specialized Center to Assist Carioca Women, provides critical support but often struggles to reach women constrained by financial and logistical barriers.

The Intervention

Recognizing the intersection of economic vulnerability and mobility challenges, Rio de Janeiro City Hall, with the support of the World Bank's Rio de Janeiro Fiscal Management and Sustainable Development Policy Loan,[6] launched an innovative transport subsidy program to address this gap.

The Cartão Move Mulher (Move Women Card) program was established by decree in 2021 (and sanctioned through the law in 2022) to provide free public transportation to women experiencing domestic violence. Administered by the Secretariat for Women's Policies and Promotion, the program distributes Move Mulher travel cards, which enable users to access critical services within the city's violence-fighting network, including women's shelters, public defenders, police stations, and specialized service centers. Each eligible woman receives a card charged for up to six bus tickets per month, with the possibility of adding another card within a month in case of need.

In addition to the Move Mulher card, Rio City Hall has introduced complementary measures like the Cartão Mulher Carioca, offering financial aid of R$500 to the families of women who are victims of violence.

[5] Case study was prepared based on desk review of project documents and recent articles such as Rio Prefectura. 2022. Rio City Hall launches the Move-Mulher Card. https://en.prefeitura.rio/cidade/prefeitura-do-rio-lanca-o-cartao-move-mulher/, and *Rio, uma cidade referência na equidade de gênero*, 2023. *Rio Prefeitura.* https://mulher.prefeitura.rio/wp-content/uploads/sites/41/2024/02/240124_Relatorio-de-Gestao-2023_V10Web.pdf; The team thanks Ana Waksberg Guerrini (World Bank's Task Team Leader) for her input into this case.

[6] Rio de Janeiro Fiscal Management and Sustainable Development Policy Loan (P179182) (2023–2024).

By the end of 2023, more than 4,000 Move Mulher cards have been distributed. The Move Mulher program represents a significant step in Rio's policies to combat GBV by ensuring affordable mobility for women in crisis. By enabling women to access essential services without a financial burden, the program empowers them to break the cycle of violence and seek justice. The provision of multiple cards per user ensures continued support and fosters a sense of security and autonomy.

Conclusion

The Move Mulher program exemplifies how targeted transport subsidies can foster resilience for women in vulnerable situations. As the program continues to expand, it serves as a model for integrating mobility, social protection, and GBV prevention into a cohesive urban policy framework.

Accessibility

Physical accessibility in urban transport systems often fails to consider the diverse needs of women users. Many public transport vehicles and infrastructure projects are designed with a "neutral" male user in mind, overlooking the requirements of parents (both women and men) traveling with children, carrying groceries, or managing other care-related tasks. High steps when boarding buses, large gaps between platforms and train coaches, and lack of storage provisions create literal barriers to comfortable travel.

While universal accessibility measures—such as ramps, elevators, and step-free access—enhance mobility for all users, they do not fully address the specific mobility challenges women face. Infrastructure design that accommodates women's needs, goes further by incorporating elements that improve safety, convenience, and usability. For example, poorly maintained sidewalks—often broken, discontinuous, or obstructed by street vendors or parked vehicles—force people to walk on the road, exposing them to traffic risks. Likewise, transit stops and stations often lack facilities that cater to the needs of women, such as separate toilets, breastfeeding rooms, and childcare areas. The absence of these amenities can make long commutes particularly difficult for parents with young children or women who are pregnant or menstruating. Table 2.3 highlights possible interventions to address accessibility constraints, and Case Study 3 shows interventions in Chennai, India.

Table 2.3. Addressing Accessibility Barriers for Women in Urban Transport

Interventions	Output Indicators	Outcome Indicators
Vehicles with universal accessibility features: Ensure that public transport vehicles have lower boarding steps, spacious interiors, and designated storage for luggage, groceries, and childcare items.	• Number/percentage of public transport vehicles with universal accessibility features. • Public transport authority using universal accessibility procurement guidelines for public transport vehicles.	• Number/percentage of women using public transport facilities with accessible infrastructure. • Change in access to employment, education, and healthcare in areas served by upgraded transport infrastructure, disaggregated by sex and disability.
Station infrastructure: Upgrade transport infrastructure by creating smooth, level transitions between platforms and vehicles.	• Number/percentage of public transport stations equipped with infrastructure that is accessible. • Public transport authority using universal accessibility procurement guidelines for stations.	
Transit stops and waiting areas: Equip main transit stops and stations with essential facilities like separate toilets for women and men, breastfeeding rooms for women, and childcare areas for parents and children.	• Number/percentage of public transport transit stops equipped with accessible infrastructure. • Public transport authority using universal accessibility procurement guidelines for transit stops.	
Infrastructure for non-motorized transport: Expand safe infrastructure for non-motorized transport, including sidewalks and bike lanes, to improve access for all.	• Kilometers of sidewalks and bike lanes constructed, rehabilitated, and maintained.	

Case Study 03

Gender-Responsive Urban Development in Chennai[7]

The Rationale

In cities across India, 30–50 percent of women report using public transport, mostly buses, as their primary way to get around. However, perceived safety is a major concern, especially at night. A 2021 World Bank study in Chennai found that women generally avoid traveling after dark, in part because of safety concerns. The study found that women travel more frequently between 3 and 5 pm, when it is light outside. Men travel more between 5 and 7 pm.

Public transport is often not designed with women's needs in mind, which limits their access to jobs, education, and economic independence.

The World Bank's study in Chennai found that many women worry about their safety and security on public transport. Many reported sexual harassment at all times of day and rising in the evening and at night. Few female public transit riders knew about emergency helplines, and a shortage of restrooms, challenges getting on and off buses and trains, and dense crowds are all sources of concern.

The Intervention

The Chennai Gender and Policy Lab (GPL)[8] is designed to create safer public areas, including public transport spaces, for women in the city.

To do that, the GPL did safety audits at 47 transit and other public places throughout the city. The audit dug deep into detail; it revealed that though people often felt unsafe crossing streets, they avoided foot bridges and subways. And the presence of street vendors, especially women, made people feel safer.

With that information, GPL designed training programs for city authorities and campaigns to raise awareness on women's safety. It advocated for reclaiming public spaces, addressing topics like bystander intervention, asserting women's rights to the city, and standing against gender-based violence (GBV). GPL helped direct the placement and design of new and renovated bus shelters. In the city's parks, GPL recommended infrastructure upgrades like better lighting, seating, visibility, and maintenance. It also suggested displaying helpline numbers on signs and training security guards to handle harassment. GPL analyzed helpline data to identify "dark spots" and helped install 425 new light posts in 152 locations.

[7] The team thanks Gerald Paul Ollivier, World Bank's Task Team Leader, for the review and clearance of the case.
[8] Chennai City Partnership: Sustainable Urban Services Program (P175221).

Safety and Personal Security

Security concerns are one of the most significant mobility barriers. Women potentially face harassment at multiple points of their journey, from the first and last mile to waiting at stops and inside vehicles. Harassment ranges from verbal harassment and intimidation to physical assault. Overcrowded public transport provides opportunities for harassment, while deserted stations and stops heighten anxieties about safety, especially during off-peak hours and at night. The lack of effective grievance redressal mechanisms and dysfunctional emergency helplines further compounds these issues, leaving women feeling vulnerable and unsupported. Women are less likely to report incidents of harassment for fear of retaliation by preparators, defamation by their own community, lack of awareness of reporting mechanisms, and distrust of grievance redressal mechanisms, thereby resulting in low levels of reporting. These safety concerns not only restrict women's immediate mobility but also have a long-term impact on their educational and professional choices. Studies have shown that women may choose lower-ranking educational institutions or lower-paying jobs closer to home to avoid unsafe commutes, perpetuating economic disparities and limiting their career progression. Table 2.4 highlights key interventions to address these security concerns followed by several examples that highlight the importance of tailoring these measures to the local context and users' expected behaviors (Boxes 2.1 to 2.3).

Table 2.4. Addressing Safety and Personal Security Barriers for Women in Urban Transport

Interventions	Output Indicators	Outcome Indicators
Safety and personal security audits: Conduct audits to benchmark harassment levels, identify vulnerable areas, and understand how infrastructure and design choices affect mobility. These audits allow women, through their participation, to assess their safety and security in public spaces and transport facilities, while also evaluating the adequacy of infrastructure and spatial usage patterns. See Box 2.2 for more information on audits.	• Number of safety audits conducted.	• Number/percentage of women who report feeling safe using public transport. • Number/percentage of survivors reporting well-being and empowerment. • Number/percentage of women accessing jobs and essential services due to the safe transport services and infrastructure.
Physical design: Incorporate safety features into urban transport systems, such as well-lit stations and CCTV cameras. Additionally, create separate, well-lit waiting areas for women at transport hubs, equipped with seating and security personnel, to enhance comfort and safety.	• Safety features implemented (for example, CCTV cameras, well-lit stations).	

Interventions	Output Indicators	Outcome Indicators
GBV protocols: Establish protocols to tackle gender-based violence (GBV) in public transport/space, including: • Reporting mechanisms via hotlines, mobile apps, and/or in-person points. • Counseling, legal support, and referral services for survivors. • Training for transport staff and law enforcement on empathetic and nonjudgmental responses. • Ongoing monitoring and evaluation, incorporating survivor feedback.	• Public transport authority/service provider developing a standard operating protocols (SOPs) for managing reports of harassment in public transport/public space. • Number/percentage of train conductors, ticket collectors and maintenance staff trained on new SOPs. • Reports filed through different means (hotline, mobile app, in person). • Number/percentage of survivors of sexual harassment receiving timely and adequate support, including counseling and legal aid, through survivor-centered SOPs.	
Public awareness campaigns: launch an educational campaign to raise awareness about harassment and violence against women in public transport, incorporating a range of strategies to ensure broad outreach and engagement, featuring: • Posters, social media, and community events. • Clear guidelines for reporting harassment. • Workshops on GBV and bystander interventions. • Partnerships with schools and media.	• Public transport authority/municipal agency undertaking public awareness campaigns. • Number/percentage of public transport users reached through in-person and digital public awareness campaigns.	

Interventions	Output Indicators	Outcome Indicators
Bystander intervention training: Provide training for transport staff and users on bystander intervention techniques (for instance, the "5Ds:" distract, delegate, document, delay, and direct, among others), ensuring staff and transport users are equipped with the knowledge and skills to intervene safely.	• Number/percentage of frontline staff trained (drivers, conductors, and security personnel) on bystander intervention.	
Data collection on incidents to enhance response: Collect and analyze data on assaults occurring in public transport systems to identify patterns and trends. Use the insights gained from the data to design and implement targeted safety training for transport service providers. This intervention could: • Establish a robust data collection mechanism (for example, incident reporting platforms, anonymous surveys). • Analyze the data to identify high-risk routes, times, and victim profiles. • Use the findings to design safety training programs for transport providers, focusing on preventing assaults and improving responses. • Update the training based on evolving trends and patterns identified in the data.	• Report/s on assault patterns and trends in public transport generated. • Number/percentage of actionable insights provided on high-risk areas and times, improving transport authorities' ability to address safety concerns. • Safety training sessions for transport service providers' staff conducted. • Number/percentage of staff confidence in handling assault incidents, as measured by post-training evaluations. • Number/percentage of bystander intervention rates in preventing harassment or assault incidents in public transport spaces. • Number/percentage of trained staff consistently applying safety protocols when handling assault or harassment incidents.	

Box 2.1. Learning Points and Tips (1): Shaping Interventions to Local Needs—Lessons from India[9]

In April 2022, Chennai introduced AI-enabled panic buttons in its public buses to improve women's safety. Starting with 500 buses, the Metropolitan Transport Corporation (MTC) expanded the program to 2,330 buses by January 2023, approaching its target of 2,500. Each bus is equipped with four panic buttons, an AI-enabled recorder, and three cameras. Pressing a panic button triggers an alarm at the Integrated Command and Control Centre (ICCC), which also records the incident. The system is connected to both Chennai City Police and the Greater Chennai Corporation's distress response center for quick action. The initiative has been widely supported by officials, who emphasize its potential to enhance women's safety. Awareness campaigns were conducted in December 2022 to educate passengers about the panic buttons. However, despite the technology, many women are reluctant to use the panic buttons, often due to cultural barriers and fear of drawing attention during harassment. Additionally, children misuse the system by pressing buttons for fun, which has led to false alarms, potentially diverting resources from real emergencies. This highlights that while technology is essential, addressing social attitudes and user behavior is key to its success, and that what works in one context may not work in another.

[9] Consultations with MTC, GCC, Chennai Gender and Policy Lab teams in July 2023 and various local news sources such as:
https://citizenmatters.in/mtc-chennais-buses-alby-john-varghese-e-tickets-smart-card-panic-buttons/
https://www.newindianexpress.com/cities/chennai/2022/May/17/mtc-staff-public-clueless-about-panic-buttons-2454877.html

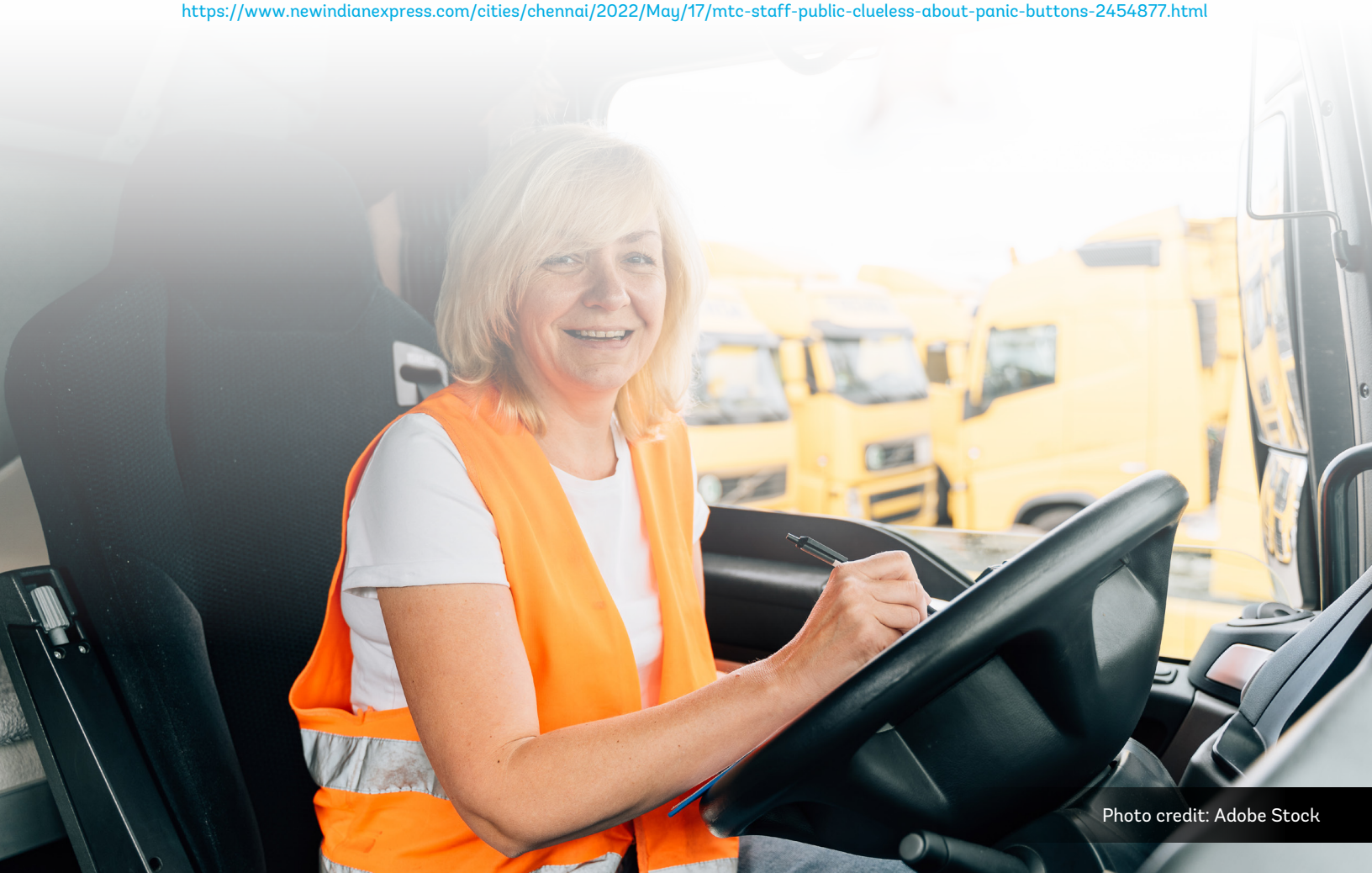


Photo credit: Adobe Stock

Box 2.2. Learning Points and Tips (2): Safety Audits in Urban Public Transport

Safety audits serve as critical tools for city authorities and public transport providers to evaluate and improve security. These comprehensive assessments offer benchmarks for harassment levels, identification of vulnerable areas, and understanding of how infrastructure and design choices affect user safety. Through participatory mechanisms, safety audits empower women to assess their safety perceptions in public spaces and transport facilities, while evaluating infrastructure adequacy and spatial usage patterns. These assessments examine key components, including street lighting quality, pavement conditions, accessibility of transit stations, last-mile connectivity options, and availability of social amenities such as public toilets, parks, and markets.

The assessment process can leverage technology for data collection. Modern digital tools facilitate comprehensive coverage across urban areas while maintaining standardized evaluation criteria. The World Bank Toolkit for Enabling Gender Responsive Urban Mobility and Public Spaces in India provides a detailed methodology and guidance for conducting safety audits, along with best practices from organizations implementing such assessments (Olliver, Mitali, and Sarah 2022). The resulting data generates detailed safety maps that highlight priority areas needing intervention. These insights guide government decisions on infrastructure improvements, focusing on critical elements like lighting enhancement, footpath rehabilitation, and strategic placement of public facilities. Depending on available resources and local context, cities may conduct these audits through professional agencies or community-led initiatives.



Photo credit: Adobe Stock

Box 2.3. Learning Points and Tips (3): Benefits and Drawbacks of Women-Only Transportation

Governments and transport companies worldwide have implemented various measures to address sexual harassment and violence in public transport and public spaces. One such measure is sex-segregated transportation, introduced in cities across countries like Bangladesh, Brazil, Egypt, India, Indonesia, Iran, Israel, Japan, Malaysia, and Mexico, to enhance safety for women. By providing designated train cars, buses, or transit sections, these initiatives aim to offer immediate relief and a sense of security, improving women's mobility and access to employment and essential services. While some women-only services have reported a decrease in safety incidents, as expected, concerns remain about their long-term impact and operational challenges, with limited evidence on their overall effectiveness in reducing harassment in door-to-door transit beyond the reserved cars.

Some Benefits of Women-Only Transport

- *Enhanced safety:* In environments where women face significant harassment in public spaces, providing women-only transport can offer them a safer space to travel in the segregated transport. For example, evidence from the World Bank's Development Impact Evaluation (DIME) research in Rio de Janeiro, Brazil, indicates that women riding in the reserved train cars reported experiencing physical harassment at one-half the rate compared to those women riding in mixed cars with men (Kondylis, Legovini, Vyborny, Zwager, and Andrade 2020).
- *Certain contexts where social norms severely restrict the mobility of women and girls may require women-only transport.* In societies where it is socially discouraged for women and girls to travel without male chaperones, women-only transport can serve as a temporary solution until societal attitudes toward female independence in travel change and public space safety improves. For example, the World Bank's Khyber Pakhtunkhwa project, discussed in chapter 3, highlights how women-only transport is essential in improving rural girls' access to schools.

Some Drawbacks of Women-Only Transport

- *Risk of stigmatization and victim-blaming:* Some studies suggest that the presence of women-only transport may lead to the perception that women who do not use these services are responsible for any harassment they experience, further entrenching biases (Dunckel-Graglia 2013).
- *Reinforcement of segregation:* While women-only spaces provide short-term relief, they may also reinforce social norms that restrict women's mobility. Some critics argue that such measures implicitly place the responsibility for avoiding harassment on women rather than addressing the behavior of perpetrators.

- *Operational and logistical challenges:* Women-only transport can lead to overcrowding in sections that carry both women and men while leaving women-only spaces underutilized at certain times. In India, for instance, women-only buses have struggled with low ridership due to infrequent service and limitations on women traveling with male companions (Shah 2018).
- *Limited scope:* Women-only transport is not a universal solution, particularly in areas where public transport infrastructure is already inadequate. Relying solely on sex-segregated options can divert attention from broader systemic improvements that benefit all users, including better enforcement of antiharassment laws and safer transport design.

Women-only transport can provide immediate safety benefits, but it is not a comprehensive solution to harassment in public spaces. While women-only transport can be part of a multifaceted approach to safer public transportation, it should not replace policies that tackle harassment at its core.

Employment

Women in urban transport face several barriers across recruitment, retention, and career growth. Roles such as bus drivers, conductors and station staff remain male-dominated due to limited awareness, gender stereotypes, and low female participation in transport-related education. High-skilled technical positions—such as vehicle maintenance specialists, traffic control operators, and electric vehicle technicians—also see low female representation, often due to gaps in access to specialized training. Work environments frequently lack women-friendly infrastructure, such as sanitation facilities at depots and terminals, and provide poorly fitting uniforms and protective gear. Long or irregular shifts, particularly in public bus and metro services, can conflict with caregiving duties and raise safety concerns. Additionally, the underrepresentation in leadership further restrict women's progression in the sector.

Outreach and recruitment

The urban transport sector faces significant challenges in attracting and recruiting female employees. There are several barriers preventing women from accessing and staying in the transport sector. These include low female enrollment in technical education fields, gender stereotypes that discourage girls from pursuing transport-related education and careers, and the widespread lack of awareness among women about the diverse jobs available in the sector, particularly semi-skilled frontline positions such as bus drivers and conductors. This information deficit is compounded by women's systematic exclusion from professional networks where these job opportunities are typically discussed and disseminated, further limiting their access to potential career paths in urban transport. Table 2.5 highlights some of the interventions related to women's recruitment that employers (transport ministries, municipal agencies, and transport service providers) can undertake. Case Study 4 presents interventions from Senegal.

Table 2.5. Addressing Barriers to Attract and Employ Women in Urban Transport

Interventions	Output Indicators	Outcome Indicators
HR workforce database: Invest in HR database improvements to enable analysis of staff entitlements and conditions by sex and other demographic and socio-economic factors. Collecting sex-disaggregated workforce data is a crucial step in developing evidence-based responses and policies. Data can be collected across a wide spectrum of domains, such as women's and men's employment in total and across different positions, age, training, and development, leave uptake, duration of employment, and so on.	• Database system upgrade to ensure collection and analysis of sex-disaggregated data is funded and included in annual budget cycle. • Clear specifications about how expected system enhancements for analysis of sex- disaggregated data and functions are developed.	• Number/percentage of women recruited, in total and by different job levels, including low-, mid-, and high-skilled technical roles, as compared to number and share of men for corresponding roles.
Communication to challenge perceptions about the suitability of transport roles for women: Through public communications, job descriptions, and the building of an employer narrative around engaging with women.	• Number of images and articles showing women in technical and leadership jobs in employer organization. • Employer website and communications include references to organization as an equal opportunity employer. • Job descriptions and employer documents showing unbiased language.	

Interventions	Output Indicators	Outcome Indicators
Nurturing female talent: • *Education talks:* Employers visiting schools and universities to talk about the value of transport work and the importance of addressing constraints women face to enter the sector. • *"Open days:"* Organizing open days where potential candidates (especially women and young people) are invited to visit the workplace and talk to staff; this could help challenge or demystify some aspects of transport careers, in addition to bringing potential reputational benefits. These will also help employers demystify false perceptions about the sector being suitably only for men, because of its culture and working conditions.	• Number of girls reached through education talks and "open days". • Links deepened/ created between urban transport employers and education institutions through memoranda of understanding (MoUs) or other cooperation agreements.	
Internship program: Establish a paid internship program for women in male-dominated fields like transport engineering and urban planning, targeting X female final-year students and recent graduates for X-month internships in key urban transport agencies.	• Number of women who enrolled and completed the internship program out of total number of enrollment and completions for interns.	

Interventions	Output Indicators	Outcome Indicators
Targeted skills trainings: Develop targeted training programs for women in the urban transport sector, collaborating with Technical and Vocational Education and Training (TVET) institutions and universities to identify candidates.	• Number of women and men who participate in, complete, and earn certification from the training programs.	
Promote women's employment in urban transport through public procurement: Promote women in different roles through concessionaire bidding documents to increase women's employment within private sector operators.	• Bidding documents for procuring goods in transport specify targets for women's representation at different levels.	



Photo credit: CETUD

Case Study 04

Using Rapid Buses to Boost Women's Employment in Senegal[10]

The Challenge

Dakar, Senegal, has long faced traffic congestion, unsafe roads, air pollution, and high greenhouse gas emissions, which affect both the quality of life and the economy. To address these issues, the Senegalese government is overhauling the city's transport system, with a focus on reducing carbon emissions. A key part of this strategy is the Dakar Bus Rapid Transit (BRT[11]) project, which aims to serve as a model for other African cities.

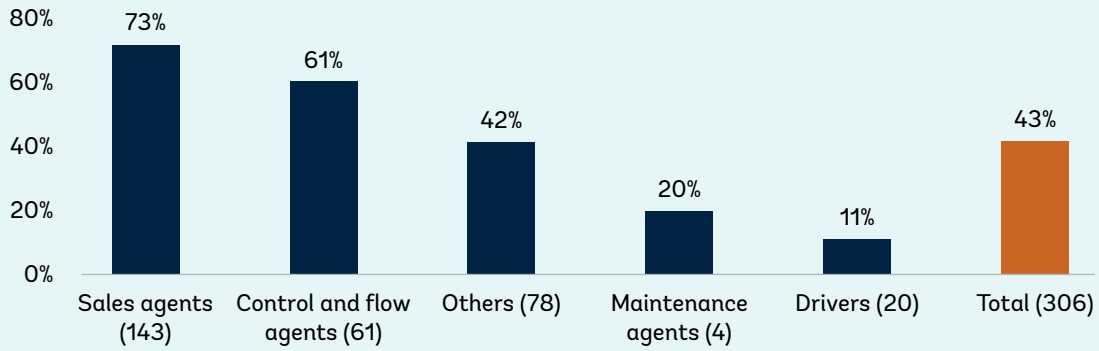
The Intervention

The Dakar BRT project serves an 18.3 kilometer corridor linking Dakar and Guédiawaye. It is Africa's first fully electric BRT line, serving 300,000 passengers daily, and reducing travel time between the two cities from 95 to 45 minutes. The project focuses on women's safety and aims to increase the percentage of female employees from 6 percent to 25 percent over the next 5 years. Features include well-lit stations, mirror systems, surveillance cameras, and broader sidewalks. Safety measures, including CCTV, dedicated police personnel, and community awareness campaigns, have led to a low crime rate of 3.51 crimes per 1 million passengers.

Challenges and Successes

The project faced challenges several challenges, including difficulty finding qualified women bus drivers. This was addressed by training women to operate buses and heavy equipment.

Figure B.2.7.1. Female Staff Hired and Trained as of Sept. 2024



Source: Dakar Mobility 2024.

[10] The team thanks the World Bank's Task Team Lead Franck Taillandier and the team member Cassandra Augusma for their review of the case and the staff of Dakar Mobility for their input provided during a World Bank mission held in November 2024.
[11] The Dakar Bus Rapid Transit (BRT) Pilot Project (P172342).

The project solved that problem by training women so they could get licenses to operate heavy equipment and to qualify to drive buses.

Lessons Learned

- **Addressing barriers:** Collaborations with driving schools helped train women.
- **External examples:** Successful case studies from other countries provided insights and helped overcome resistance.
- **Leadership and advocacy:** Strong leadership was crucial in making gender equity an actionable priority.
- **Partnerships:** Collaborations with vocational schools, nongovernmental organizations (NGOs), and recruitment agencies were vital.
- **Recruitment and communication:** Campaigns and creation of a women friendly workplace environment attracted women to the sector.
- **Safety:** Infrastructure improvements and community liaison officers helped address safety concerns.

Conclusion

The Dakar BRT project exceeded its women's employment targets and demonstrated the importance of combining infrastructure, training, and stakeholder engagement to achieve gender equity in urban transit.

Human resource policies and practices

Biases persist in human resource policies and practices in the urban mobility sector. Some in management harbor discriminatory attitudes, particularly toward women with family obligations or those expecting children. These biases manifest in unfair practices such as overlooking qualified women for advancement in bus operations or train services or assigning fewer demanding routes to female drivers. The unique challenges of urban mobility work, including security issues during late-night shifts, extended or unpredictable hours, and subpar workplace amenities, further deter recruiters from employing women in frontline roles.

Inequalities between women and men are evident in the design and provision of workplace infrastructure. Many transport hubs and vehicles are configured with male employees in mind, offering minimal or no accommodations for female staff. These include few basic sanitation facilities such as women's toilets. Personal protective equipment (PPE) that is designed to fit most men is another example: gloves are often too big for women, safety googles are too wide for their faces, or women have to wear uncomfortably high heels (World Bank and EBRD 2024). A lack of PPE that fits women is not only a question of comfort but can be a serious health issue since improperly fitting PPE does not adequately protect against occupational hazards and could increase the

risk of illnesses, injuries, and death. Beyond health hazards, ill-fitting PPE could lower employee productivity simply by making basic tasks harder. This lack of consideration for female employees is often justified by citing the historically male-dominated nature of the transport sector or perceived physical job requirements. Such practices not only restrict women's access to operational positions but also perpetuate misconceptions about women's suitability for certain roles.

Finally, regulatory barriers pose additional obstacles to women's participation in the sector. Certain requirements, such as legal restrictions on working in certain transport sector jobs in remote locations, or during evening hours, disproportionately affect women and can bar them from many positions. Moreover, these positions frequently demand long working hours, which can be particularly problematic for women, who may face greater safety risks or have caregiving responsibilities that conflict with such schedules.

Table 2.6 highlights some of the interventions related to human resources policies and practices that employers (transport ministries, municipal agencies, and transport service providers) can implement. Case Study 5 explores an initiative based in Mexico.



Photo credit: GIZ and WRI

Table 2.6. Improving Human Resources Policies and Practices in Urban Transport

Interventions	Output Indicators	Outcome Indicators
Flexible work-life policies: Introduce policies that provide flexible working hours, job-sharing arrangements, and part-time options for employees. **Sexual harassment policy:** Develop and implement a sexual harassment policy, including procedures for reporting and redress, and ensure it is accessible to all staff and published on the company website.	• Policies rolled out with staff-wide communication. • Number/percentage of staff trained on the sexual harassment policy. • Number of sexual harassment reports received through the formal redress mechanism and addressed. • Number/percentage of women utilizing flexible work options.	• Number/percentage of women retained with the organization, in total and by different job levels, including low-, mid-, and high-skilled technical roles. • Number/percentage of staff reporting improved job satisfaction, after the introduction or improvement of company's human resources policies and practices; disaggregated by sex and other key organizational metrics.
Workplace infrastructure and uniform and PPE: Implement safety measures, including separate toilets for men and women, changing rooms, and lighting. Provide Personal Protective Equipment (PPE) that is appropriately designed to fit both women and men.	• Number/percentage of workplace facilities equipped with separate toilets, changing rooms, and appropriate lighting. • Gender-sensitive PPE provided to all workers who require it.	
A staff satisfaction survey: Conduct periodic surveys to assess satisfaction with employment terms, working conditions, hours, leave, professional development, and equal opportunity outcomes. Analyze results by sex and demographics to inform activities, evaluate implementation, and identify areas for improvement.	• Surveys completed periodically. • Results disseminated among staff. • Percentage of recommendations acted upon.	

Case Study 05

Transforming Jalisco's Public Transportation Workforce[12]

The Challenge

Women make up just 11 percent of the workforce in transportation in Mexico.[13] Women in transport generally work in administrative and service jobs, while men typically occupy leadership, managerial, technical, driving, and operational positions.

The Intervention

The Mujeres Conductoras Program in Jalisco[14] addresses gender inequality in transport, an issue with implications far beyond employment. The program goes beyond job skills to address the challenges facing women workers and riders; in addition to driving training, it offers course modules on safety regulations and protocols for preventing violence.

Another part of the program makes it easier for women to get a public transport license. The law used to require four years of professional driving experience as a prerequisite for a public transport license, called a C2. This was a significant hurdle for women with limited experience. Because of the program, a driver's license of any type now permits someone to apply for a C2. This has opened doors for women while addressing public transport's shortage of drivers.

The Mujeres Conductoras Program prioritized collaboration with transportation companies. Government agencies worked closely with both public and private companies to create a hiring pipeline.

Challenges and Successes

The Mujeres program confronted deeply ingrained beliefs that driving is a male profession. The first female driving students faced an array of obstacles ranging from disapproval from their families, hostile male drivers, and the general view that women should not work as drivers. Many women, especially the 58 percent who were heads of households, struggled to balance the demands of working with their caregiving responsibilities. Some companies tried to accommodate women with more flexible schedules, but pressure to work during rush hours remains a challenge. Drivers also must cope with a lack of restrooms at terminals and along bus routes.

[12] The team is grateful to Gabriela de la Torre Ríos (WRI) and Hannah Behr and Jens Giersdorf (GIZ) for the material.
[13] ILO Laborstat. 15 years and above. 2023. Transportation and storage. https://ilostat.ilo.org/data/#.
[14] The program was implemented by the "TUMI E-Bus Mission: Accelerating mass adoption of electric buses worldwide" for the State of Jalisco, and the World Resources Institute (WRI) in Mexico, with funding from the German Federal Ministry for Economic Cooperation and Development (BMZ). The data, which informed the design of the interventions, were collected in 2022.

Despite these obstacles, the program had an immediate impact on the number of women entering the public transportation workforce. The female graduation rate rose from 60 percent for the first cohort of students to 75 percent in the second. Changes in the program's design, such as online training modules and flexible scheduling, addressed participants' needs. The program also marked a shift to a more formal employment model, which brought substantial benefits to both male and female drivers. All drivers got standardized wages, social security benefits, vacations, and fixed schedules. The new working conditions greatly benefited male drivers, who had previously endured grueling 24-hour shifts and the task of maintaining their vehicles.

The program also sent a message by challenging conventional roles about women and men, and inspiring other women. Women began to see themselves as capable employees who might pursue a nontraditional career. And female drivers placed behind the wheel helped create a sense of security for female riders. In the Mexican state of Jalisco, 8 in 10 women reported feeling unsafe on public transportation.

Lessons Learned

- **Financial support:** Using a stipend to support program participants was instrumental. The stipend helped women overcome economic barriers to participation.
- **Flexibility and adaptability:** The program adapted to participants' needs. Online training and flexible scheduling meant women could better juggle work and family.
- **Inter-institutional collaboration:** The program's collaboration with government agencies, educational institutions, and public and private transportation companies guaranteed steady funding, informed curriculum design, helped with legal compliance, and offered jobs to graduates.
- **Addressing gender stereotypes:** The program tackled stereotypes about driving with training and by highlighting women drivers' accomplishments.

Conclusion

The Mujeres Conductoras Program has benefited newly employed women drivers by offering them economic autonomy and boosting their self-esteem, and it has sent a strong message to their families and communities. The program has also reduced absenteeism and increased safety. While challenges remain, the Mujeres Conductoras Program serves as a model for both promoting women's employment and improving public transportation.

Career progression

Women in the urban transport sector face significant barriers to career progression. A notable challenge is the lack of adequate training and skill development programs, particularly for operating new electronic vehicles which are increasingly common in urban transport systems. This skills gap limits women's opportunities for career advancement and adaptation to technological changes. Additionally, women's disproportionate burden of unpaid care work necessitates employers in the public transport sector to consider their care and domestic work responsibilities. Table 2.7 highlights some of the interventions related to women's career progression and retention. Case Study 6 explores a project based in Tanzania.

Table 2.7. Addressing Barriers to Women's Career Progression in Urban Transport

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as: establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' resumes do not include personal details, and testing participants without revealing their personal details so as to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias and gender equality. • Gender balance in decision-making processes, ensuring a fairer and more diverse representation in promotion decisions.	• Number/percentage of women promoted within X months/years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months/years after the introduction of the women's mentorship program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).

Interventions	Output Indicators	Outcome Indicators
Women's mentorship program: Implement a mentorship program pairing women with senior female and male professionals, focusing on various issues such as, improving technical and soft skills, and addressing specific workplace challenges.	• Number of women participating in the mentorship program.	
Women's networking: Create a platform for women in urban transport to connect, share experiences, and seek mentorship.	• Number of women participating in networking events.	

Case Study 06

Empowering Women in Urban Mobility: Inclusive Infrastructure and Workforce Development in Dar Es Salaam's BRT System[15]

The Challenge

Tanzania is rapidly urbanizing, with one-half of its population expected to live in cities by 2050. Dar es Salaam, home to 40 percent of the urban population, is one of Africa's fastest-growing cities and is projected to become a megacity by 2030. However, urban inefficiencies hinder productivity, job creation, and accessibility, highlighting the need for improved infrastructure and public transport.

The National Transport Policy (NTP) aims to enhance urban mobility, focusing on high-capacity public transport, with the Bus Rapid Transit (BRT) system as a key initiative. The World Bank's Dar es Salaam Urban Transport Improvement Project (2017–2026) supports this, with the first phase already cutting travel times significantly. Six planned phases aim to build a 140.1 km network by 2030, improving accessibility, reducing congestion, and supporting sustainable mobility.

[15] Dar es Salaam Urban Transport Improvement Project (P150937). This case study was prepared based on a desk review and an interview with the project Task Team Leader, Yonas Eliesikia Mchomvu, World Bank's Task Team Leader.

The Interventions

The project includes initiatives to enhance women's mobility and employment in the transport sector:

- **Improved pedestrian infrastructure:** Developing safer walking spaces like sidewalks, lighting, and pedestrian crossings.
- **Expanded public transport:** Scaling up the BRT system to reduce waiting times and overcrowding, improving safety for female passengers.
- **Mobile reporting system for gender-based violence (GBV):** A system for women to report GBV incidents, map occurrences, and facilitate actions from authorities.
- **Employment initiatives:** Internship programs for transport graduates, vocational training for affected Daladala drivers and conductors, and the Structured Engineering Apprenticeship Program (SEAP), aiming for 50 percent female enrollment in engineering.

Implementation Challenges and Successes

Challenges were several, including the leadership continuity issues and delays in system functionalities. Despite this, the project saw successes:

- **Graduate engineering initiative:** SEAP achieved equal representation of women and men, with 433 graduates (211 men and 210 women) participating, increasing female representation in engineering.
- **Women drivers training:** 102 women were trained as drivers, with 77 completing the course, some already securing BRT driver positions.

Lessons Learned

Key lessons include the importance of consistent leadership, expert support from transport and gender specialists, practical tools like surveys and suggestion boxes, targeted initiatives that empower women in male-dominated fields, and strengthening local capacity for more effective implementation.

Conclusion

The Dar es Salaam Urban Transport Improvement Project demonstrates the positive impact of integrating strategies addressing women's mobility and employment in urban transport planning. By improving infrastructure, safety, and professional development opportunities, the project enhances women's mobility and empowers them economically and socially, despite challenges.

Leadership

A significant barrier in the urban mobility sector is the severe underrepresentation of women in leadership positions. The sector suffers from a lack of mentorship programs designed to address women's specific needs, leaving them without crucial guidance to navigate industry-specific challenges. This gap in support systems often results in women feeling isolated and struggling to advance their careers. The absence of relatable role models and mentors who understand the unique obstacles women face in this male-dominated field further exacerbates the problem. Additionally, informal decision-making processes in promotion and career advancement often perpetuate biases, reinforcing existing workplace power imbalances and creating further barriers to women's professional growth.

Consequently, many talented women exit the sector prematurely, unable to realize their full potential or achieve their professional aspirations, thereby perpetuating the imbalance in urban transport leadership and operations. This lack of female leadership also perpetuates a cycle of decision-making in urban transport planning and policy making that overlooks women's perspectives as users of transport. Table 2.8 highlights some of the interventions related to women's leadership. Case Study 7 showcases interventions implemented in Ecuador.

Table 2.8. Addressing Barriers to Women's Leadership in Urban Transport

Interventions	Output Indicators	Outcome Indicators
Women's Leadership program: Establish a targeted leadership training program for women in the urban transport sector, focusing on strategic planning, financial management, and team leadership.	• Number/percentage of enrolled participants who successfully complete the training program.	• Number/percentage of women promoted to leadership roles within X months/years after the introduction of the women's leadership training program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).
Annual review process: Implement an annual review to track progress in women's representation in managerial and senior roles, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	

Case Study 07

Addressing Mobility and Employment Barriers for Women in Quito's Transport Sector[16]

The Challenge

The 2018 Quito Metro Line One Project aimed to improve urban mobility in Quito, Ecuador, responding to increasing demand for public transport. Over 91 percent of women reported experiencing harassment in public spaces, leading many to modify their mobility patterns for safety.

The Intervention and Results

The project implemented several measures to address sexual harassment, including a prevention and response protocol and staff training. During the first five months of project implementation, results were significant: 96 percent of women reported feeling safe on the metro, with only six harassment cases over 20 million trips.

The metro also achieved 40 percent female participation in its workforce, surpassing the 20 percent target, with 50 percent of management roles held by women. These achievements marked a key milestone in fostering women's employment in public transport in Ecuador, where women make up only 9 percent of the transport sector's workforce.

[16] Quito Metro Line One (P144489). The team thanks the World Bank's Task Team Leader Alejandro Hoyos Guerrero and the project team member Karla Dominguez Gonzalez for their input.



Photo credit: World Bank

Entrepreneurship

Despite emerging opportunities, such as operating electric three-wheelers for last-mile connectivity and e-commerce delivery, women entrepreneurs face numerous challenges in urban transport systems, including limited access to capital, training, and networks.

Business skills training and advisory support

Women face limited access to business skills training and business advisory support in the transport sector, which is often seen as a male-dominated industry. This gender stereotype discourages women from seeking relevant training and opportunities. Additionally, transport-related subjects are frequently underrepresented in educational curricula, particularly for young women. Without access to specialized courses or training programs, women have fewer opportunities to acquire the knowledge and skills needed for business roles in transport. Table 2.9 highlights some key interventions to address these constraints.

Table 2.9. Addressing Women's Business Skills Training and Advisory Support Needs in Urban Transport

Interventions	Output Indicators	Outcome Initiatives
Launch a structured business skills training an advisory program to empower women in the urban transport sector, especially in the e-mobility space, through the following: • Conduct regular business training covering essential business skills, such as planning, financial management, marketing, and e-mobility trends. • Create an online platform with templates, guides, and toolkits for managing businesses in urban transport, along with regulatory information and funding opportunities.	• Number of women receiving training and business advisory support.	• Number/percentage of women beneficiaries of training and business advisory support launching or growing their businesses in urban transport. • Number/percentage of women beneficiaries of training and business advisory support reporting change in their economic outcomes (in projects, revenue, or profits). • Change in the number of projects, revenue, or profits among women entrepreneurs who benefited from training and business advisory support.

Access to Finance

Financial barriers persist, with financial institutions often imposing biases that hinder women's ability to secure loans for vehicle purchases or transport businesses. Discriminatory practices, like requiring male co-signers or higher interest rates for female applicants, confine women to lower-paying, less secure jobs and perpetuate economic vulnerability. Table 2.10 highlights some key interventions to address these constraints.

Table 2.10. Addressing Access to Finance Constraints for Women Entrepreneurs in Urban Transport

Interventions	Output Indicators	Outcome Initiatives
Launch a dedicated initiative providing *loans* tailored to women entrepreneurs (for example, collateral free, low interest, and so on) in urban transport with a streamlined application process. Establish a competitive *grant* program to provide seed funding for women-led startups in the e-mobility sector.	• Number/percentage of women entrepreneurs securing loans through the access to finance initiative. • Number of female entrepreneurs receiving e-mobility grants and other financial incentives for sustainable transport solutions.	• Number/percentage of women beneficiaries of access to finance programs launching or growing their businesses in urban transport. • Number/percentage of women beneficiaries of access to finance programs reporting change in their economic outcomes (in projects, revenue, or profits). • Change in the number of projects, revenue, or profits among women entrepreneurs who benefited from access to finance programs.

Market Access and Linkages

Additionally, market access challenges prevent women from tapping into business opportunities and digital platforms, restricting their participation in ridesharing or delivery services and hindering their ability to generate sustainable livelihoods within the urban mobility ecosystem. Table 2.11 highlights some key interventions to address these constraints.

Table 2.11. Addressing Women's Constraints to Market Access in Urban Transport

Interventions	Output Indicators	Outcome Initiatives
Market access and linkages: • Create partnerships between women entrepreneurs and government procurement systems for urban transport and e-mobility projects, including capacity building workshops to navigate procurement processes and develop competitive proposals. • Develop forums for women entrepreneurs in urban transport and e-mobility to connect, share experiences, and collaborate through regular events and conferences.	• Number/percentage of women-owned businesses being awarded contracts in urban transport from government. • Number of women entrepreneurs participating in networking platforms focused on urban transport.	• Number/percentage of women beneficiaries of market access support programs launching or growing their businesses in urban transport. • Number/percentage of women beneficiaries of market access support programs reporting change in their economic outcomes (in projects, revenue, or profits).

3

Rural and Peri-Urban Roads

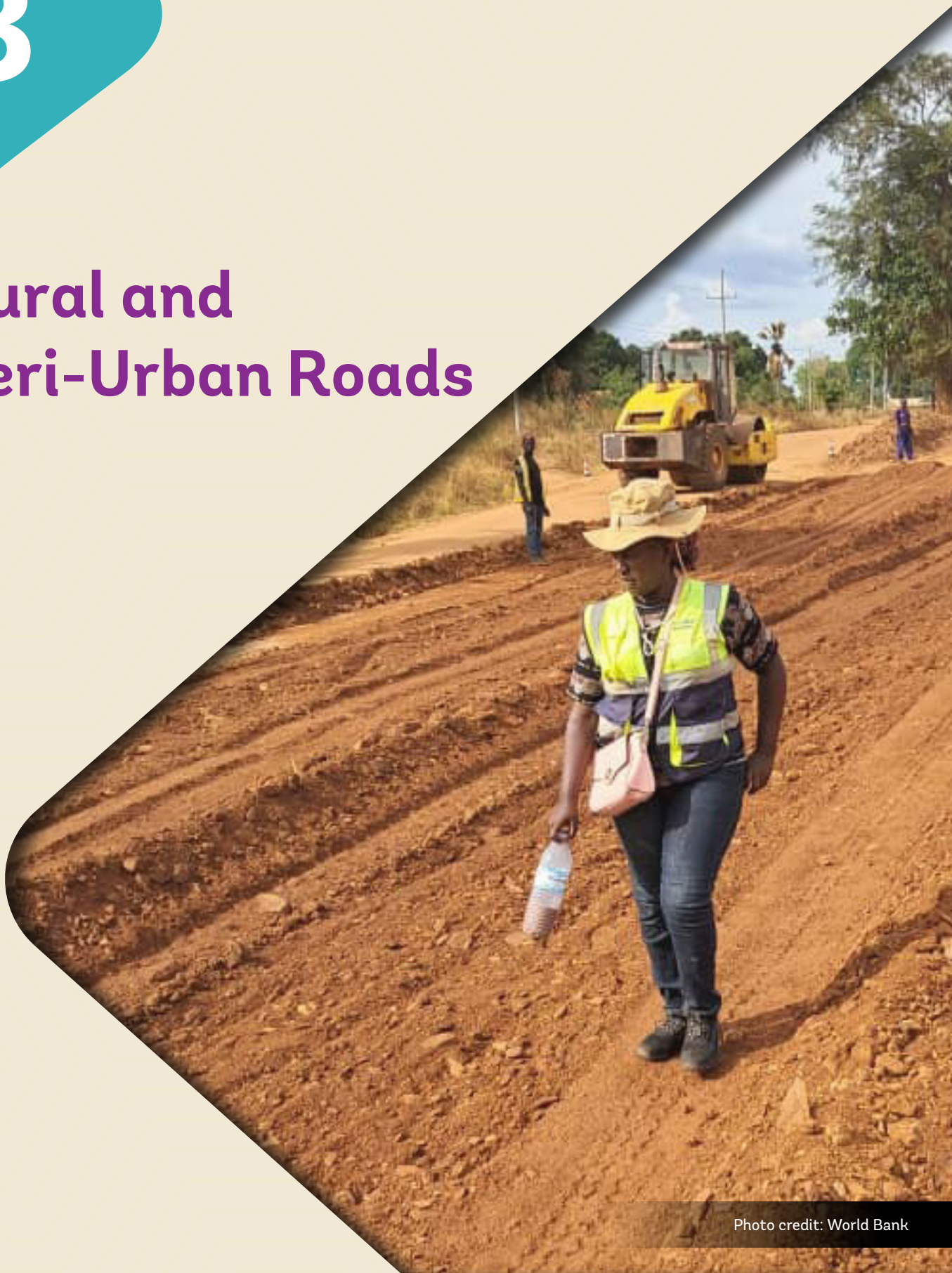


Photo credit: World Bank

World Bank rural and peri-urban road projects typically focus on enhancing connectivity and accessibility, reducing transport costs, travel time, and improving road safety. They aim to support economic development by facilitating the movement of goods and people, particularly in rural and underserved regions, and strengthening agricultural and tourism sectors. These projects also seek to build institutional capacity for road and bridge asset management, improve the climate resilience of road infrastructure, and ensure sustainable and durable transport networks. The rural and peri-urban road projects primarily focus on road infrastructure, including construction, rehabilitation, and maintenance. Transport fleets and their operations are typically addressed in urban transport projects, which were discussed in the preceding chapter.

Mobility

In rural and peri-urban road operations, disparities in mobility between men and women are closely linked to issues related to poor road conditions that make it difficult for women to access public transportation, especially in rural areas where transportation options are already scarce. This exacerbates gender disparities, as women often must rely on informal transport, which may not be accessible or affordable. Poor roads can increase travel time and the risk of accidents, making women more vulnerable to violence, harassment, and exploitation, especially when traveling alone or during off-peak hours. Availability, affordability, safety, accessibility, and social and cultural acceptability of road infrastructure and transport services restrict women's movements and limit their access to employment, markets, and social services.

Availability

Availability is a critical issue, as transport infrastructure (roads) and services (such as public transportation) in rural and peri-urban areas are often infrequent, irregular, or absent. The scarcity of reliable public transportation and poor road conditions, especially the lack of all-weather roads that remain passable during wet and dry seasons, significantly contribute to the gap in human development indicators between women and men. Inadequate road infrastructure frequently fails to meet women's needs for safe and accessible routes, resulting in longer travel times, higher costs, and increased physical and economic burdens, which hinders their mobility and participation in community and economic activities. Furthermore, existing transport services, when available, may not align with women's schedules, which are shaped by household responsibilities such as childcare or agricultural work.

This scarcity of reliable and regular transport options exacerbates women's isolation. It limits their ability to travel for work, education, or personal needs, with many services catering primarily to male-dominated sectors like agriculture or trade, without considering women's specific needs. Incorporating women's needs into government plans for prioritizing roads for rehabilitation and construction is essential to ensure women's equitable access to vital services. Women, often primary caregivers and workers, rely heavily on accessible roads that lead to jobs, health facilities, and educational institutions. By prioritizing road infrastructure that connects women to these essential resources, governments can foster greater economic participation, improve health outcomes, and

increase educational opportunities for women. A thoughtful approach to road planning, one that considers the unique needs of women, will ultimately strengthen communities, promote gender equality, and enhance overall societal well-being. Table 3.1 highlights some of the key interventions to address these constraints and their corresponding indicators.

Table 3.1. Addressing Availability Barriers for Women in Rural and Peri-urban Transport

Interventions	Output Indicators	Outcome Indicators
• **Data collection to construct baseline:** Collect data to identify sex-disaggregated mobility patterns among current road users and the mobility needs of potential users. • **Consultation and participation:** Organize consultations for road projects by engaging a broad range of community members, including women, to ensure that road selection and upgrade work address their specific needs. • **Road prioritization:** Select rural and peri-urban roads for upgrades to provide women with better access to essential services and markets, reduce isolation, and improve their overall mobility.	• A survey to collect and analyze data about the road usage and needs, travel patterns, frequency, modes of transportation, trip purposes, travel times, and distances, broken down by sex and other demographic and socio-economic factors. • Number or /percentage of roads selected for upgrades that incorporate women's specific mobility needs. • Community consultations where women actively participate and contribute to the road selection and planning process.	• Number/percentage of women reporting change in their access to income-generating opportunities (for example, agricultural production, businesses, trade, or formal jobs) because of their improved access to roads. • Number/percentage of women who can access health services with obstetrical facilities within X minutes because of their improved access to roads. • Number/percentage of women who can access education/skill training facilities within X minutes be-cause of their improved access to roads.

Interventions	Output Indicators	Outcome Indicators
Construction/rehabilitation of rural and peri-urban roads: Build roads that connect women residing in rural and peri-urban areas to essential services, improving their access to health care, education, and employment and markets. These roads should incorporate accessible infrastructure (for example, lighting, higher visibility with few concrete walls, and other elements, as devised through participatory feedback from communities).	• Kilometers of roads constructed, rehabilitated, and maintained with accessible infrastructure.	• Number of women who can access banking facilities, government offices, and other citizen-focused services within X minutes because of their improved access to roads. • Number/percentage of girls (and boys) who can access schools within X minutes because of their improved access to roads.

Affordability

Affordability of transport remains a significant barrier for women, who often earn less than men and face limited financial resources. These constraints can restrict their ability to regularly access transport services, both for themselves and for their dependents. The lack of affordable and accessible transport limits women's participation in the workforce and discourages families from sending children to school or seeking essential services such as healthcare—ultimately undermining human capital development for both current and future generations. As a result, many women rely on walking or low-cost alternatives that are often time-consuming and physically demanding, especially for those balancing household and caregiving responsibilities. In many households, boys are prioritized for schooling, while girls remain at home due to financial hardship, safety concerns—including transport-related risks—and entrenched social and cultural norms. Table 3.2 outlines key interventions to address these barriers and their associated indicators, while Case Study 8 presents a project from Pakistan's Khyber Pakhtunkhwa Province.

Table 3.2. Addressing Affordability Barriers for Women in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
School transport subsidies: Provide targeted transport subsidies for girls (and boys) from low-income communities to ensure their enrollment and retention in schools.	• School attendance rates for girls (and boys) receiving subsidized transport or number of girls (and boys) attending school due to subsidized transport. • School retention rates for girls (and boys) receiving subsidized transport or number of girls (and boys) being retained in school due to subsidized transport. • Number or percentage of school-age girls (and boys) from low-income communities benefiting from subsidized school transport.	• Number/percentage of girls (and boys) reporting change in their school attendance/ retention rates due to subsidized transport.
Healthcare transport subsidies: Provide targeted transport subsidies to women from low-income communities for routine and critical health care visits.	• Number/frequency of healthcare visits (both routine and critical) attended by women from low-income communities who receive transport subsidies. • Change in number of missed healthcare visits due to transport subsidies. • The number/percentage of women from low-income communities receiving targeted transport subsidies for routine and critical health care visits.	• Number/percentage of women reporting change in their health outcomes due to subsidized transport.

Interventions	Output Indicators	Outcome Indicators
Reduced transport fares in low-income areas or location specific reduced fare system for underserved areas: Introduce lower public transport fares for women (and their dependents) in low-income areas to improve their access to jobs, education, and health services.	• Number/percentage of women eligible for reduced transport fares from low-income communities benefiting from the transport subsidy program. • Number/proportion of subsidized public transportation tickets issued to women in low-income communities as the share/number of all eligible women.	• Number/percentage of women reporting improved access to jobs and markets due to subsidized transport. • Number/percentage of women reporting improved access to essential services (health and education) as a result of subsidized transport.



Photo credit: World Bank

Case Study 08

Safe and Affordable School Journeys for Girls in Khyber Pakhtunkhwa

The Challenge

In Pakistan's Khyber Pakhtunkhwa Province and the Newly Merged Districts, decent roads can mean the difference between going to school or staying home, between seeing a health care provider or getting sicker, between selling wheat or vegetables for a healthy profit at market or selling too cheaply to neighbors.

Bad roads and long commutes keep girls out of school. In the Newly Merged Districts, approximately 70 percent of girls do not go to school, compared to 30 percent of boys. In Khyber Pakhtunkhwa, these numbers are slightly better—49 percent of girls are out of school, while only 21 percent of boys are. Girls' dropout rates are particularly high, especially at transition points such as the end of primary school and the end of secondary school. These dropout rates are linked to a lack of safe, affordable, and reliable ways to get to school, which disproportionately affects girls.

Intervention

The World Bank–supported Khyber Pakhtunkhwa Rural Accessibility Project[17] provides subsidized transport to girls from marginalized rural communities. The project's innovative ideas are designed to protect schoolgirls and ease parents' anxiety. Transport providers undergo a comprehensive selection process, including background and medical screenings, verification of vehicle permits and certifications, community reputation assessment, adherence to a strict code of conduct, and completing sensitization training on appropriate awareness and behavior toward women. These are new and notable parts of this project, which are helping to lower barriers to education while respecting local cultural norms.

The project is on course to provide safe transport for 30,000 girls cumulatively over the course of the project, with a specific target of bringing 2,400 out-of-school girls back into the education system. Since commencement, the program has been positively received by parents and local stakeholders alike, with several schools reporting the reenrolment of students that had initially dropped out, to avail the subsidy. This project demonstrates the transformative potential of addressing disparities between women and men in education through infrastructure development. By tailoring transport services to local needs and norms, such projects can serve as a model for improving girls' access to education in conservative and rural settings. The project also highlights the importance of cross-sectoral collaboration, in this case—between transport and education.[18]

[17] Khyber Pakhtunkhwa Rural Accessibility Project (P177069).
[18] This study was reviewed and confirmed with the World Bank project team members Mr. Muhammad Bilal Paracha, and Ms. Sara Zafar Cheema.

Accessibility

Physical accessibility is a significant challenge for women in rural and peri-urban areas, particularly for those with limited mobility, the elderly, pregnant women, or those traveling with young children. Poor road access in rural areas often confines women to working close to their homes, such as on farms, unlike their male counterparts. Inadequate infrastructure and poorly maintained roads make it difficult for women to access transport services, especially in remote areas where distances between villages and transport hubs are long. Additionally, cultural constraints in many countries hinder women from cycling, despite it being a common mode of transport in rural and peri-urban areas. Women often face barriers such as a lack of cycling skills, the inability to afford a bike, or fear of cycling in traffic due to safety concerns. Table 3.3 highlights some of the interventions and their associated indicators.

Table 3.3. Address Accessibility Barriers for Women in Rural and Peri-urban Transport

Interventions	Output Indicators	Outcome Indicators
Pedestrian infrastructure: Improve pedestrian infrastructure around rural and peri-urban roads: • Develop and maintain pedestrian sidewalks that are free from obstructions, such as potholes. • Provide clear, visible pedestrian crossings at intersections with sufficient time for crossing, particularly at busy peri-urban roads, and use traffic-calming measures.	• Number of kilometers of pedestrian sidewalks constructed or upgraded in rural and peri-urban areas • Pedestrian crossings installed or improved at key intersections. • Intersections with clearly marked and visible pedestrian crossings • Traffic-calming measures (e.g., speed bumps, signage, raised crossings).	• Number/percentage of women reporting improvement in their access to key destinations (for example, markets, jobs, schools, and health facilities) due to enhanced pedestrian and/or cycling infrastructure. • Number/percentage of women reporting change in their usage of nonmotorized transport (walking, cycling) as a mode of transport due to enhanced pedestrian and/or cycling infrastructure.

Interventions	Output Indicators	Outcome Indicators
Cycling Infrastructure: Improve cycling infrastructure around rural and peri-urban roads: • Develop separate cycling lanes or marked roads to safely separate cyclists from motor traffic; where not feasible, provide wide road shoulders. • Design routes that connect rural communities to essential services like health centers, schools, markets, and transport hubs, improving women's mobility. • Install bike racks at key locations to allow safe parking for cyclists. • Offer cycling safety training for women to build confidence and reduce accident risks on mixed-traffic roads.	• Number of bike parking racks or secured areas installed at key locations such as markets, bus stations, schools, and health care centers. • Number/percentage of women participating in cycling safety training, with subsequent improvements in their cycling skills and confidence. • Kilometers of dedicated cycling lanes or wide shoulder areas constructed, rehabilitated, and maintained.	

Safety and Personal Security

Personal security and safety concerns are another significant barrier to women's mobility in rural and peri-urban areas. Transport systems in these regions are often poorly monitored, with inadequate lighting, security, and female-friendly infrastructure, such as safe waiting areas or designated spaces for women. This lack of personal security creates a climate of fear where women worry that they are at a higher risk of harassment, violence, and exploitation, particularly in isolated or poorly connected areas.

In addition to personal security, road safety also poses a disproportionate challenge to women. Poor road conditions, such as potholes, uneven surfaces, and a lack of proper signage make travel hazardous for all users, but women (and children) are particularly vulnerable, as they are more likely to walk because of limited access to personal vehicles. These poor conditions increase the risk of accidents. Inadequate pedestrian facilities, such as sidewalks, crossings, and footpaths, force women to share the road with motor vehicles, putting them at greater risk. This problem is even more pronounced in rural areas, where infrastructure is often limited. Table 3.4 highlights some of the interventions and the associated interventions that address these barriers.

Table 3.4. Addressing Women's Safety and Personal Security Barriers in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Safe infrastructure: Install street lighting, closed circuit television (CCTV), well-lit rest stops, sanitation infrastructure, and emergency call points to enhance safety.	• Number of surveillance cameras in pedestrian zones installed, especially in places where women report feeling unsafe. • Number of emergency call boxes operationalized in pedestrian-heavy areas and along isolated walkways. • Number of rest stops with sufficient lighting. • Number of public restrooms (with both male/female options) that are clean, safe (with locks), with running water and soap in project intervention area. • Number of well-lit streets and transit areas.	• Number/percentage of women who report improved access to jobs/markets and essential services as a result of safer road infrastructure. • Number/percentage of women from local communities who use the upgraded roads.
Road safety education and awareness: Develop and implement road safety education and awareness programs that address both men's and women's perspectives. **Child-friendly road safety measures:** Implement child-specific road safety features, such as speed limits around schools, school-zone road signs, and pedestrian crossings that are easily visible to both children and drivers.	• Road safety awareness that addresses both men's and women's perspectives and needs undertaken. • Number of women and men reporting better road safety awareness following the implementation of road safety education program that addresses both men's and women's perspectives and needs. • Percentage of school zones and child-frequented areas where child-specific road safety measures are implemented.	• Change in the number/ percentage of road accidents, disaggregated by sex and age.

Employment

It is crucial to recognize that rural and peri-urban projects involve two distinct types of employers: road contractors (private sector), who execute construction work through project bids, and the road agency or any other state entity responsible for setting the bidding terms[19] and for oversight functions. This distinction is critical when designing interventions, as the applicability of measures varies. For example, facilities that cater to the needs of women, such as providing changing rooms and appropriate personal protective equipment, are more relevant to private contractors managing on-site personnel. Conversely, road agencies focus more on policy, monitoring, and ensuring compliance with safety and labor standards. Understanding these differences is essential when deciding on appropriate interventions ensuring they are tailored to the relevant type of employer.

Outreach and recruitment

Women face significant barriers to entry in road works due to societal expectations and a lack of targeted recruitment efforts, resulting in a predominantly male workforce. The absence of training and certification programs for technical jobs restricts women's ability to gain the skills needed to compete effectively for specialized jobs such as equipment operator or in project management. Personal security concerns, such as risks of harassment or violence, particularly in remote rural construction sites, discourage women from pursuing careers in this sector. Table 3.5 outlines key activities that road companies can undertake to enhance women's recruitment, as well as measures that road authorities can implement through public procurement to promote women in the sector. Case Study 9 showcases interventions from a project in North Macedonia.

[19] Many contracting agencies are leveraging public procurement to train and hire local women for transport sector roles. This is typically achieved by amending bidding documents to require bidders to commit to training and employing women. A new rated criteria, introduced in September 2023 for all international procurements under World Bank–supported projects, offers an opportunity for contracting agencies to evaluate the quality of bidders' plans for promoting women in their workforce and providing safe work environment.



Photo credit: World Bank

Table 3.5. Addressing Barriers to Attracting and Employing Women in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Procurement measures: Reserve a minimum portion or number of contracted labor opportunities for women in road work roles in project bidding documents; specify job categories to be awarded to women with a focus on mid- and high-skilled technical jobs where women tend to be the most underrepresented and require bidders to demonstrate commitment to employing women and creating supportive workplace through an action plan.	• Action plans submitted by the bidders (road companies) demonstrating their commitment to employ women and to create safe and supportive working environment. • Bidding documents amended by relevant contracting authorities incorporating women's employment targets.	• Number or percentage of local women employed in low-, mid- and high-skilled technical roles by road transport companies. • Number of women managing community-based road maintenance groups out of all the groups operating. • Number or percentage of women reporting improvement in their incomes or livelihoods as a result of their participation in road maintenance programs.
Outreach campaigns: Raise awareness of road sector opportunities for women through local radio, short message service (SMS) blasts, and women-focused job fairs in rural and peri-urban areas, and collaborate with community groups, vocational centers, and NGOs to promote road careers and support recruitment.	• Number /percentage of female applicants for technical, operations, and managerial positions in road companies.	

Interventions	Output Indicators	Outcome Indicators
Technical certification and apprenticeship programs: Offer technical certification programs for women in mid-skilled roles such as construction, road maintenance, machinery operation, and project management, complemented by structured apprenticeships for practical experience. Provide scholarships or subsidies to support women from rural and peri-urban areas in accessing these opportunities.	• Number of women obtaining skill certifications through targeted programs.	
Internship programs: Provide paid internships to build a pipeline of women in high-skilled technical occupations in road contractor workforce and in road agencies (for example, engineers, road safety specialists, geodesists, and so on).	• Number of paid internships completed, with women making at least X percent.	
Community-based Road maintenance programs[20]: Promote women's employment in local road maintenance contracts.	• Number and percentage of women involved in road maintenance groups (as opposed to overall number of members). • Number and percentage of women in leadership roles in road maintenance groups, such as project manager, team leader, or decision-maker.	

[20] Community-Based Road Maintenance Programs are initiatives that involve local communities, including both men and women, in the maintenance, repair, and improvement of roads, particularly in rural or peri-urban areas. These programs are designed to empower local populations, create job opportunities, and improve infrastructure in a sustainable and cost-effective way.

Case Study 09

Using Public Procurement to Promote Employment of Ethnic Minorities in North Macedonia[21]

Background

Public procurement accounts for around 12 percent of GDP[22] in many economies. Partly because of the money involved and the scale of many projects, procurement can be a powerful tool to promote female entrepreneurship, improve working conditions for women, and get them jobs in traditionally male-dominated industries like transport. Transport projects can integrate women into employment and supply chains through public procurement, as evidenced by several World Bank–supported initiatives.

The Intervention

The Roma, Europe's largest ethnic minority, faces significant challenges, including limited access to transportation and jobs, along with other minority ethnicities in the country. Recognizing this, the World Bank supported the North Macedonia Local Roads Connectivity Project,[23] which promotes employment for Roma men and women in public works.

During the preparation, the project began with a detailed assessment of the needs of Roma women, Roma men, and non-Roma women regarding road infrastructure, public transport, and employment in transport.[24] Findings revealed that poor infrastructure disproportionately impacts Roma communities and that entrenched social norms, combined with welfare disincentives, keep Roma women away from jobs on road works.

In response to these challenges, the project's bidding documents were revised to include a requirement for road construction companies to hire women (both Roma and non-Roma) as well as Roma men. While the targets were not ambitious, they were designed to raise awareness and encourage the private sector to engage with and employ ethnic minorities.

Between 2021 and 2024, the project hired 271 Roma men for public works projects, but it faced some challenges in providing similar opportunities for Roma women, with only 17 women being recruited. Social norms and expectations presented a significant barrier; construction jobs are traditionally considered to be for men only. Another barrier was the country's social welfare policy, which discourages disadvantaged groups from seeking short-term employment because of the potential loss of their government stipends.

[21] The team is grateful to Maja Lazarevska, Director of the Project Implementation Unit for clearing the case.
[22] Erica Bosio and Simeon Djankov. 2020. "How large is public procurement?" World Bank Blog: https://blogs.worldbank.org/en/developmenttalk/how-large-public-procurement.
[23] North Macedonia Local Roads Connectivity Project P170267 (2019–2026).
[24] Kurshitashvili, N., Hadzi-Vasileva, Kristina., Bekim, I., Vukanovic, S., 2020. Assessment of Barriers and Opportunities Using Gender and Roma Lens in North Macedonia: Case of Transport. World Bank.

Besides the efforts to include women and ethnic minorities in road works, the project has recently launched a Call for Proposals to provide grants to municipalities for implementing small community-driven infrastructure projects. Community participation, including those of ethnic minorities, will be a required condition for receiving the grants. The grant will fund activities such as the improvement of bus stops, children's playgrounds, and urban equipment for small squares in villages and cities.

Lessons

The project highlighted the importance of aligning public procurement changes with broader social policies and cultural norms. It also demonstrated that while there is some support for using procurement to promote women and minority ethnicities, practical tools and guidance remain scarce. There is a need to record and share successful approaches for incorporating social considerations into procurement processes. Lastly, the project showed the importance of flexibility in adapting strategies to overcome challenges identified during implementation.

Human resources policies and practices

One of the main challenges related to company human resources policies and practices in rural and peri-urban transport is the limited implementation of gender-sensitive measures that ensure safety for female workers. Despite the growing presence of women in transport-related roles, many road companies still lack sexual harassment policies and complaint mechanisms that are accessible and well-communicated to all employees. Additionally, workplace infrastructure often fails to meet the basic safety needs of women, such as separate restrooms, changing areas, and adequate lighting, particularly in remote or male-dominated work sites. Personal protective equipment (PPE) is not always available in appropriate sizes or designs for women, which can hinder their comfort and safety on the job. These gaps in human resource practices contribute to lower job satisfaction, reduced retention, and underrepresentation of women at all levels within the rural and peri-urban transport sector. Table 3.6 outlines some policies and practices that road companies can undertake, as well as the policies that road agencies implement through public procurement. Case Studies 10 and 11 highlight some of the interventions from Samoa and Tonga, and Uganda, respectively.



Photo credit: World Bank

Table 3.6. Improving Human Resources Policies and Practices in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Policies and practices related to safety and personal security: Integrate contractual requirements in procurement for road companies to adopt a sexual harassment policy, establish a confidential complaint mechanism, and provide safe facilities (e.g., separate toilets and changing rooms, adequate lighting), along with appropriate personal protective equipment (PPE) for all employees, as required.	• Sexual harassment policy adopted and communicated organization-wide • Number/percentage of workplace facilities with safety features (e.g., separate toilets for men and women, changing rooms and lighting). • Number/percentage of contracted female and male employees reporting feeling safe and supported in the workplace.	• Number/percentage of women retained with the organization, in total and by different job levels, including low-, mid-, and high-skilled technical roles. • Number/percentage of staff reporting improved job satisfaction, after the introduction and/or improvement of human resources policies and practices; disaggregated by sex and other key organizational metrics.
Commuting options: provide safe commuting options for road workers, especially for women, to address their safety concerns, especially when roadwork involves early starts, remote sites, and male-dominated environments. The interventions could potentially include company arranged transportation, safe pick up drop off points, and carpooling options.	• Safe commuting options for road workers provided.	

Case Study 10

Using Driver's Licenses to Improve Women's Lives in Samoa and Tonga[25]

The Challenge

Women in Samoa hold under 30 percent of private and only 2 percent of commercial driver's licenses. In Tonga, just 15 percent of commercial licenses are held by women. These low numbers stop women from getting higher-paying jobs driving buses, taxis, or heavy vehicles. Cultural norms, financial constraints, and logistical challenges exacerbate these barriers, particularly in male-dominated transport industries. Addressing these challenges is a critical step in promoting gender equality and women's economic empowerment.

The Intervention

To address these barriers, the World Bank's Climate Resilient Transport Projects[26] are helping women get driver's licenses in Samoa and Tonga. The projects are informed by surveys in each country, which revealed that cultural attitudes, affordability, and limited access to training are the key obstacles facing women drivers. To tackle these issues, driver education and safety programs were specifically designed for women and, in Samoa, the fees for such classes and the licensing fees were waived. In Tonga, the costs were subsidized. National media campaigns aimed to normalize the idea of women behind the wheel were conducted.

Cultural norms in Samoa and Tonga traditionally discouraged women from applying for licenses, especially for commercial vehicles, but outreach campaigns helped shift perceptions. Fee waivers in Samoa and subsidized costs in Tonga made participation more affordable, while institutional support meant the driving program would continue. By overcoming cultural, financial, and institutional barriers, these projects not only empowered women economically but also promoted resilient transport systems.

By the end of the pilot phase, over 120 Samoan women earned private driving licenses, narrowing the gender gap. In Tonga, 15 women completed a three-week commercial driver training program and learned to operate heavy vehicles like loaders and forklifts. Plans are underway to repeat this program in the coming year.

[25] A World Bank video on "Building roads and bridging gender gaps in Samoa" https://www.worldbank.org/en/news/feature/2023/11/17/building-roads-and-bridging-gender-gaps-in-samoa.

[26] The Samoa Climate Resilient Transport Project (P165782) and Tonga Climate Resilient Transport Project II (P176208). This case study was based on a desk review of project documents and an interview with Sean Michaels, Senior Infrastructure Specialist, and documents provided by Satoshi Ogita, Senior Transport Specialist, World Bank.

Lessons Learned in Implementation

- **Institutional support:** Licensing training was supported by recognized institutions like Samoa's Land Transport Authority and, in Tonga, a collaboration with a training and licensing outfit from New Zealand. These organizations gave the program credibility.
- **Logistical challenges:** Access to vehicles for practice is still a constraint. Future projects could explore partnerships with transport providers to address this gap.
- **Scalability:** These programs' success in Samoa and Tonga offers a replicable model for other Pacific Island nations.

Case Study 11

Creating Opportunities for Women Refugees in Uganda[27]

The Challenge

Uganda hosts Africa's largest refugee population, with most refugees living in the impoverished West Nile region, which lacks adequate infrastructure. Women and children make up 82 percent of the refugee population, with many girls facing early marriages, pregnancies, and limited education. Although Uganda's economic policies aim to help refugees and host communities, remote locations, few jobs, and limited market access create significant struggles.

The Intervention

The Uganda: Roads and Bridges in the Refugee Hosting Districts and Koboko-Yumbe-Moyo Road Corridor Project[28] aims to upgrade 105 kilometers of road, connecting refugees and host communities to markets and jobs. The project addresses employment and mobility barriers for women, with key activities including:

- **Employment:** Creating job opportunities for women in road construction and maintenance through quotas in bidding documents.
- **Infrastructure:** Improving roadside vending areas, bus bays, lighting, and safety features based on consultations with local women.

[27] The case study was prepared based on a desk review of project documents and an interview with Ivan Emmanuel Mwondha, World Bank Task Team Leader for the Uganda: Roads and Bridges in the Refugee Hosting Districts/Koboko-Yumbe-Moyo Road Corridor Project.

[28] The Uganda: Roads and Bridges in the Refugee Hosting Districts/Koboko-Yumbe-Moyo Road Corridor Project (P171339) (2021–2026).

- **Capacity Building:** Strengthening the Uganda National Roads Authority's ability to address women's needs in infrastructure planning.
- **Data Management:** Sorting the Road Accident Database by male and female refugee and host community status to inform policies.

Implementation

The goal of the project is to increase female representation in road construction, including administrative roles, to 30 percent. The project is on track to meet this target, having already employed 100 women in roadworks. Community consultations are conducted to ensure women's voices are heard, address employment barriers, and gather feedback on workforce participation. Training programs are also in place to equip women with necessary skills. Additionally, the project aligns with other World Bank initiatives supporting women's cooperatives and market access. While the lack of baseline data has made it challenging to measure progress accurately, efforts are underway to address this issue.

Lessons Learned

- **Community engagement:** Local women's consultations helped ensure that infrastructure designs met their needs, especially for safety and economic empowerment.
- **Collaboration:** Leveraging existing programs addressing women's employment maximized resources.
- **Data:** Baseline data are crucial for setting realistic targets and tracking progress.
- **Monitoring:** Ongoing monitoring of key metrics, with a dedicated M&E consultant, provides valuable insights and guides adjustments.

These lessons will inform future infrastructure projects, especially in refugee-hosting areas with unique challenges.

Career Progression

Women in the government agencies involved in rural roads face significant challenges in advancing their careers. In road agencies often characterized by informal management systems, women, even if technically qualified, encounter limited opportunities for growth. To address these barriers, targeted interventions are essential. These include, amongst others, implementing training programs, establishing mentorship initiatives, and promoting awareness of unconscious biases in hiring and promotion to ensure that hiring is done solely based on meritocracy. Table 3.7 highlights some activities that road agencies can implement related to women's career progression and retention, and the associated indicators.

Table 3.7. Enhancing Career Progression for Women in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as: establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' resumes do not include personal details, and testing participants without revealing their personal details so as to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias and gender equality. • Gender balance in decision-making processes, ensuring a fairer and more diverse representation in promotion decisions.	• Number/percentage of women promoted within X months/years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months/years after the introduction of the mentorship/networking programs. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).
Certification and technical training: Provide specialized education and skill-building programs to women and men aimed at equipping them with the knowledge and expertise needed to perform specific tasks related to road construction, maintenance, and management.	• Number of women enrolled, completed, and certified through certification and training programs.	
Women's mentorship program: Implement a mentorship program pairing women with senior female and male professionals, focusing on various issues such as career development skills and addressing specific workplace challenges.	• Number/percentage of women participating in the mentorship program. • Employer introducing the women's mentorship program.	

Interventions	Output Indicators	Outcome Indicators
Women's networking program: Create a forum for women within the road sector to connect, share experiences, and seek support.	• Number of women participating in networking platforms.	

Leadership

Women also face significant challenges in attaining managerial and leadership positions within the roads sector. It is important to note that the interventions, such as promoting women to managerial and leadership positions, are more relevant to road agencies (state entities) than to private road contractors bound by short operating timelines, who have a predominantly low-to-mid-level workforce. Road agencies tend to have fairly static organizational structures and stable career pathways to leadership and decision-making jobs. In contrast, road contractors typically operate for shorter durations, ranging from six months to a few years, focusing on project execution rather than long-term employee development. For private contractors, interventions may need to prioritize recruitment, skill-building, and workplace policies and practices, rather than investing in leadership development. Table 3.8 presents some of the activities and the corresponding indicators to promote women's leadership in the road sector.

Table 3.8. Addressing Women's Leadership Barriers in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Women's Leadership program: Establish a targeted leadership training program for women in the road transport sector, focusing on strategic planning, financial management, and team leadership.	• Number/percentage of enrolled participants who successfully complete the training program.	• Number/percentage of women promoted to leadership roles within X months/years after the introduction of the women's leadership training program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).
Annual review process: Implement an annual review to track progress in women's representation in managerial and senior roles, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	

Entrepreneurship

Women entrepreneurs in the road sector face several critical challenges in starting and operating their businesses. Limited access to business skills training, technical knowledge, and advisory services specific to transport and infrastructure-related sectors hinders their ability to compete effectively. Social norms and unpaid domestic responsibilities further restrict their time and mobility, making it difficult to pursue entrepreneurial activities in road construction and maintenance. Financial barriers, such as lack of access to credit or collateral—especially for bidding on road sector procurement contracts—also limit their ability to scale operations. Additionally, poor road connectivity and lack of safe transport reduce their market access, particularly in rural areas where roadside marketplaces and mobility infrastructure are underdeveloped. Addressing these challenges through targeted skills training, financial inclusion strategies, and improved infrastructure is essential to unlocking women's potential in the road sector.

Business Skills Training and Advisory Services

While women are actively engaged in sectors critical to rural economies—such as agriculture and construction—their participation is often concentrated in low-paid or informal roles. This is largely due to limited access to skills development, technical training, and opportunities for income diversification. Social norms that confine women to traditional roles, along with the burden of unpaid domestic responsibilities, further limit their time and ability to pursue entrepreneurial or income-generating activities. Targeted business skills training and advisory services are essential to address these barriers. Such interventions can empower women with the knowledge and tools needed to start and manage businesses, improve productivity, and transition into higher-value roles. By equipping women with relevant skills, confidence, and support networks, these programs can enhance their economic agency and reduce vulnerability. Moreover, transport projects have a unique opportunity to support women entrepreneurs—not only within the transport sector but also across related sectors—by improving access to markets through rehabilitated roadside marketplaces and enhanced mobility infrastructure. Table 3.9 outlines some interventions designed to support women entrepreneurs, along with the results indicators.



Photo credit: World Bank

Table 3.9. Addressing Women Entrepreneurs' Needs for Business Training and Advisory Services in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Provide business skills training with personalized advisory services for women involved in rural road construction and related livelihoods. Consider offering training on essential skills such as financial management, project planning, marketing, and procurement, and tailored business guidance from experienced business advisors.	• Number/percentage of women participants reporting improved business skills and increased confidence in starting or managing their enterprises in or associated with the road sector.	• Number/percent of women entrepreneurs who start or grow their businesses in or associated with the road sector, following the receipt of the training, or business advice. • Number/percentage of local female entrepreneurs benefiting from the business skills training and advisory support reporting improvement in their income, work orders, or in market access.

Access to Finance

Limited access to financial services—such as credit, savings, and insurance—poses a major barrier to women's economic empowerment. Without adequate financial support, women struggle to start or scale businesses, invest in their skills, or respond to new market opportunities. Discriminatory practices in land ownership and inheritance rights further hinder their ability to secure collateral for loans, particularly in agriculture or other capital-intensive sectors.

Women-owned businesses in the road sector are especially disadvantaged in accessing financial resources needed to compete in procurement processes or expand operations. Addressing these gaps requires targeted financial inclusion strategies, including tailored loan products, savings schemes, and financial literacy programs designed with women's specific needs in mind. Table 3.10 outlines a set of interventions aimed at addressing the barriers women entrepreneurs face in accessing finance within the road sector, along with corresponding results indicators.

Table 3.10. Addressing Women Entrepreneurs' Needs for Finance in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Access to finance: Provide women entrepreneurs in road transport—particularly those in road construction, maintenance, and related services with tailored financing through joint access to finance programs developed by transport sector stakeholders and finance institutions. The program could offer loans with flexible repayment terms, risk guarantees, and business development support. It could also include a simplified application process and financial literacy workshops to enhance the applicants' financial management and business skills.	• Number/percentage of women entrepreneurs securing loans through the initiative.	• Number/percent of women entrepreneurs who start or grow their businesses in or associated with the road sector, following the receipt of the financial support. • Number/percentage of local female beneficiaries of the access to finance programs reporting improvement in their income, work orders, or in market access.

Market Access and Linkages

Even when women are economically active, they often face significant barriers to accessing markets—especially in rural areas with poor road connectivity and limited safe transport options. This is particularly challenging for women producing goods such as textiles, handicrafts, or food products, who often depend on intermediaries to reach customers. This dependency reduces their earnings and limits control over pricing and profits. Strengthening market linkages involves improving transportation infrastructure, ensuring safe and affordable mobility, and supporting women in establishing direct connections with buyers, cooperatives, or procurement platforms. Table 3.11 outlines some interventions designed to support women entrepreneurs with access to markets, along with associated indicators. Case Study 12 highlights interventions from Azerbaijan that illustrates how targeted efforts can positively impact women's economic participation in infrastructure-related sectors.

Table 3.11. Supporting Women Entrepreneurs with Market Access in Rural and Peri-Urban Transport

Interventions	Output Indicators	Outcome Indicators
Market access and linkages: • Develop forums for women entrepreneurs in road transport to connect, share experiences, and collaborate through regular events and conferences. • Earmark contracts and subcontracts to women-owned and managed businesses in the road sector (by contracting authorities in the bidding documents for potential buyers). • Provide information sessions for the bidders and for women to help the latter navigate procurement processes, develop competitive proposals, and connect with opportunities to supply goods and services for road projects.	• Number/percentage of contracts and subcontracts earmarked for women-owned and managed businesses. • Bidder awareness sessions and capacity building workshops for women entrepreneurs.	• Number/percent of women entrepreneurs who start or grow their businesses in or associated with the road sector, following the receipt of the advice on market access. • Number/percentage of women-owned and managed businesses being awarded contracts or purchase orders in or related to the road sector.
Access to marketplaces: • Establish designated roadside marketplaces near rural production centers—such as those for textiles, handicrafts, and food products—along key road corridors. • Reserve trade stalls for women entrepreneurs to enhance their access to local and regional markets. Provide training on marketing strategies, logistics, and customer engagement to help women maximize their income.	• Number/percentage of roadside marketplaces established with reserved stalls for women. • Number/percentage of women entrepreneurs using reserved trade stalls.	

Case Study 12

Empowering Rural Economies in Azerbaijan

The Challenge

Nearly one-half of Azerbaijan's population lives in the countryside and works on farms. Agriculture, however, contributes only 7 percent to the country's GDP, because most farms are small and do not have access to big markets. Bad roads and logistics challenges drive up transportation costs, limit access to markets, and inflate expenses for small family farms. Without modern transportation, processing and refrigeration food spoils quickly, and farmers can be forced to sell cheaply. Women, who make up a significant portion of Azerbaijan's farmers, often struggle with business resources and need training opportunities. Women's jobs are concentrated in low-paying industries, and women often do not have the help they need to grow their businesses.

The Intervention

The World Bank's Regional Connectivity and Development Project[29] is designed to promote growth and development in Azerbaijan, with a particular emphasis on rural areas such as the Salyan and Bilasuvar districts. The project is rehabilitating 71.2 kilometers of road, enhancing access to markets, and benefiting approximately 250,000 residents. Improved roads will also extend to neighboring regions like Jalilabad, Masalli, and Lankaran. In addition, the project will construct warehouses, cold storage units, and small markets, while ensuring that both women and men can sell their products in the markets by earmarking spaces for them.

Importantly, the project aims to support small-scale roadside businesses, agricultural, and agri-logistics producers by providing training and business advisory services to help them start and expand their activities. A key focus is ensuring that at least 50 percent of beneficiaries are women, including those from single-headed female households, who are often among the most vulnerable.

Progress

Women played an active role in designing logistics and market centers. These centers will include "community rooms," providing accessible spaces for gatherings—an important feature in rural Azerbaijan, where such facilities are scarce.

Training and business advisory services in areas prioritized by the communities, such as modern production and service techniques, business development, and e-commerce, are underway. Over 300 people have received training, and approximately 70 individuals have benefited from business advice.

[29] Azerbaijan Regional Connectivity and Development Project (P174379). The team thanks Nijat Valiyev (World Bank's Task Team Leader) and Elnur Abbaszade (Social and Community Relations Specialist at the Project Implementation Unit) for their input.

Women have been sharing innovative ideas, such as opening packaging centers, offering printing services, and selling tea, coffee, sweets, preserves, and bakery products. Some are aiming to expand their businesses online.

Lessons Learned

- **Community mobilization and engagement:** Getting early buy-in from local authorities and leaders was critical for project implementation. The more the project team talked to community leaders about the project's potential benefits, the more people trusted them.
- **Community mobilization engaging both women and men:** Hiring women community mobilizers proved essential in reaching rural women, especially in conservative areas where women might otherwise be reluctant to interact with men.
- **Facilities:** Involving community members early in the design process led to better roadside facilities. Both men and women gave valuable input, which influenced lighting, seating arrangements, and dedicated areas for women.
- **Business training:** A survey found that women in business were most concerned about time limitations, their own lack of confidence, and location-related obstacles. To address that, training sessions were tailored, some were shortened, and venues were safe and culturally appropriate.
- **Local partners:** Local partners with prior experience in community mobilization and engagement with women brought useful insights into cultural norms and helped navigate social dynamics.

Conclusion

This case study underscores the importance of equality-driven infrastructure development as a way to promote inclusive growth. The Azerbaijan project is improving logistics and transportation while taking account of women's needs and perspectives. This intervention underscores the importance of working with community members as early as possible and adapting to local needs, be they cultural or business related.

4

Rail Transport



Photo credit: Adobe Stock

Railway projects aim to enhance the efficiency, safety, and sustainability of rail transport. They involve both passenger services, connecting urban and rural areas, and freight operations that support trade and logistics. While challenges for women rail users are similar to those in urban transport, freight rail presents unique issues tied to trade corridors and logistics. These projects focus on reducing transport costs, modernizing infrastructure, and strengthening institutional capacities. Key objectives include building railway branch lines, improving multimodal connections, and modernizing signaling systems. They may also involve engineering studies, environmental documentation, and managing rail-enabled logistics centers. Additionally, projects prioritize institutional strengthening, capacity building, and governance improvements. Some promote a modal shift to rail for safer, lower-carbon freight and passenger transport, while others focus on track rehabilitation and regional trade. Overall, railway projects contribute to a more efficient, reliable, and sustainable rail network.

Mobility

Women's mobility in the context of railway projects faces several challenges across several dimensions (that is, availability, affordability, physical accessibility, cultural and social acceptability, and safety). These complex challenges differ across passenger and freight rail contexts and require nuanced understanding and targeted solutions to ensure equitable access and participation in rail transport systems.

Availability

In many parts of the world, rail services are less accessible than other public transport modes, such as buses. This is because of limited networks, outdated infrastructure, and lack of investment in the sector. Additionally, inadequate first- and last-mile connectivity to rail services is a major issue and one of the most common challenges faced by rail passengers. In particular, women, who tend to have less access to private cars than men to cover the first mile, and who make multiple stops in their trip-chained journeys, often do not find rail convenient. Trains are often located away from other modes of public transportation, so improving connecting transport options—such as buses, cycling infrastructure, and pedestrian pathways—can significantly boost rail ridership by making it easier for passengers to reach stations (Kurshitashvili, N., Gonzalez Carvajal, K., Saunders, K., and Ait Bihi Ouali, L., 2022).

Rail frequency is another concern that often affects women disproportionally. Women, especially those with caregiving responsibilities or jobs with nonstandard hours, depend on flexible and frequent train schedules. Infrequent or unavailable service during early mornings, late evenings, or weekends can limit women's access to work, education, health care, and social activities. Irregular train schedules can add uncertainty to women's travel, especially for those who rely on public transport for time-sensitive responsibilities, such as picking up children or arriving at work on time.

In the freight rail sector, women face distinct but equally important accessibility challenges. Women entrepreneurs encounter significant barriers in accessing rail logistics services, especially in areas with limited freight infrastructure. The poor connectivity between rail networks and

commercial zones creates additional hurdles for women-owned businesses attempting to utilize rail freight services. This infrastructure gap often compels these businesses to resort to costlier and less efficient transportation alternatives, undermining their market competitiveness. Additionally, a limited availability of freight handling facilities and convenient storage spaces further complicates their operational efficiency and growth potential. Table 4.1 highlights some key interventions to address availability of rail transport.

Table 4.1. Addressing Availability Barriers for Women in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Data collection: Conduct a study to gather sex-disaggregated data on mobility needs for rail, focusing on: • Travel patterns, including duration, frequency, purpose, and first-/last-mile connectivity to rail. • Travel preferences and perceptions regarding rail affordability, availability, accessibility, safety, and personal security. • Overall satisfaction with rail services and suggestions for improvements.	• A survey to collect and analyze data about rail usage and needs, travel patterns, frequency, first- and last-mile connectivity, trip purposes, travel times, and distances, broken down by sex and other demographic and socioeconomic factors.	• Number/percentage of women using rail services. • Number/percentage of women using rail services at non-working and off-peak hours (for example, late nights and weekends) due to the introduction of timetables that meet their needs. • Change in time spent by women traveling due to more frequent, well-timed services or better connectivity with other transport modes. • Number/percentage of women users reporting change in their economic (market access or incomes) or social (education and health) outcomes due to improved availability of rail services and infrastructure.

Interventions	Output Indicators	Outcome Indicators
Tailor rail service frequency and schedules to accommodate women's travel needs, such as work, childcare, and other responsibilities, particularly during off-peak hours.	• Percentage of rail services (for example, routes, schedules) adjusted to meet women's travel patterns (for example, during early morning, late night, or weekends). • Percentage of train routes that include timetables or additional services catering to women's travel needs (for example, additional trains during school holidays, or later services for night-shift workers). • Availability of information regarding service times, frequency, and safety features for women travelers (for example, printed materials, mobile apps, and website updates).	
Improve rail access by enhancing first- and last-mile connectivity in collaboration with other transport sector stakeholders.	• Kilometers of pedestrian and bicycle infrastructure connecting to rail stations. Bike-sharing operations connecting to rail, number of bicycle racks in trains, bike storage in stations.	

Affordability

Affordability poses a significant barrier for women from low-income households who often prioritize essential household expenses over transportation, limiting their access to economic opportunities. Long-distance rail travel expenses often become prohibitive for women from low-income households, particularly when they travel with family members. The need for more expensive accommodations to ensure safety and comfort during overnight journeys adds to the financial burden. Women often face difficult choices between cheaper, but less safe travel options, and more expensive but secure alternatives. The cost implications become more significant when considering additional expenses such as porter services, food during travel, and secure accommodations at stations during long waits. Table 4.2 highlights some key interventions to address affordability of rail transport for women.

Table 4.2. Addressing Affordability Barriers for Women in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
The following initiatives aim to improve the affordability of rail transport for women: • Creating financial assistance or discounted fare programs for women from low-income households, single mothers, or marginalized communities.[30] • Offering reduced fares to women in specific situations, such as those traveling with children or caregivers. • Offering reduced fares to women traveling for education or work on regional or intercity trains serving smaller towns and villages. • Offering integrated passes combining rail with other transportation (for example, buses, metro systems, ferries).	• Number of women with children or caregiving responsibilities using discounted tickets. • Number/percentage of women traveling on regional or intercity trains with discounted fares. • Number/percentage of women using integrated transport passes for both rail and local transport. • Number/percentage of women traveling during off-peak hours using flexible fare options. • Number/percentage of low-income women benefiting from subsidized fare tickets.	• Change in number/ percentage of women using rail services due to improved rail transport affordability. • Change in the number/ percentage of women using multi-modal transport, enabled by integrated fare passes for rail and other modes of transport. • Number/percentage of women' traveling for long-distance job interviews, training, or conferences enabled by rail travel. • Number/percentage of women users reporting change in their economic (market access or incomes) or social (education and health) outcomes due to improved rail transport affordability.

Accessibility

Physical accessibility in passenger rail presents multifaceted challenges that significantly impact women's travel experiences. The fundamental issue lies in infrastructure design that primarily caters to male passengers, resulting in significant discomfort for women travelers. This includes seating arrangements that do not consider women's ergonomic needs, particularly during long journeys. Many railway stations lack women-friendly infrastructure, such as ramps or elevators, well-lit and safe pathways, clean and well-lit toilets, and baby-changing facilities. Insufficient amenities in train stations and on trains make it difficult for women, especially those with children or disabilities, to

[30] See case study 2 on Increasing Affordability of Transport for Women in Rio de Janeiro through the Cartão Move-Mulher Program.

navigate the system. A critical but often overlooked challenge is the information barrier women face in railway spaces. Since rail transport is typically used for long-distance travel, women are less likely to be frequent users and therefore less familiar with navigating these spaces. Complex station layouts, confusing signs, and lack of clear information about schedules, platforms, and services can create significant anxiety and uncertainty.

In general compartments, limited designated women-only seating often results in an uncomfortable proximity to male passengers, particularly in crowded compartments. Even when women's reserved seats are mandated, these are sometimes occupied by male passengers, and women may hesitate to assert their rights, due to fear of confrontation or retaliation.

For overnight journeys, the challenges become more acute. Lower berth preferences, crucial for elderly women, pregnant women, and those traveling with young children, are often difficult to secure due to high demand. Women traveling with infants face additional difficulties as there are rarely dedicated spaces for breastfeeding or childcare. The standard berth design, typically optimized for adult passengers, poses challenges for women managing both children and luggage simultaneously.

In freight rail facilities, women face distinct physical accessibility challenges that affect their ability to work effectively and safely. The infrastructure at freight terminals and handling facilities often lacks basic amenities essential for women workers, including clean restrooms, changing areas, and rest spaces. Poor lighting in work areas, inadequate ventilation, and an ergonomic equipment design create additional barriers. The layout of freight facilities often fails to consider women's safety needs, with isolated areas and poor visibility creating potential risk zones. Table 4.3 highlights some key interventions to address accessibility of rail transport for women.

Table 4.3. Addressing Accessibility Barriers for Women in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Ensure platforms are level with train doors for easier boarding and alighting. Build ramps and elevators at stations to ensure smooth access to platforms and trains. Install baggage racks at accessible heights for women.	• Platforms aligned with train doors to allow for smoother boarding and alighting, ensuring easier access for all passengers, especially those with mobility challenges. • Stations equipped with ramps and elevators to ensure smooth access to platforms and trains, increasing accessibility for passengers with disabilities, seniors, and parents with strollers. • Trains with baggage racks installed at accessible heights for women and other passengers, improving ease of use and comfort. • Average boarding and alighting times at stations changed due to improved platform and accessibility features.	• Passenger satisfaction with station and train accessibility, disaggregated by sex. • Change in access to employment, education, and healthcare in areas served by upgraded stations, disaggregated by sex and disability.

Safety and Personal Security

Security concerns, such as poorly lit stations, inadequate security measures, and frequent harassment on trains, further exacerbate these challenges, making rail travel unsafe and unappealing for many women. This leads to women avoiding travel or only traveling with an escort, which limits their mobility and freedom compared to men. Furthermore, the isolated location of many freight facilities, combined with the necessity of night-shift operations, creates significant security concerns for women workers. The male-dominated work environment can lead to situations of harassment or discrimination. Addressing these barriers is essential to improving women's mobility and access to rail services.

The very few women working as railway staff or security personnel further reinforces these cultural barriers. The absence of visible female authority figures, ticket collectors, station managers, or security officers, creates an environment where women travelers often feel insecure and unsupported. The lack of female employees in railway operations not only undermines women's confidence in using rail services but also perpetuates the perception of railways as a male-dominated space, making it more challenging for women to assert their right to safe and comfortable travel. Table 4.4 highlights some key interventions. Case Study 13 presents a project initiated in Georgia.

Table 4.4. Addressing Women's Safety and Personal Security Barriers in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Railway infrastructure safety: Enhance infrastructure at railway stations to improve safety through the following measures: • Installing separate, well-lit toilets. • Providing baby changing facilities for parents. • Providing lactation rooms and safe, private rest areas for pregnant women and lactating mothers. • Providing sufficient space in carriages for strollers, bags, and bicycles in rail carriages. • Improving lighting at stations and on trains and installing surveillance systems to improve overall security.	• Number of stations upgraded with women-friendly facilities • Number of well-lit toilets, baby changing facilities, rest areas, or lactation rooms installed at railways stations • Number of surveillance systems installed at railway stations • Number of rail carriages with upgraded facilities.	Change in women's ridership across train routes with safety upgrades. Change in number and percentage of women using rail services at night and during off-peak ours due to their confidence in rail service and infrastructure safety.

Interventions	Output Indicators	Outcome Indicators
Safety on trains and at stations: Enhance safety protocols to address concerns that discourage women from using rail services by: • Improving/adopting standard operating protocols (SOPs) for harassment reporting, response, and enforcement for people in distress. • Providing training for security personnel on SOPs and to ensure empathetic responses. • Increasing patrols by well-trained personnel, including female staff. • Recruiting female front-facing personnel. • Conducting awareness campaign to (i) communicate sexual harassment policy and protocols, and (ii) address social norms and stereotypes that condone harassment.	Railway authority's/companies' new or improved standard operating protocols for reporting sexual harassment developed, adopted, and implemented. Protocols including: • Easy and safe reporting. • Staff trained to assist survivors. • Clear follow-up steps on the complaints. • A commitment to investigate claims and enforcement capacity. • Gender-based violence referral pathways. • Reported incidents (by route, time of day) and cases followed up on. Number/percentage of women staff recruited to railway police. Number/percentage of women staff (train conductors, ticket collectors, maintenance, and so on) recruited. Number/percentage of women users reporting improved perceptions of safety due to safer services.	

Case Study 13

Attracting Women to railway jobs through the Georgian Railway Green Bond Project

The Challenge

Georgian Railway JSC, which employs around 12,000 people, 17% of whom are women,[31] faces significant challenges in attracting women to technical and engineering positions—jobs that are often perceived as unsuitable for women. At Georgia's Railway Transportation College, a vocational education center established by the company to train workers with a streamlined theoretical and practical approach, only 32 women were enrolled in 2020, compared to 298 men. Despite Georgian Railway's non-discrimination policy and the career development tools available to all staff, the company continues facing difficulties attracting female employees to a sector widely seen as unsuitable for women.

The Intervention

A Gender Action Plan was developed for the Georgian Railway Green Bond project under the Asian Development Bank's investment to help women access jobs in transport. During the project's construction phase, the company created 350 jobs, of which 41 were filled by women—an improvement from the 2020 baseline of 31 out of 323 jobs. The project also aimed to increase the percentage of women in internships to at least 15%, up from the 2019 baseline of 11%. By the end of 2023, women held 22% of the internships, surpassing the initial goal.

Addressing sexual harassment in the workplace is another priority outlined in the project. The company adopted a comprehensive policy to counter sexual harassment, supported by easy-to-use reporting tools and transparent redress systems. Additionally, to help change attitudes in the workplace, nearly 100% of Georgian Railway's staff and contractors attended awareness-raising sessions on zero tolerance policies for gender-based violence and non-discrimination, while also learning about female-friendly workplace rules and provisions.

Women transport users are another focus of the Georgian Railway Green Bond project, which is promoting safety and equality within its system. To help women and girls feel safe on public transport, the Green Bond project installed notice boards at railway passenger stations, providing information on hotlines and helplines for reporting violence and harassment and seeking assistance.

[31] Georgian Railway Green Bond Project. Gender Action Plan. Asian Development Bank. https://www.adb.org/sites/default/files/project-documents/55132/55132-001-gap-en.pdf. Data from 2020. The team is grateful to Claire Charamnac, Harumi Toyama, Tamar Bortsvadze and Gisela Garzon De La Roza from the ADB team for the case study.

Challenges and Successes

Georgian Railway introduced new policies and took action, but meeting new staffing targets proved challenging due to systemic barriers for women in the railway sector. Gender norms discourage women from applying for male-dominated jobs, while mobility issues and care responsibilities further limit their opportunities to travel outside the main cities for work.

However, the internship program attracted a relatively high number of women, suggesting it is an effective way to encourage female participation in the sector. With early exposure to railway jobs, women may transition from internships to entry-level roles, potentially viewing these non-traditional industries as viable career paths.

Lessons Learned

- **Addressing Societal Norms:** The project aims to challenge the deeply ingrained social norms in Georgia that limit women's full economic potential, by promoting non-traditional career paths for women.
- **A Holistic Strategy:** The project takes a strategic approach to challenge inequalities between men and women in the transport sector, combining policy changes (e.g., establishing a sexual harassment policy), practical measures (e.g., increasing women's employment and safety measures), and capacity building (e.g., training).

Conclusion

Practical steps, such as a sexual harassment policy, awareness-raising initiatives, and rigorous monitoring, have created conditions that encourage more women to enter the railway sector, including as interns. The Green Bond project sets a strong precedent for future initiatives in the transport sector. Its positive outcomes will contribute to a more inclusive and equitable transport system in Georgia, benefiting both women employees and riders. If additional efforts are made to include women in highly skilled and decision-making roles, it could significantly enhance women's economic inclusion and contribute to the country's broader development, fully recognizing women's potential.

Employment

Women in the rail sector face numerous employment challenges rooted in structural, cultural, and institutional barriers. Low participation in technical education, limited awareness of job opportunities, and exclusion from professional networks hinder recruitment. Gender biases in promotion further restrict women's advancement. In the workplace, inadequate facilities, ill-fitting PPE, and rigid schedules—often conflicting with caregiving roles—create additional obstacles. Safety concerns, regulatory restrictions, and a lack of mentorship and leadership development programs contribute to low retention and limited career progression, leaving women underrepresented, especially in technical and leadership roles.

Outreach and recruitment

The rail industry faces significant challenges in recruiting and retaining female employees. Barriers include low female participation in technical education, gender stereotypes that discourage women from pursuing rail careers, and a lack of awareness about job opportunities, especially in semi-skilled roles like train drivers and conductors. This information gap is worsened by women's exclusion from professional networks where these roles are often shared, limiting career access. Table 4.5 highlights some suggested interventions for improving women's recruitment in the rail sector.

Table 4.5. Addressing Barriers to Attracting and Employing Women in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Workforce database: Enhance the HR database to allow an analysis of staff entitlements and conditions based on sex, as well as other demographic and socioeconomic factors. Collecting sex-disaggregated workforce data is essential for developing evidence-based policies and responses. This data can cover a wide range of areas, including overall employment rates for women and men, distribution across various positions, age, training and development opportunities, leave uptake, and duration of employment.	Database system enhancement to ensure collection and analysis of sex-disaggregated data.	• Number/percent of women recruited and retained, in total and by different job levels, including low-, mid-, and high-skilled technical roles, as compared to number and share of men for corresponding roles. • Number/percentage of staff reporting improved job satisfaction, disaggregated by sex and other key organizational metrics.
Communication to challenge perceptions about the suitability of transport roles for women: This can be done through public communications, job descriptions, and the building of an employer narrative around engaging with women (through links with education, hiring statistics, and new initiatives).	• Number of images and articles showing women in technical and leadership jobs in employer organization. • Employer website and communications include references to organization as an equal opportunity employer. • Job descriptions and employer documents showing unbiased language.	

Interventions	Output Indicators	Outcome Indicators
Nurturing female talent • *Education talks:* (transport authorities/rail service providers) Visit schools and universities to talk about the social and environmental aspects of transport work and the importance of addressing the constraints women face to entering and remaining in the sector. • *"Open days:"* Organizing open days where potential candidates (especially women and young people) are invited to visit the workplace and talk to staff; this could help challenge or demystify some aspects of rail careers, in addition to bringing potential reputational benefits.	• Number of girls reached through education talks and "open days." • Links deepened or created between rail transport employers and education institutions.	
Internship program: Establish a paid internship program for women in male-dominated fields like rail engineering, targeting X female final-year students or recent graduates for X-month internships in key agencies (ministry of transport/rail, rail service providers, and so on).	• Number/percentage of women who enrolled and completed the internship program out of total number/ percentage of enrollment or completions for interns.	
Targeted trainings: Develop targeted training programs for women in rail, collaborating with TVET institutions and universities that prepare graduates for rail to identify candidates.	• Number of women and men who participate in training programs, by trainee roles and training topics.	
Women as rail operators: Recruit and train women in customer-facing roles such as train drivers, conductors, and other staff.	• Number/percentage of women employed as train operators and other customer-facing staff.	

Interventions	Output Indicators	Outcome Indicators
Promoting Women's Employment through Public Procurement: Require or incentivize private sector operators to include women in technical and managerial roles by integrating gender-related criteria into concessionaire bidding documents. This approach aims to increase women's participation and employment in the road sector through public procurement processes.	• Bidding documents for procuring goods in transport amended, specifying targets or quotas for women's representation.	

Human resources policies and practices

Biases in human resources and management also persist, particularly toward women with family obligations or those expecting children. These biases can result in unfair treatment, such as overlooking qualified women for promotions or assigning fewer demanding routes to female drivers. The unique challenges of rail work—like security risks during late shifts, long or unpredictable hours, and poor workplace amenities—further discourage women from pursuing frontline roles.

Gender inequalities are evident in workplace infrastructure. Many rail hubs and trains are designed for male employees, with insufficient facilities for women, such as basic sanitation or properly fitted personal protective equipment (PPE). Ill-fitting PPE, like oversized gloves or high visibility clothes, not only creates discomfort but can pose health risks by failing to protect against hazards, potentially leading to injuries or reduced productivity. This lack of consideration is often justified by the sector's historical male dominance or perceived physical job requirements, reinforcing misconceptions about women's suitability for certain roles.

Regulatory barriers also hinder women's participation, such as restrictions on working in certain transport roles or during night shifts. These policies disproportionately affect women, especially when combined with long working hours, which can conflict with caregiving responsibilities or safety concerns.

Table 4.6 highlights some suggested interventions for improving HR policies and practices in the rail sector. Case Study 14 highlights a project from Serbia.

Table 4.6. Improving Company Human Resources Policies and Practices in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Human resources policies: • *Flexible work-life policies:* Revise or adopt HR policies to include provisions such as flexible working hours, parental leave, and childcare to balance professional and personal responsibilities. • *Sexual harassment policy:* Develop a sexual harassment policy with an accompanying implementation plan that is accessible to all staff and available on the company website. • *Isolated worker policy:*[32] Develop an isolated worker policy with an accompanying implementation plan that is accessible to all staff and available on the employer website.	• Policies rolled out with staff-wide communication. • Number/percentage of staff trained on the sexual harassment policy. • Number of sexual harassment reports received through the formal redress mechanism and addressed. • Number/percentage of women utilizing flexible work options.	• Number/percentage of women retained with the organization, in total and by different job levels, including low-, mid-, and high-skilled technical roles. • Number/percentage of staff reporting improved job satisfaction, after the introduction or improvement of company's human resources policies and practices; disaggregated by sex and other key organizational metrics.
Childcare facility: Establish employer-provided childcare services, tailored to the organization's business needs and workforce size. Additionally, consider offering financial support to employees—such as childcare subsidies or vouchers—to help cover associated costs.	• Childcare facility established or upgraded in compliance with national standards. • Number of staff (women and men) benefiting from childcare facilities or subsidies.	

[32] An **isolated worker policy** is a set of guidelines or procedures designed to protect employees who work alone or in isolated environments where they may be at higher risk of injury, illness, or other emergencies due to the lack of immediate assistance or supervision. This policy is often implemented in industries like rail, construction, utilities, and health care, where workers may be required to perform tasks in remote locations or during off-hours. Many transport companies, including rail operators, have adopted isolated worker policies.

Interventions	Output Indicators	Outcome Indicators
Workplace infrastructure and PPE: Provide separate toilets, changing rooms, lighting and PPE that is appropriately designed to fit both women and men.	• Number/percentage of workplace facilities equipped with separate toilets, changing rooms, and appropriate lighting. • Gender-sensitive PPE provided to all workers who require it.	
A staff satisfaction survey: Conduct periodic surveys to assess satisfaction with employment terms, working conditions, hours, leave, professional development, and equal opportunity outcomes. Analyze results by sex and demographics to inform activities, evaluate implementation, and identify areas for improvement.	• Surveys completed periodically. • Results disseminated and discussed among staff. • Percentage of recommendations acted upon. • Staff feedback on overall communication improved.	

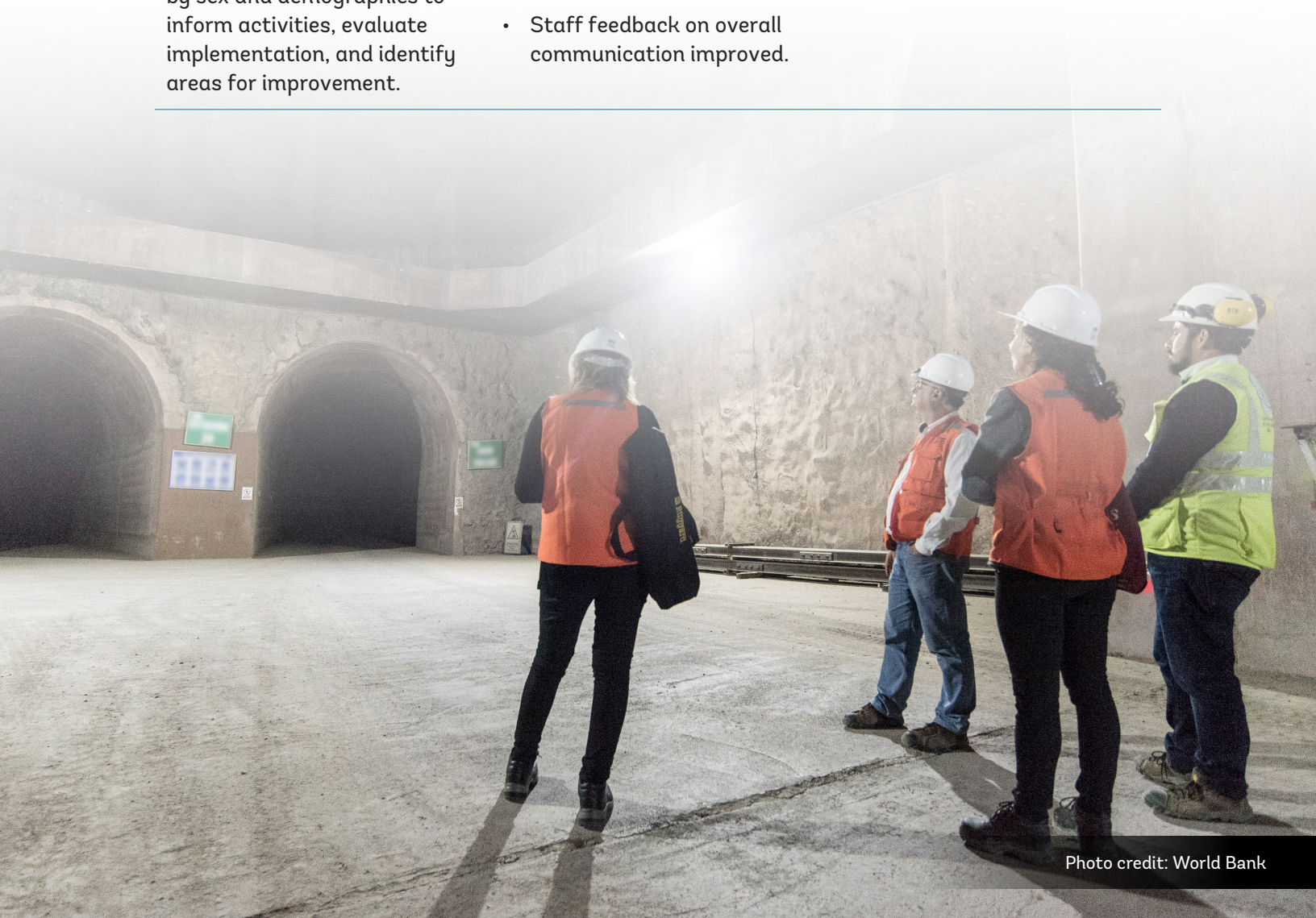


Photo credit: World Bank

Case Study 14

Developing a Pipeline for Female Talent in the Rail Industry in Serbia[33]

Background

To get more women to work in transportation, Serbia is going right to the top. The teachers in higher education and technical schools who prepare students for careers in transport tend to be men, and most of the students are men. It is no wonder that, in many countries, transport tends to be thought of as a place for men to work. A scarcity of female teachers, professors, and even students make it hard for female engineers to find mentors.

Intervention

The Serbia's Ministry of Construction, Transportation, and Infrastructure[34] is piloting a project to give three PhD scholarships to women working in the railway business. A key condition of the program, as in other scholarship programs, is a mandatory requirement to work in Serbia for at least four years after completing the program.

The PhD scholarship program got off to a rough start. Recruiting candidates was slow. Only four women applied and only two of those met the minimum criteria. The PhD candidates were required to finish their degree programs in three years or repay their tuition. Many women, who often juggle multiple responsibilities, found this deadline tight.

Lessons

Despite delays and a very small candidate pool, the PhD program generated a great deal of interest from students and school administrators. This indicates that the PhD program has the potential to inspire women to do high-level study in engineering and logistics, disciplines that are important for railways. Importantly, this is the first pilot of this kind in the sector, and the ministry and the World Bank are learning useful lessons on scholarship administration, better outreach to candidates, and more, so they can enhance the program offering in the future.

Career Progression

Women in the rail sector face numerous barriers to career advancement, many of which stem from structural inequalities and workplace practices. A key issue is the lack of accessible training and skill development programs, which limits opportunities for women to upgrade their capabilities and move into more advanced roles. Additionally, the disproportionate burden of unpaid care work

[33] The team thanks Svetlana Vukanovic (World Bank Senior Transport Specialist), Larisa Puzovic (Lead of the Project Implementation Unit of the Railway Project) and Sonja Mamic (Advisor to Assistant Minister for Railway) for sharing their input into the case study.
[34] Serbia Railway Sector Modernization (P170868).

often carried by women requires employers to adopt more flexible and inclusive approaches when designing work schedules and career pathways. The absence of support systems such as tailored mentorship and professional development programs further hinders women's ability to thrive in the sector. These gaps contribute to high attrition rates and discourage long-term engagement, particularly in technical or operational roles where women remain significantly underrepresented.

Leadership

Women aspiring to leadership roles in the rail sector encounter unique challenges that go beyond technical qualifications. Informal decision-making processes—often influenced by entrenched biases and power dynamics—undermine merit-based advancement and limit women's access to leadership positions. The lack of mentorship opportunities and the scarcity of female role models in leadership further exacerbate these challenges. Without relatable mentors who understand the specific hurdles women face in the industry; many feel isolated and unsupported in their career journeys. These dynamics not only hinder individual progress but also contribute to a wider leadership gap within the sector.

Table 4.7 highlights some interventions to support women's career progression and leadership aspirations in the rail sector. Case Studies 15 and 16 present some interventions from Egypt and India, and Azerbaijan, respectively.

Table 4.7. Addressing Barriers to Women's Career Progression and Leadership in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' CVs do not include personal details, and testing participants without revealing their personal details to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias in hiring. • Gender balance in decision-making processes, ensuring a fairer representation in promotion decisions.	• Number/percentage of women promoted within X months or years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months or years after completing the mentorship program. • Number/percentage of women promoted to leadership roles within X months or years after the introduction of the women's leadership training program.

Interventions	Output Indicators	Outcome Indicators
Women's mentorship programs: Implement a mentorship program pairing women with senior female and male professionals, focusing on various issues such as, career development and addressing specific workplace challenges.	• Number/percentage of women participating in mentorship programs. • Employer introducing a women's mentorship program.	• Employee perceptions of organizational culture related to equal employment opportunities.
Women's networking: Create forums for women in rail to connect, share experiences, and seek mentorship. Organize events for networking and building connections in rail.	• Number of women participating in networking platforms.	
Women's leadership training program: Establish a targeted leadership training program for women in the rail sector, focusing on strategic planning, financial management, and team leadership.	• Number of women enrolled in the leadership training program each year. • Number/percentage of enrolled participants who successfully complete the training program.	
Annual review process: Implement an annual review to track progress in women's representation in managerial and senior roles using specific metrics to measure effectiveness and adjust initiatives as needed.	• Number of women participating in the review process. • Employer introducing annual review process.	

Case Study 15

Childcare Centers Keep Women Working in Egypt and India

Background

If a lack of childcare keeps women out of the workforce, the solution is to bring the childcare to work. India's Mobile Creches program[35] allows women to get, and keep, construction jobs because babies and children can come to work with their mothers. In Egypt, the country's national railways is opening an improved childcare center because, while women make up 18.5 percent of the labor force, they comprise only 3 percent of over 40,000 Egyptian National Railways employees.[36] Notably, almost one-half of Egypt's Science, Technology, Engineering and Mathematics (STEM) graduates are women, but barriers such as gender norms, limited childcare, and restrictive workplace policies often keep them from working in engineering and technical jobs.

The Intervention

In India, Mobile Creches, as its name suggests, sets up mobile childcare services at construction sites. Mobile childcare is especially useful in rural areas, where childcare options are limited. Providing childcare on rural road construction projects can significantly increase female labor force participation and contribute to more inclusive and sustainable development. In Egypt, the new childcare facility will be designed to support both male and female employees. It will use an employee survey to inform its offerings.

Mobile Creches provides more than just childcare, though that alone is crucial. It offers health care, nutrition, and early learning services for children ages zero to twelve. Operating 40 centers and serving over 5,000 children, the organization aims to put childcare centers at all worksites, as a matter of policy. In Egypt, offering on-site childcare hopes to increase female labor force participation and retention at the railway.

Lessons Learned

The Mobile Creches' early childhood care model is a smart and innovative way to help working parents and a useful tool for addressing gender disparities in the workforce. Egyptian National Railways' childcare facility might be less novel, only because it is stationary, but also supports employment and retention, especially for women workers. These projects highlight

[35] Mobile Crèches. https://www.mobilecreches.org/; Rising Together: Annual report for Mobile Creches 2023-24. https://www.mobilecreches.org/_files/ugd/ee163e_2527e717a143419f9c06a6fe14322c55.pdf

[36] Cairo Alexandria Trade Logistics Development Project (P177932). The team thanks Salma Abdel Fattah (Senior Transport Specialist) for her review and input into the case study.

that both India and Egypt recognize the crucial role of childcare in supporting families and the benefits of promoting women's participation in, and retention within, the workforce. Mobile childcare services in rural road projects help remove barriers to women's employment, benefiting not only women but also their families and broader communities.

The childcare facility at Egyptian National Railways serves as a model for integrating social support into infrastructure projects, with the potential to set a significant example for other large employers. Both projects tackle a fundamental barrier to women's participation in traditionally male-dominated industries.

Case Study 16

Lifting Legal Restrictions on Women's Employment in Azerbaijan

The Challenge

In some countries, women are barred from working outside the home due to cultural reasons, childcare responsibilities, or legal restrictions. For instance, in 12 countries, legal barriers limit women's access to certain transport jobs, while in 45 economies, policies restrict women from working in hazardous roles.[37]

It's not only women who are affected by job restrictions—businesses also suffer. These barriers to entry for women reduce the national talent pool, ultimately hindering economic development. The legal bans on women's work are often rooted in outdated assumptions about health risks, reflecting a paternalistic and antiquated view of women. They fail to consider technological advancements and modern safety standards that have since made these restrictions irrelevant.

Until 2022, Azerbaijan's legislation prohibited women from working in 674 occupations, including roles in transport, energy, and agriculture. For example, women were banned from laying asphalt, working as train engineers, or driving large buses. These restrictions, inherited from Soviet laws, reinforced a stark divide between women and men in the workforce, with women mostly in low-wage sectors like health and education, while men dominated other often better-paid industries.

[37] World Bank's Women, Business and the Law. 2024. https://wbl.worldbank.org/en/wbl.

The Intervention

In November 2022, with World Bank support, Azerbaijan repealed these restrictions,[38] replacing them with a health-based approach that applied only to pregnant women and new mothers. This reform aimed to open up higher-paying jobs, address occupational segregation, and narrow the gender pay gap, increasing female labor force participation and benefiting businesses by expanding the talent pool.

Alongside the labor code reform, the World Bank worked with Azerbaijan Railways and the Port of Baku to improve their human resource policies and boost women's representation in male-dominated sectors (Kurshitashvili N., Mustafayeva S., Mammadov T., Mynbayeva J., Kelly S., Newett K, 2024). Progress includes:

- Azerbaijan Railways launched its first-ever women's train operator training program and created a women-in-rail network.
- The Port of Baku committed to increasing female employment from 8 percent to 20 percent by 2030.

Lessons Learned

Azerbaijan's experience offers key lessons for other countries looking to remove employment barriers for women:

- **Setting an example:** Azerbaijan's reforms serve as a model for countries that still carry similar employment bans.
- **Comprehensive action:** Legal reforms must be paired with policies that challenge social attitudes and workplace behaviors.
- **Evidence-based approach:** Data and risk assessments were crucial in challenging outdated assumptions and changing policies and attitudes.

Conclusion

Azerbaijan's repeal of employment restrictions is a vital step toward promoting women's employment, but legal changes alone are insufficient. Cultural norms and stereotypes continue to influence women's career choices. To fully integrate women into the labor market, legal reforms must be accompanied by efforts to change societal attitudes, particularly in male-dominated sectors like transportation and engineering.

[38] World Bank blog. With legal restrictions lifted, it is time to break "soft" barriers to women's employment in Azerbaijan.

Entrepreneurship

Women entrepreneurs operating in railway stations face barriers such as limited business training, unclear vendor policies, and high permit costs, which hinder their ability to start and grow businesses. Informal competition and lack of access to networks further challenge their success. Targeted training, financial support, and stronger market linkages are key to enabling their participation and growth.

Business Training and Advisory Services

Women entrepreneurs operating in railway stations—particularly in the retail and service sectors—have unique opportunities to establish businesses such as small shops, food stalls, or childcare services. However, many women are either unaware of these opportunities or lack the guidance and support needed to navigate the system. Further, inconsistent vendor policies and unclear lease agreements create uncertainty and hinder business continuity. Informal competition from unregulated vendors and the unpredictability of train-based foot traffic add to the difficulty, often resulting in unstable income streams.

Tailored business training and advisory services can play a critical role in bridging these gaps. Such support can help women understand licensing procedures, develop business plans, and navigate complex vendor policies—thereby enhancing their confidence and capacity to engage in railway station commerce.

Access to Finance

Even when women are aware of the business opportunities in railway stations, they face significant financial barriers to entry. Securing vendor permits can be prohibitively expensive—not only due to formal fees but also because of informal payments and hidden costs that add to the burden. These financial hurdles limit many women's ability to start or sustain businesses in these settings. Without access to affordable credit or startup capital, women entrepreneurs struggle to invest in inventory, infrastructure, or staff. Financial support mechanisms tailored to women—including microfinance, grants, and flexible loan products—are essential to enable their participation and success in railway-based enterprises.

Market access and linkages

Women entrepreneurs tend to be excluded from business networks that could offer peer support, shared resources, or market insights. Strengthening access to such networks and formalizing market linkages would help level the playing field, enhance business resilience, and open up opportunities for growth. These intertwined challenges restricts women entrepreneurs' potential to thrive in the railway sector. Table 4.8 highlights some interventions to promote women's entrepreneurship in the rail sector and the corresponding indicators to measure progress.

Table 4.8. Addressing Barriers to Women's Entrepreneurship in the Rail Sector

Interventions	Output Indicators	Outcome Indicators
Market access through spaces at railway stations: Reserve retail space and stalls for women entrepreneurs to set up their physical shops at railway stations. Provide training on marketing strategies, logistics, and customer engagement to help women maximize their income from these spaces.	• Number/percent of retail space earmarked for women- owned and managed businesses. • Number of training sessions held for women entrepreneurs on marketing, logistics, and customer engagement who lease retail spaces at railway stations.	• Number/percentage of local women reporting higher incomes, more work orders, or increase in market access. • Percentage of revenue among female entrepreneurs using retail space versus male entrepreneurs.
Procurement: Strengthen the capacity of the procurement workforce (rail authorities) to enhance awareness among potential bidders, including women-owned enterprises in the retail and hospitality sectors, about available opportunities. Provide capacity building workshops to help women navigate procurement processes, develop competitive proposals, and connect with opportunities to supply goods and services for railway station projects.	• Number/percentage of women-owned and managed businesses awarded retail space at railway stations. • Information sessions and capacity building workshops offered to existing and potential women entrepreneurs. • Bidder awareness sessions held.	• Number/percentage of women entrepreneurs using reserved retail space (compared to men).

5

Aviation



Photo credit: Adobe Stock

Aviation projects are designed to enhance the safety, security, and efficiency of air transport and its infrastructure across various regions. These projects focus on improving operational safety, navigational efficiency, and airport infrastructure that are resilient to natural disasters and climate change. Objectives include strengthening the capacity of aviation safety offices to deliver oversight and technical services, as well as ensuring immediate response capabilities in the event of crises or emergencies. Additionally, these projects aim to bolster the sustainability of associated infrastructure, such as roads, and enhance the capacity of key agencies in air transportation operations and airport investment planning. By targeting these areas, aviation projects support reliable regional air connectivity and contribute to the overall safety and resilience of the aviation sector.

Mobility

Women face several mobility barriers in the aviation sector that limit their ability to access and benefit from air travel. Availability of services is a major challenge, especially in remote or low-income areas where flight options are limited. The lack of women-centered facilities—such as nursing rooms or safe transport to and from airports—further restricts access. Additionally, affordability remains a key constraint. These challenges are compounded by inadequate accessibility features and safety concerns, including the risk of harassment and the lack of proper support systems within airports and aircraft.

Availability

There is limited research on the mobility barriers women face in air travel, compared to other modes of transportation. However, the aviation sector is not immune to such challenges. Availability of air travel services can pose a significant barrier for women, particularly in low-income or remote areas. Women, who may already face economic constraints, often have fewer opportunities to access convenient flight routes or travel at preferred times. Flight schedules frequently do not align with women's time-use patterns, and there is limited availability of women-centered services, such as female-only seating, nursing rooms, or women-friendly check-in options in airports. Additionally, the lack of access to private vehicles can make it difficult for women to reach airports or parking facilities safely and conveniently—especially in areas where public transportation is unreliable, unsafe, or unavailable during early morning or late-night hours. Table 5.1 highlights some of the interventions and the associated indicators to address air transport availability for women travelers.

Table 5.1. Addressing Availability Barriers for Women in Aviation

Interventions	Output Indicators	Outcome Indicators
Data Collection to establish baselines for air travel: Conduct a study to collect sex-disaggregated data on mobility needs related to air travel, focusing on: • Travel patterns, including mode of access to airports, trip duration, frequency, purpose, and first- and last-mile connectivity. • Travel preferences and perceptions regarding the affordability, availability, accessibility, safety, and personal security of air travel.	Survey conducted to collect and analyze data air travel usage, including travel patterns, frequency, purpose, travel times, and distances and first and last mile connectivity—disaggregated by sex and other demographic and socioeconomic factors.	• Number/percentage of women from remote/low-income areas using air travel. • Change in time/distance-related barriers reported by women traveling to/from airports.
Availability: Expand regional and low-cost air routes to underserved or remote areas, especially those with poor transport connectivity. Provide airport shuttle services with safe, women-friendly access, especially during off-peak hours.	• Number of new or expanded regional routes serving low-access areas. • Number of shuttle/last-mile services to/from airports specifically targeting women travelers. • Number of airports with female-friendly transport options available at night or early morning.	

Affordability

Affordability is another major mobility constraint limiting women's access to air travel, particularly for those in lower-income brackets or with informal or unstable sources of income. Women are more likely than men to face economic disparities due to wage gaps, unpaid care responsibilities, and limited access to financial resources or formal employment. As a result, even when air travel is available, it may remain out of reach for many women. Additional costs—such as baggage fees, ground transportation, childcare arrangements, or accommodations—can further discourage or prevent women from flying. In many cases, travel decisions within households may prioritize men's

mobility, especially for work or income-generating opportunities, while women's travel needs, including for health and education, are deprioritized. Table 5.2 highlights some of the interventions and the associated indicators to address affordability barriers that women travelers face. However, it is important to note that, unlike in other transport sub-sectors, most of these interventions remain largely untested in the aviation sector. Aside from occasional ad-hoc initiatives during events such as International Women's Day, there has been limited implementation of sustained or systemic affordability initiatives for women traveling by air.

Table 5.2. Addressing Women's Affordability Barriers in Aviation

Interventions	Output Indicators	Outcome Indicators
Following are some of the interventions that could potentially address affordability barriers for women air travelers: • Bundle airfares with ground transport to reduce hidden costs. • Offer flexible payment schemes (e.g., installment plans, fare savings programs). • Incentivize airlines to include women-focused subsidies through government partnerships.	• Number of women travelers benefiting from bundled services. • Number of women enrolled in flexible fare payment schemes. • Number of partnerships established between airlines and government agencies for women-focused subsidies.	Change in the gender gap in air travel access. Number/percentage of women traveling by air for education, health or work. Number/percentage of women' traveling for long-distance job interviews, training, or conferences enabled by air travel.

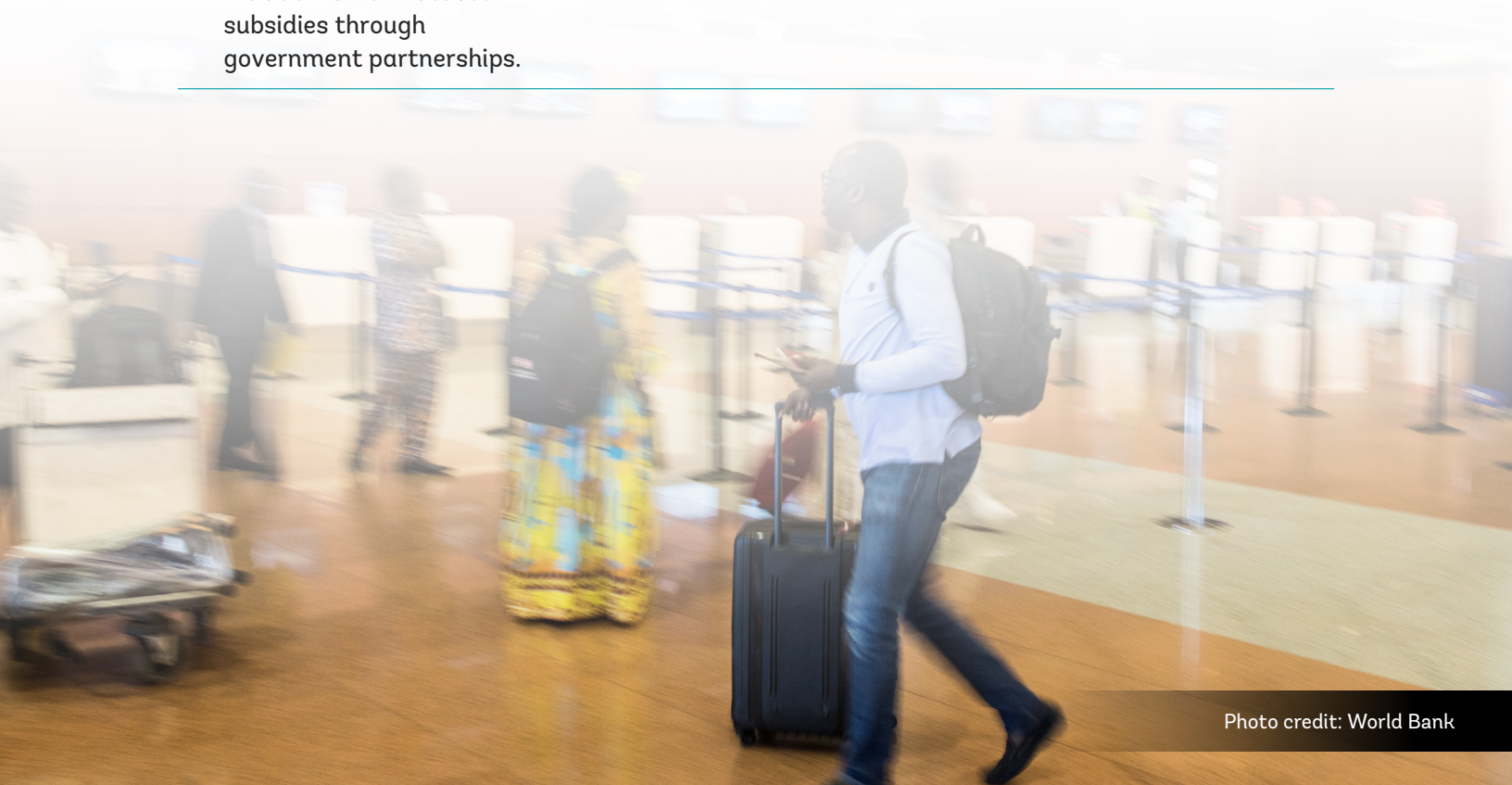


Photo credit: World Bank

Accessibility

Women often face a variety of accessibility concerns in airports and planes, such as cramped bathrooms that are particularly difficult for pregnant women and parents with children. There is also a lack of women-friendly facilities; traveling during menstruation, for example, can be challenging, especially when inflight bathrooms are overcrowded or lack proper hygiene provisions. Table 5.3 highlights some of the interventions and the associated indicators to address accessibility barriers that women travelers face.

Table 5.3. Addressing Women's Accessibility Barriers in Aviation

Interventions	Output Indicators	Outcome Indicators
• Invest in larger, more accessible restrooms that accommodate the needs of pregnant women, those with mobility impairments, and passengers with health conditions. • Equip the restrooms with necessary hygiene facilities, such as sanitary product dispensers and proper disposal options. Provide sanitary product dispensers and offer privacy and space in restrooms.	• The number of accessible restrooms. • Availability of hygiene facilities with sanitary product dispensers and proper disposal options.	Number/percentage of women and men being satisfied with airports and airlines concerning comfort and accessibility of their facilities.

Safety and Personal Security

Additionally, personal security can be an issue, as women may experience harassment or feel unsafe during boarding, disembarking, or while in flight, particularly in crowded or unmonitored spaces that complicate reporting, intervention, and prevention of harassment. Issues arise because of constrained space and proximity, fear of retaliation from perpetrators, lack of suitable training for the cabin crew, (who are typically trained in how to handle emergencies, but not necessarily complex harassment situations), as well as legal and jurisdictional issues, making it unclear which country's laws apply in a charge case of harassment. Table 5.4 highlights some of the interventions and the associated indicators to address safety and personal security barriers that women travelers face.

Table 5.4. Addressing Women's Safety and Personal Security Barriers in Aviation

Interventions	Output Indicators	Outcome Indicators
Following are some of the interventions to address some of the safety and personal security barriers for women in aviation: • *Staff training:* Train the crew not only in emergency protocols but also in how to recognize and handle harassment or other forms of gender-based violence. This includes understanding different forms of harassment, responding empathetically, and de-escalating situations effectively. • *Reporting mechanisms:* Implement a clear, visible, and easy-to-use system for passengers to report harassment or inappropriate behavior during flights. This could include digital reporting options or confidential assistance via flight attendants. • *Protocols for handling harassment cases:* Adopt protocols for dealing with harassment complaints, including an understanding of how such cases will be handled once a flight lands, which legal system will oversee the case, and how perpetrators will be held accountable.	• Percentage of crew who have undergone anti-harassment training. • Number of harassment incidents reported. • Length of time to respond to reported incidents. • Rate of case closure with transparent action (rate of harassment cases where the passenger receives a clear update on investigation outcomes and actions taken).	• Number/percentage change in women and men trusting airline safety protocols and airlines' ability to protect them from harassment and respond appropriately. • Change in perception of safety among women accessing airports, especially during night and off-peak hours. • Number of harassment cases that result in appropriate actions or legal follow-ups, showing that the airline's protocols are implemented.

Interventions	Output Indicators	Outcome Indicators
• *Collaboration with law enforcement:* Work with local law enforcement agencies to ensure that harassment incidents are taken seriously and addressed quickly once a flight lands, regardless of jurisdictional complexities. • *Improved awareness and education:* Engage in educational campaigns to raise passenger awareness about appropriate behavior and the consequences of harassment. Clear signs could be used to help educate all passengers about respectful behavior during flights. • *Postflight support:* For women who experience harassment during a flight, provide immediate postflight support, including access to counseling or referral services. This can include offering assistance through hotlines, providing legal support, or connecting passengers to advocacy groups that can help navigate the aftermath of an incident.		

Human trafficking is one of the major forms of GBV in the aviation sector, affecting men and boys, though women and girls are disproportionately victimized. Traffickers exploit the aviation industry's global reach, yet there is a lack of comprehensive training and oversight to combat this effectively. Table 5.5 includes some interventions and the associated indicators to address human trafficking in aviation.

Table 5.5. Addressing Human Trafficking in Aviation

Interventions	Output Indicators	Outcome Indicators
Following are some of the interventions to address human trafficking threats in aviation: • *Enhanced airport safety protocols:* Strengthen safety and security protocols at airports to protect potential trafficking victims, including designated safe spaces and support services. • *Accessible reporting mechanisms:* Establish clear, accessible reporting mechanisms for both staff and passengers to report suspected human trafficking incidents. • *Public awareness:* Launch public awareness campaigns in airports and through airline communication channels to educate passengers about the signs of human trafficking and how to report them. • *Coordination with partners:* Develop partnerships with law enforcement agencies and NGOs to ensure a coordinated response to human trafficking cases in the aviation sector.	• Number of airports with designated safe spaces and support services for trafficking victims. • Number of interventions and rescues of trafficking victims based on reported incidents. • Number of reported human trafficking incidents through established mechanisms. • Number of awareness campaigns launched in airports and through airline communication channels. • Awareness of safety protocols among airport staff. • Number of partnership agreements signed with law enforcement and NGOs.	• Number of trafficking cases reported by staff and passengers. • Number/percentage of trafficking victims supported and rescued through coordinated efforts, by sex and age. • Interagency response time to trafficking incidents.

Employment

Women in aviation face notable barriers in recruitment, retention, and advancement. While cabin crew jobs have provided entry points, women remain underrepresented in roles like pilots, engineers, and ground operations due to limited access to training, weak STEM pathways, and gender stereotypes. Safety and harassment concerns—especially mid-flight—are worsened by weak reporting systems. Career progression is further hindered by limited mentorship, international mobility demands, and a lack of female role models in senior positions. Addressing these challenges requires coordinated efforts to expand training opportunities, strengthen HR policies, and foster inclusive leadership pathways.

Outreach and Recruitment

The aviation sector offers diverse employment pathways, spanning both ground operations and airborne roles. Ground-based positions include airport management, ground handling, passenger services, and freight operations, while flying jobs include pilots, aviation engineers, and cabin crew. However, women's access to these opportunities remains uneven.

Cabin crew positions have emerged as a primary entry point for women—particularly in emerging markets—offering pathways to international careers. Yet, this success in attracting women has not translated across all aviation segments. Technical roles remain heavily male-dominated due to multiple barriers at the recruitment stage. These include limited access to aviation-related training, insufficient encouragement for women to pursue STEM education, and persistent stereotypes about women's technical capabilities. Table 5.6 presents some interventions and the accompanying indicators to attract and employ women in aviation.

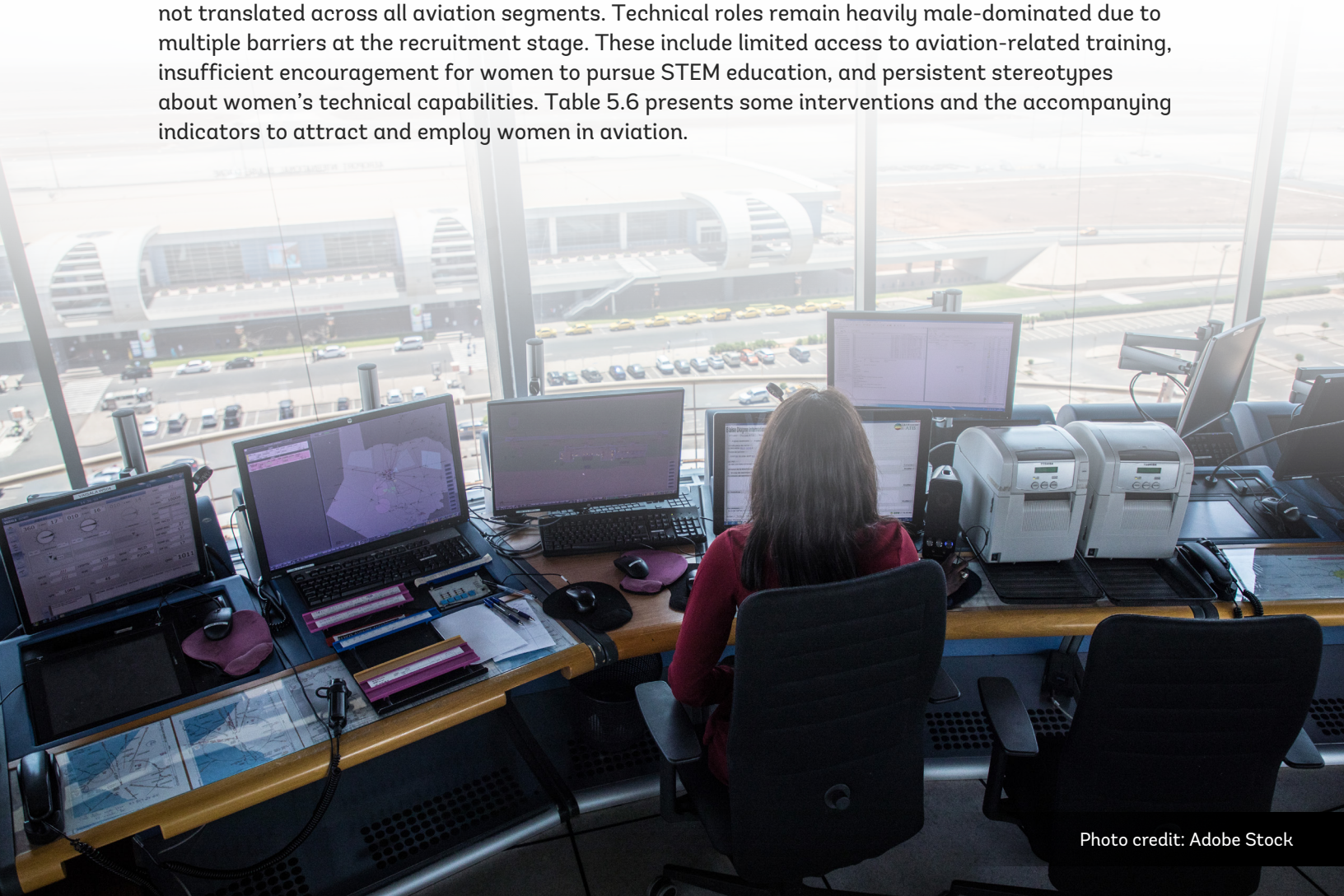


Photo credit: Adobe Stock

Table 5.6. Addressing Barriers to Attracting and Employing Women in Aviation

Interventions	Output Indicators	Outcome Indicators
Assessment to establish the baseline and action plan: Conduct analysis of barriers to women's recruitment, retention, and promotion in aviation. Gather sex-disaggregated data across airports and airlines, including employment, job roles, training, and leave policies. Use findings to develop an action plan with targeted measures like training programs, HR policies, and awareness initiatives to advance gender equality in the sector.	• Assessment undertaken resulting in actionable recommendations and time-bound and budgeted action plan.	Number/percent of women recruited and retained by different job levels, as compared to number and share of men for corresponding roles, including: • Low (for example, ground crew, luggage handler, customer service representative) • Mid (for example, flight attendant, air traffic controller, aircraft maintenance technician, ground operations staff, flight dispatcher, airport security)
Outreach: Launch outreach campaigns to challenge stereotypes and reshape perceptions about women's roles in aviation. Promote the sector as a rewarding career path for women.	• Number of images and articles showing women in technical and leadership jobs in aviation • Airport and airline websites and communications emphasize they are equal opportunity employers • Number of women expressing interest in aviation careers • Number of outreach campaigns conducted.	• High-skilled roles (for example, pilot, airspace engineer, traffic manager).

Interventions	Output Indicators	Outcome Indicators
Nurturing female talent: • *Education talks:* Employer visiting schools and universities to talk about the value of work in aviation and the importance of promoting women in the sector. • *"Open days:"* Organizing "open days" where potential candidates (especially women and young people) are invited to visit the workplace and talk to staff. This could help challenge or demystify some aspects of careers in aviation.	• Number of girls contacted through education talks and "open days". • Links deepened or created between urban transport employers and education institutions through MoUs.	
Internships: Offer paid internships to female university students in engineering, transport, and aviation roles to provide hands-on experience and encourage long-term careers in the sector.	• Number/share of women who enrolled and completed internship programs out of total number or share of enrollment or completions for interns.	
Training: Provide specialized accredited training programs and apprenticeship programs for women to prepare them for jobs in the aviation industry, including mid- and high-skilled technical positions, in collaboration with engineering and aviation schools.	• Number of women trained and certified in aviation-specific programs.	

Human Resources Policies and Practices

The aviation sector's HR policies and practices require substantial strengthening to support gender equality. One of the major challenges is the sector's 24/7 operational nature, which demands flexible scheduling. However, current policies often fail to accommodate employees with family responsibilities. Limited flexibility in shift assignments and inadequate support for work-life balance disproportionately affect women, who are more likely to bear caregiving duties.

Safety and harassment policies also need significant improvement. Current procedures for reporting and addressing in-flight harassment are often unclear or insufficient. Given the isolated and mobile nature of aviation work, especially mid-flight, specialized and responsive policies are needed to ensure workplace safety and support for affected employees. Many airlines lack clear protocols for addressing incidents, and when they do exist, fear of retaliation or career impact often deters women from reporting.

Effective HR systems must therefore include tailored harassment prevention strategies, accessible reporting channels, and mechanisms that account for the unique operating environment of aviation. Table 5.7 presents some interventions and the corresponding indicators to improve human resources policies and practices by the employers in the aviation. Case Study 17 presents the example from Kiribati.



Photo credit: World Bank

Table 5.7. Improving Company Human Resources Policies and Practices in Aviation

Interventions	Output Indicators	Outcome Indicators
Flexible work-life policies: Revise or adopt HR policies to include provisions such as flexible working hours, parental leave, and childcare to balance professional and personal responsibilities. **Sexual harassment policy:** Develop a sexual harassment policy with an accompanying implementation plan that is accessible to all staff and available on the company website. **Isolated worker policy:** Develop an isolated worker policy with an accompanying implementation plan that is accessible to all staff and available on the employer website.	• Policies rolled out with staff-wide communication • Employer introducing flexible work options and family support benefits. • Number/percentage of women utilizing flexible work options • A statement developed and shared by the company's senior management that no form of sexual harassment is tolerated.	• Number/percentage of women employed and/or retained with the organization, in total and by different job levels, including low-, mid-, and high-skilled technical roles, as compared to number and share of men for corresponding roles. • Number/percentage of staff reporting improved job satisfaction, after the introduction or improvement of company's human resources policies and practices; disaggregated by sex and other key organizational metrics.
Childcare facility: Establish employer-provided childcare services, tailored to the organization's business needs and workforce size. Additionally, consider offering financial support to employees—such as childcare subsidies or vouchers—to help cover associated costs.	• Childcare facility established or upgraded in compliance with national standards. • Number of staff (women and men) benefiting from childcare facilities or subsidies.	
Workplace Infrastructure and PPE: Ensure the provision of gender-sensitive workplace infrastructure, including separate toilets and changing rooms, adequate lighting, and PPE that is appropriately designed to fit both women and men.	• Number/percentage of workplace facilities equipped with separate toilets, changing rooms, and appropriate lighting • Gender-sensitive PPE provided to all workers who require it.	

Interventions	Output Indicators	Outcome Indicators
A staff satisfaction survey: Conduct periodic surveys to assess staff satisfaction with employment terms, working conditions, professional development, and perceptions of equal opportunity. Results should be disaggregated by sex and other demographics to inform and evaluate relevant initiatives and identify areas for improvement.	• Surveys completed periodically • Results disseminated and discussed among staff • Percentage of recommendations acted upon • Staff feedback on overall communication improved.	

Case Study 17

Addressing Employment Barriers in Kiribati[39]

Challenge

The Kiribati Kiritimati Infrastructure Project aims to promote women's employment in Kiritimati Island where women's labor force participation rate lags 14 percent behind men's, and women are primarily confined to informal economic activities such as handicraft production, street vending, and tourism services.

Intervention

The project will prioritize women's professional development through targeted capacity building and skills training. Airport operations training will maintain a minimum 30 percent female participation rate. Regular training plans will ensure a sustained focus on women's career advancement throughout implementation. Safety audits will inform road design features, including enhanced lighting and visibility, minimize dark spots and improve walkability for women beside the road. The upgraded CXI-London Road will explore creating dedicated spaces for local women vendors and traders. The airport terminal design will explore whether the infrastructure can be adapted to provide a separate access channel for domestic violence survivors.

[39] The Kiribati Kiritimati Infrastructure Project (P506425). The team thanks Anita Shrestha (World Bank's Senior Transport Specialist) for her input and clearance of this case.

Career Progression

Career progression poses significant challenges across all aviation roles, particularly for flight attendants. Women in these roles often face safety and harassment concerns that impact their well-being and long-term career sustainability. The confined and often isolated environment of aircraft creates unique vulnerabilities. Flight attendants may experience harassment from passengers, colleagues during long-haul flights, or even supervisory staff. Reporting mechanisms for these incidents are frequently inadequate, especially for mid-flight occurrences. The international nature of aviation further complicates jurisdictional issues and reporting procedures. Power dynamics—such as those between pilots and cabin crew—can make reporting difficult and resolution elusive. Long-term exposure to these risks has serious implications for women's ability to stay and thrive in the industry. To improve retention, the sector must prioritize the creation of safe, respectful working environments, along with clear and supportive grievance redress mechanisms. Key interventions could include the establishment of formal performance review systems linked to competencies and promotion pathways and adoption of unbiased recruitment and promotion practices. Implementing mentorship programs that pair women with senior professionals—both male and female—can help build skills, confidence, and career visibility. Table 5.8 outlines these interventions along with relevant output and outcome indicators.

Table 5.8. Addressing Barriers to Women's Career Progression in Aviation

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as: establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' resumes do not include personal details, and testing participants without revealing their personal details so as to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias and gender equality. • Gender balance in decision-making processes, ensuring a fairer and more diverse representation in promotion decisions.	• Number/percentage of women promoted within X months/years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months/years after the introduction of the women's mentorship program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).

Interventions	Output Indicators	Outcome Indicators
Women's mentorship program: Implement a mentorship program pairing women with senior female and male professionals in aviation, focusing on various issues such as, improving technical and soft skills and addressing specific workplace challenges.	• Number/percentage of women participating in the mentorship program. • Employer introducing the women's mentorship program.	
Women's networking: Create for women in aviation to connect, share experiences, and seek mentorship. Organize events for networking and building connections in the sector.	• Number of women participating in networking platforms	
Annual review process: Implement an annual review to track progress in women's promotion, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process	

Leadership

Despite initial opportunities through cabin crew positions, women face significant barriers in advancing to high-status roles such as pilots or senior management. Advancement requires access to specialized training, international mobility, and overcoming entrenched stereotypes about women's technical and leadership capabilities.

Balancing career development with caregiving responsibilities is a further barrier. Opportunities for promotion often require frequent travel or relocation, which can disproportionately affect women. The limited presence of women in leadership also creates a lack of visible role models and mentors, reinforcing the gender gap at the top.

Addressing these issues requires deliberate investment in women's career development, including leadership pipelines, mentorship opportunities, and institutional commitments to gender equity in decision-making roles. Table 5.9 presents some interventions and the corresponding indicators to address these barriers.

Table 5.9. Addressing Barriers to Women's Leadership in Aviation

Interventions	Output Indicators	Outcome Indicators
Women's Leadership program: Establish a targeted leadership training program for women in aviation, focusing on strategic planning, financial management, and team leadership.	• Number/percentage of enrolled participants who successfully complete the training program.	• Number/percentage of women promoted to leadership roles within X months/years after the introduction of the women's leadership training program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).
Annual review process: Implement an annual review to track progress in women's representation in managerial and senior roles, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	

6

Maritime Transport



Photo credit: Adobe Stock

The maritime transport sector operates through three interconnected segments: ports, shipping operations, and inland waterways represent critical infrastructure that handle over 80 percent of global trade[40] by volume and provide essential connectivity for passenger movement. Modern ports serve as sophisticated interface points between sea and land transport, housing container and bulk terminals, passenger facilities, and complex technical operations for cargo handling and vessel management.

Port activities range from crane operations to customs control, supported by extensive logistics and administrative functions. Shipping operations divide into cargo and passenger services. Cargo shipping utilizes various specialized vessels, from container ships to bulk carriers and tankers, requiring expertise in navigation, engineering, and maritime logistics. Passenger shipping, through cruise ships and ferries, combines technical vessel operations with hospitality services, demanding skills in both maritime operations and customer service.

Inland waterways complete the maritime ecosystem with river ports, domestic shipping services, and vessel traffic management on rivers, lakes, and canals. This segment focuses on local transport, tourism operations, and environmental protection, requiring specialized knowledge of local conditions and regulations.

Despite the sector's economic significance and technological advancement, women's representation remains very low, with women making up about 1.2% of the global seafarer workforce (IMO and WISTA, 2021). This disparity results from historical, structural, and sociocultural factors. The maritime sector's association with physically demanding work, long periods at sea, and male-dominated workplace cultures has created significant barriers to women's participation. Additionally, the sector's unique operational characteristics, such as 24/7 operations, remote locations, and specialized technical requirements, pose distinct challenges for integrating women's needs. Many societies view maritime work as unsuitable for women. This stigma is particularly strong for onboard positions, where women face skepticism about their ability to meet the sector's demands. The nature of maritime work, including extended periods at sea, makes it challenging for women to maintain family relationships and manage household responsibilities. Even shore-based roles are affected by the industrial nature of port environments and perceived safety risks, which limit women's participation in male-dominated spaces.

Mobility

In maritime transport, disparities in mobility between men and women manifest through multifaceted challenges that extend beyond basic transportation access to encompass complex interactions between infrastructure design, operational patterns, and sociocultural norms.

Availability

Ports and shipyards, typically located in industrial or remote coastal areas, often lie outside established public transportation networks. This spatial disconnection creates particular difficulties for women, who tend to rely more heavily on public transport. The problem is especially acute

[40] World Bank. 2023. Why ports matter for the global economy.

during early morning shifts or late-night operations when public transport services are minimal or nonexistent. The lack of reliable, scheduled transportation forces many women to either forgo maritime employment opportunities or resort to more expensive private transport options, creating an economic barrier to sector participation.

The first- and last-mile connectivity to maritime facilities poses additional challenges. Even when public transport exists, the final segments likely involve walking through poorly lit industrial areas with limited pedestrian infrastructure. This infrastructure gap disproportionately affects women, who may need to navigate these spaces during odd hours, while carrying necessary work equipment or managing personal safety concerns. Table 6.1 highlights some interventions to improve availability of maritime transport for women. Case Study 18 presents a project from South Asia.

Table 6.1. Addressing Availability Barriers for Women in Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Data collection to construct baseline: Collect sex-disaggregated data on access to ports and other maritime facilities focusing on: • Travel patterns to ports and maritime facilities (transport mode, duration, frequency, and purpose, and first- and last-mile connectivity). • Travel preferences and perceptions of affordability, availability, accessibility, safety, and personal security at maritime facilities. • Perceptions and experiences of harassment in maritime transport and facilities.	A survey to collect and analyze data about maritime facility access patterns, frequency, modes of transportation, trip purposes, travel times, and distances, broken down by sex and other demographic and socio-economic factors.	• Number/percentage of women using maritime transport. • Number and percentage of women passengers using extended-hour ferry services. • Average waiting time on key routes used predominantly by women. • Number/percentage of women shifting from higher-carbon emitting transport mode to lower-carbon emitting maritime transport. • Number/percentage of women reporting improved accessibility to jobs and essential services due to the introduction or improvement of maritime transport.

Interventions	Output Indicators	Outcome Indicators
Availability of maritime transport: Extend early morning and late-evening ferry schedules to accommodate women working in markets, caregiving, or shift jobs. Increase ferry frequency on routes with high female ridership, such as market hubs, schools, or health care centers.	• Number of additional ferry trips during early morning or late evening hours. • Number/percentage of women passengers using extended-hour ferry services. • Average waiting time on key routes used by women. • Number/percentage of ferry trips on high-demand routes for women.	
Connectivity between maritime and land transport: • Improve bus and ferry coordination, pedestrian access, and bike-friendly infrastructure at terminals. • Provide demand responsive transport (for example, shuttle services, shared mini-buses, and cars) from urban centers to remote port locations, including women-specific transport options during early or late shifts, if required by cultural norms.	• Number of multimodal transport hubs integrating ferry services. • Number/percentage of women reporting improved connectivity in passenger surveys. • Number of dedicated shuttle services introduced incorporating women's preferences. • Number/percentage of women using shuttle services.	

Case Study 18

Transforming South Asia's Waterways to Empower Women[41]

The Challenge

Eastern South Asia boasts a vast inland waterway that links India's northeast with Bangladesh and Bhutan. For many communities, these waterways provide vital access to jobs, school, and healthcare. Spanning 3,500 kilometers, a modern, efficient Eastern Waterways Grid has the potential to revitalize the economies of the eastern subcontinent to the benefit of the region's 600 million residents.

The World Bank's Assam Inland Water Transport Project[42] is improving ferry infrastructure and services, making inland water transport safe, accessible, inclusive, and reliable. A key focus is to help women gain from these improvements through trade and ownership of water transport vessels.

A comprehensive study of the region's workforce gap showed that women face significant barriers working in inland water transport (IWT). In parts of Assam, 71 percent of men said they used IWT for trade and transportation, compared to just 28 percent of women. Women commuters contend with poor access to terminals; a minimum of waiting areas, toilets, and drinking water; infrequent ferry services; a risk of sexual harassment; and no way to formally complain. These issues discouraged women from using IWT and kept them from participating in economic activities such as trade.

The Intervention

The project designed terminals and ferries to make them more useful and comfortable for women. These designs include well-lit spaces, a nursing room, wheelchair-accessible and separate toilets for women and men, and CCTV cameras in ferry terminals. On the ferries themselves, the designs include gangways and jetties with handrails, dedicated seats for women, separate and wheelchair-accessible toilets, and life jackets and other life-saving equipment.

The project is expanding ferry services from 10 to 15 hours per day on key routes and changing some schedules based on feedback from women users. Future terminals and jetties will be designed with space to sort and store goods.

[41] This case study is based on this report: World Bank. 2024. Connecting Economies, Empowering Women: A Partnership of the World Bank—Australian Department of Foreign Affairs and Trade, (2015–2024) South Asia Regional Trade Facilitation Program.
[42] Assam Inland Water Transport Project (P157929). The team thanks Ninan Oomen Biju, Rashi Grover, and Jaishree Jindel (World Bank Transport Team) for their input and clearance of the case.

The Jibondinga Incentive Scheme offers boat owners substantial subsidies to retrofit their engines. This program includes dedicated money for women and women-led enterprises, including women's self-help groups. There was a push to promote women in decision-making positions as part of setting up an "Inland Water Transport Regulatory Authority."

Results

So far, the results are promising. Ferry service operation hours rose, and ridership doubled from 1 million in 2019 to 2 million in 2022, with an average of 27 percent of women users. Out of 825 applications for the Jibondinga program, 35 came from women, helping them become boat owners while, at the same time, modernizing the fleet.

The Assam Inland Water Transport Project demonstrates how addressing barriers to women's participation, improving safety and accessibility, and positioning women as entrepreneurs and leaders, modernized ferry services and empowered women in a male-dominated industry.

Affordability

Affordability challenges significantly impact women's access to maritime transport, often compounding broader mobility barriers. Women, especially those in low-income or informal employment, are more likely to rely on cost-sensitive transport options. However, maritime transport services often lack flexible fare structures, making daily commutes unaffordable for many. The absence of discounted tickets, multiride passes, or family fare packages disproportionately affects women who travel with dependents or need to make multiple trips. When combined with limited connectivity to ferry terminals and the high cost of private transport alternatives, these affordability constraints reduce women's ability to access education, employment, and essential services via maritime routes. Table 6.2 highlights some key interventions to address maritime affordability barriers for women and not only.

Table 6.2. Addressing Women's Affordability Barriers in Maritime Sector

Interventions	Output Indicators	Outcome Indicators
• Introduce family passes, off-peak discounts, and multiride tickets that allow women and dependents to travel affordably on maritime transport. • Bundle ferry services with last-mile transport (e.g., buses, shuttles) at discounted combined rates.	• Number/percentage of women using discounted or multiride ferry passes. • Number of transport hubs offering integrated fare packages.	• Number/percentage of women traveling in maritime transport with dependents. • Number/percentage of women reporting increased access to jobs and essential services as a result of improved affordability of maritime transport.

Accessibility

Women users of maritime transport often face physical accessibility challenges due to maritime infrastructure that is not designed with their specific needs in mind. For instance, poorly designed embarkation points, inadequate boarding facilities, and a lack of accessible pathways to reach ferry terminals or ships can hinder their ability to travel safely. Many ports and terminals still lack ramps, elevators, or other features that would make it easier for everyone—particularly those with children, elderly passengers, or those carrying heavy loads—to access ships and transit services. Additionally, the absence of clearly marked paths, proper seating at waiting areas, or designated spaces for passengers with diverse needs further exacerbates these challenges. Table 6.3 highlights some key interventions.

Table 6.3. Addressing Women's Accessibility Barriers in Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Infrastructure: Develop safe and accessible infrastructure along routes to maritime facilities, including: • *Improving Boarding Infrastructure:* Upgrade embarkation points and boarding facilities to include ramps, elevators, and clear pathways. • *Enhancing Waiting Areas and Terminals:* Design and build accessible seating, properly marked paths, and waiting areas at ferry terminals. • *Ensuring Women-friendly Design:* Include women-specific needs in the design process, such as safe spaces for children, breastfeeding facilities, or female-only waiting areas • *Developing Multimodal Access:* Ensure easy access from public transport (buses, taxis, etc.) to ferry terminals, with clearly marked routes and pedestrian-friendly infrastructure.	• Number of embarkation points with upgraded ramps and elevators. • Number of seating areas and waiting facilities equipped with accessible features (e.g., spaces for people with disabilities, designated seating for women). • Percentage of ferry terminals with designated signage and accessible features (e.g., wheelchair ramps, tactile surfaces). • Number of accessible pathways and walkways between transport modes (e.g., from buses or taxis to ferry terminals).	• Number/percentage of women using improved boarding facilities (e.g., ramps, elevators, accessible pathways). • Number/percentage of women using accessible seating and waiting areas at terminals. • Average time spent by the passengers waiting in accessible areas compared to previous periods. • Number/percentage of women reporting ease of access from public transport to ferry terminals.

Safety and Personal Security

The isolated location of many maritime facilities, combined with 24/7 operational requirements, creates unique security vulnerabilities. Poor lighting in operational areas, inadequate surveillance systems, and limited security personnel presence, especially during night shifts, heighten these risks. The situation is further complicated by the industrial nature of port environments, where safety hazards extend beyond personal security to include occupational risks that may affect women differently due to inadequate safety equipment and protocols. Table 6.4 highlights some key interventions.

Table 6.4. Addressing Women's Safety and Personal Security Barriers in Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Establish protocols to tackle gender-based violence in maritime transport service, including: • Reporting mechanisms via hotlines, mobile apps, and/or in-person points • Counseling, legal support, and referral services for survivors • Training for transport staff and law enforcement on empathetic and nonjudgmental responses • Ongoing monitoring and evaluation, incorporating survivor feedback.	• Maritime employer developing standard operating protocols (SOPs) for managing reports of harassment. • Number/percentage of vessel conductors, ticket collectors, maintenance staff in front-facing positions trained on new SOPs focusing on survivor-centered responses. • Number of reports filed through different means (hotline, mobile app, in person). • Number/percentage of survivors of sexual and other forms of harassment receiving timely and adequate support. • Number/percentage reduction in response time to the survivors. • Number/percentage of survivors' satisfaction rate with support services.	• Change in number/percentage of women who feel safer using maritime transport after the introduction of safety measures. • Shift in women's perception of safety leading to an increase in their increased use of maritime transport.

Employment

Women in the maritime sector face significant barriers in recruitment, retention, and career advancement. Recruitment is hindered by limited awareness of opportunities, particularly in technical roles, and by gender stereotypes and biases. Long shifts, especially at sea, and physical demands often conflict with women's caregiving responsibilities, limiting their ability to stay in seafaring roles. Career progression is challenged by rigid routes, lack of mentorship, and limited access to seagoing opportunities. Women in leadership roles also face resistance to their authority, creating additional barriers to advancement. Inadequate workplace infrastructure, such as the lack of women-friendly facilities and PPE, further compounds these challenges, contributing to the gender gaps in the sector.

Outreach and recruitment

Limited awareness about maritime career opportunities for women represents a fundamental barrier. Most women in the industry work in administrative roles, such as finance and clerical work at the ports, while few are appointed as surveyors of ships. The sector's traditional image of being dominated by men, combined with insufficient outreach to women students in maritime education and training institutions, creates a significant information gap. This is particularly evident in technical and operational roles, where women's representation in maritime academies and training programs remains low. The lack of visible female role models in operational positions further perpetuates this awareness deficit, creating a self-reinforcing cycle of low participation.

Recruitment practices often reflect deeply entrenched biases regarding women's ability to handle physically demanding operational roles. These biases manifest in both explicit and implicit forms, from direct discrimination in hiring processes to subtle discouragements during recruitment. Recruiters frequently express skepticism about women's ability to manage jobs like marine piloting, cargo handling, or engineering, despite evidence of successful female performance in these positions. This bias is particularly pronounced in operational roles where physical strength is perceived as a primary requirement, even when technological advancements have significantly reduced physical demands.

Onboard positions typically require four-to-six-month deployments at sea, a schedule that conflicts with societal expectations about women's family responsibilities. Similarly, port operations often involve irregular shift patterns and extended exposure to harsh weather conditions, creating work-life balance challenges that disproportionately affect women. The lack of flexible working arrangements or job-sharing options further compounds these difficulties, particularly for women with caregiving responsibilities. Table 6.5 presents some interventions that the maritime employers can implement to attract and employ women, along with their corresponding indicators.

Table 6.5. Addressing Barriers to Attract and Employ Women in the Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Assessment to identify barriers for women in maritime jobs and an action plan: • Conduct an analysis of the barriers women face in recruitment, retention, and promotion in the maritime sector, broadly, and more concretely, collect sex-disaggregated maritime workforce data across a wide array of domains, such as women's and men's employment in total, across different positions, age, training and development, use of leave, duration of employment, and so on. • Create an action plan with targeted activities, such as training programs, HR policy enhancements, and communication strategies to address identified barriers.	Assessment undertaken resulting in actionable recommendations and a time-bound and budgeted action plan.	• Number/percentage of women's maritime sector employment in total and across different job roles. • Number/percentage of female interns hired within X time of internship completion. • Number/percentage of women who secure jobs in the maritime sector within X time of completion of professional certification program.
Outreach: Launch community outreach initiatives with seafarers and maritime associations, combining professional maritime counseling, family engagement sessions, and public awareness campaigns to showcase job opportunities.	• Number of female participants in career awareness programs. • Number of career awareness programs conducted annually.	

Interventions	Output Indicators	Outcome Indicators
Nurturing female talent: • *Education talks:* Employer (airport and airline) visiting schools and universities to talk about the value of work in maritime and the importance of promoting women in the sector. • *"Open days:"* Organizing "open days" where potential candidates (especially women and young people) are invited to visit the workplace and talk to staff. This could help challenge or demystify some aspects of careers in maritime, in addition to bringing potential reputational benefits. These will also help employers demystify false perceptions about the sector's image implying it is only suitable for men, because of the culture and working conditions.	• Number of girls contacted through education talks and "open days" • Links deepened or created between maritime employers and education institutions through MoUs.	
Internship and professional certification programs: Establish internships and professional certification programs (for example, in navigation, and so on) for women entering maritime careers.	• Number/percentage of female interns who enroll and complete internship programs. • Number/percentage of women who enroll in and complete professional certification programs.	

HR policies and practices

Legal restrictions in numerous jurisdictions explicitly limit women's participation in specific maritime roles or during certain working hours. For instance, in some countries, regulations prohibit women from working night shifts in ports or restrict their access to certain vessel areas, ostensibly for safety reasons. These regulatory barriers, often framed as protective measures, effectively exclude women from crucial operational experiences necessary for career advancement.

The sector demonstrates notable deficiencies in workplace policies that are supportive of women's needs. Private terminal operators and port authorities frequently lack comprehensive maternity leave policies, parental leave provisions, or structured return-to-work programs. This gap is particularly pronounced at shipping companies, where the unique demands of seafaring careers create complex challenges for policy implementation. For instance, many vessels lack appropriate facilities for nursing mothers or fail to provide adequate health care coverage for women-specific medical needs. The absence of childcare facilities at maritime workplaces, combined with inflexible scheduling practices, creates additional barriers for women balancing professional and family responsibilities.

Many maritime facilities lack restrooms for women, changing areas, or appropriately sized PPE. This infrastructural deficit is particularly acute in older port facilities and vessels, where physical space constraints and budgetary limitations complicate retrofitting efforts. The absence of these essential facilities not only creates practical difficulties but also sends a clear message about the sector's limited commitment to gender equality. Table 6.6 presents some interventions that the maritime employers can implement to improve their human resources policies and practices, along with their corresponding indicators.

Table 6.6. Improving Company Human Resources Policies and Practices in the Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Flexible work-life policies: Revise or adopt HR policies to include provisions such as flexible working hours, parental leave, and childcare to balance professional and personal responsibilities. **Sexual harassment policy:** Develop a sexual harassment policy with an accompanying implementation plan that is accessible to all staff and available on the company website.	• Policies rolled out with staff-wide communication. • Number/percentage of staff trained on the sexual harassment policy. • Number of sexual harassment reports received through the formal redress mechanism and addressed. • Number/percentage of women utilizing flexible work options.	• Number/percentage of women retained with the organization, in total and by different job levels, including low-, mid-, and high-skilled technical roles. • Number/percentage of staff reporting improved job satisfaction, after the introduction or improvement of company's human resources policies and practices; disaggregated by sex and other key organizational metrics.

Interventions	Output Indicators	Outcome Indicators
Isolated worker policy: Develop an isolated worker policy with an accompanying implementation plan that is accessible to all staff and available on the employer website.		
Childcare facility: Establish employer-provided childcare services, tailored to the organization's business needs and workforce size. Additionally, consider offering financial support to employees—such as childcare subsidies or vouchers—to help cover associated costs.	• Childcare facility established or upgraded in compliance with national standards. • Number of staff (women and men) benefiting from childcare facilities or subsidies.	
Workplace Infrastructure and PPE: Ensure the provision of gender-sensitive workplace infrastructure, including separate toilets and changing rooms, adequate lighting, and PPE that is appropriately designed to fit both women and men.	• Number/percentage of workplace facilities equipped with separate toilets, changing rooms, and appropriate lighting. • Gender-sensitive PPE provided to all workers who require it.	
A staff satisfaction survey: Conduct periodic surveys to assess staff satisfaction with employment terms, working conditions, professional development, and perceptions of equal opportunity. Results should be disaggregated by sex and other demographics to inform and evaluate relevant initiatives and identify areas for improvement.	• Surveys completed periodically. • Results disseminated and discussed among staff • Percentage of recommendations acted upon. • Staff feedback on overall communication improved.	

Career progression

Career advancement in maritime operations demands multiple professional certifications and mandatory seafaring experience, creating layered barriers for women. For instance, progression to senior roles like harbor master or marine superintendent typically requires extensive sea time—often 10–20 years—combined with specialized certifications. This requirement poses particular challenges for women, who must not only navigate the technical demands of these qualifications but also overcome discrimination in gaining practical experience. This is further complicated by limited access to mentorship and professional networks traditionally crucial for career advancement in the maritime sector.

Many women find themselves compelled to transition from seagoing positions to shore-based roles or exit the sector entirely after several years of service, primarily due to family responsibilities or societal pressures. This transition often occurs at a critical career juncture when women are accumulating the essential experience needed for advancement to senior positions. The lack of structured programs supporting marine staff to transition back to seas or alternative progression pathways further compounds this challenge, effectively creating a permanent career ceiling for many women in maritime operations.

Many vessels lack proper medical support for women employees, particularly in addressing women-specific health care needs. This includes the absence of appropriate facilities or supplies, such as feminine hygiene products, which can make long-term seagoing careers challenging and less sustainable for women.

Unlike many other industries where lateral moves can facilitate advancement, maritime careers often follow strictly defined progression routes with limited flexibility. This rigidity particularly disadvantages women who may need to temporarily step back from operational roles or seek alternative routes to leadership positions. The situation is exacerbated by a lack of formalized cross-training programs that could enable women to build diverse skill sets while maintaining career momentum. Table 6.7 presents some of the interventions to address barriers to women's retention and career progression in the maritime sector, along with their corresponding indicators.



Photo credit: World Bank

Table 6.7. Addressing Barriers to Women's Career Progression in the Maritime Sector

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as: establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' resumes do not include personal details, and testing participants without revealing their personal details so as to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias and gender equality. • Gender balance in decision-making processes, ensuring a fairer and more diverse representation in promotion decisions.	• Number/percentage of women promoted within X months/years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months/years after the introduction of the women's mentorship program. • Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).
Women's mentorship program: Implement a mentorship program pairing women with senior female and male professionals in maritime, focusing on various issues such as, improving technical and soft skills and addressing specific workplace challenges.	• Number/percentage of women participating in the mentorship program. • Employer introducing the women's mentorship program.	
Women's networking: Create for women in maritime to connect, share experiences, and seek mentorship. Organize events for networking and building connections in the sector.	• Number of women participating in networking platforms.	
Annual review process: Implement an annual review to track progress in women's promotion, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	

Leadership

Women in maritime leadership positions remain a rarity in emerging economies, especially as ship captains and port operations managers. Even when they do ascend to these positions, they contend with persistent resistance rooted in the sector's biases toward women. In these traditionally male-dominated command structures, female leaders face subtle but constant challenges to their authority. Female ship captains often find their technical decisions subjected to extra scrutiny by subordinates, a pattern rarely seen with male counterparts, while women port managers must repeatedly prove competencies that are assumed in male leaders.

This continuous need to validate their expertise creates a significant psychological burden. These challenges not only affect current female leaders but also discourage women from pursuing leadership roles, perpetuating the cycle of underrepresentation in maritime leadership.

The traditional pathway to senior positions typically requires extensive operational experience, often including mandatory sea time and specific technical certifications. However, women face disproportionate challenges in accumulating this experience due to limited access to seagoing opportunities, bias in technical role assignments, and interruptions in career progression due to family responsibilities.

Women in maritime leadership positions must navigate the dual challenges of demonstrating technical competence in a male-dominated field while also exhibiting leadership capabilities. This dual burden often results in women being held to higher standards than their male counterparts. For instance, female technical directors in port authorities frequently report needing to possess both superior technical credentials and exceptional management skills to be considered for positions, while male candidates might advance based primarily on technical expertise. Table 6. 8 highlights some interventions.

Table 6.8. Addressing Barriers to Women's Leadership in the Maritime Sector

Interventions	Output Indicators	Outcome Indicators
Women's Leadership program: Establish a targeted leadership training program for women in maritime focusing on strategic planning, financial management, and team leadership.	• Number/percentage of enrolled participants who successfully complete the training program.	• Number/percentage of women promoted to leadership roles within X months/years after the introduction of the women's leadership training program.
Annual review process: Implement an annual review to track progress in women's representation in managerial and senior roles, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	• Change in employee perceptions of organizational culture related to equal employment opportunities (measured through regular staff satisfaction surveys).

Entrepreneurship

Despite emerging opportunities in the ports, shipping, and inland waterways sectors, such as operating electric vessels, growing passenger and cruise ships, and greater automation in seaports, women encounter numerous challenges, including limited access to capital, training, and networks. Women can participate in sea trade either as merchandise traders or as suppliers of goods and services for sea-based trade, especially as suppliers to large ocean liners.

Business Skills Training and Advisory Services

Women face limited access to business skills training. The scarcity of trainings on trade processes, particularly digital trade facilitation mechanisms, creates barriers to entry. Furthermore, there is a notable lack of certification and training programs on providing logistics services, freight forwarding, clearances and maritime trading designed especially for women. This deficiency in targeted skill development opportunities significantly hinders women's career progression and advancement in the field. Women traders also face challenges related to regulatory compliances, quality testing requirements, and clearance processes. International, sea-based trade often requires a much higher level of compliances vs. land-based trade. Moreover, the products that women traders often engage in trading, such as processed foods or textiles, have very specific testing requirements, such that only a few testing agencies in emerging economies may exist for quality certification in line with standards in developed countries. These testing requirements also entail high costs, which make engaging in sea-based trade harder for women traders. A knowledge of requisite compliances, coping with newly digitized customs clearance software, and ensuring duly filled paperwork for the shipment can also be barriers for women traders, especially small and medium enterprises (SMEs). Table 6.9 highlights some interventions to address these constraints.



Photo credit: World Bank

Table 6.9. Addressing Barriers to Women's Access to Business Skills Training in the Maritime Sector

Interventions	Output Indicators	Outcome Initiatives
Launch a structured program to empower women in the maritime sector, especially in the passenger and cruise segments, as well as for women in merchandise sea trade, through the following: • Conduct regular business training covering essential business skills, such as planning, financial management, marketing, and passenger preferences and trends in the cruise and inland waterways segments. • Create an online platform with templates, guides, and toolkits for managing businesses in maritime transport, along with regulatory information and funding opportunities.	• Number/percentage of women receiving training and business advisory support, disaggregated by women merchandise traders, and women suppliers to maritime transport industry.	• Number/percentage of women who participated in training, business advisory support programs and subsequently launched or expanded businesses in maritime transport or merchandise trade. • Number and percentage of women who received training and business advisory support and report an improvement in their economic situation (e.g., increased revenue or profits).

Financial barriers

Financial barriers are particularly pronounced if women try to enter merchandise trade. Merchandise traders often have high working capital loan requirements so that they get their complete shipments (going into multiple container loads) cleared by port authorities, even if they do not have a buyer lined up for the entire shipment. Women find it harder to secure these working capital loans owing to enduring stereotypes, especially in the formal banking sector. Table 6.10 highlights some of the key interventions to address these constraints women face, and the earlier case study on the Assam Inland Water Transport Project highlights the importance of affordable financing for women entrepreneurs to start their businesses in the maritime sector.

Table 6.10. Addressing Barriers to Women's Access to Finance in the Maritime Sector

Interventions	Output Indicators	Outcome Initiatives
• *Loans:* Launch a dedicated initiative providing loans tailored to women entrepreneurs (for example, collateral free, low interest, and so on) in maritime trade with a streamlined application process. • *Grants:* Establish a competitive grant program to provide seed funding for women-led startups in the maritime trade sector.	• Number/percent of women entrepreneurs who secure loans through the access to finance initiative. • Number of women entrepreneurs who receive maritime trade grants for engaging in the maritime trade sector.	• Number/percentage of women who received financial support and subsequently launched or expanded businesses in maritime transport or merchandise trade. • Number and percentage of women beneficiaries of the financial support who report an improvement in their economic situation (e.g., increased revenue or profits).

Market access and linkages

Additionally, market access and networking challenges prevent women from tapping into business opportunities. Women entrepreneurs are often smaller and lack networks to enter contracts for becoming suppliers of specific goods and services for ocean liners and shipping companies. Table 6.11 highlights some of the key interventions to address these constraints women face.

Table 6.11. Addressing Barriers to Women's Access to Markets in the Maritime Sector

Interventions	Output Indicators	Outcome Initiatives
Facilitate market-oriented networking and collaboration between women entrepreneurs and port authorities, customs agencies, and maritime trade associations through exhibitions, and business matchmaking events.	• Number/percentage of women entrepreneurs participating in maritime networking platforms. • Number/percentage of women entrepreneurs participating in these platforms who secure contracts in maritime trade.	• Number/percentage of women who report improved market access, secured contracts and business partnerships as a result of networking engagement.

7

Economic Corridors and Logistics



Photo credit: Adobe Stock

The economic corridor sector primarily operates through land ports, logistics facilities, dry ports, and warehouses to facilitate international trade and commerce. At land ports, customs officers, documentation specialists, and operations managers coordinate with cargo handlers and equipment operators to manage goods movement. Logistics operations rely on freight forwarders and customs brokers who work as intermediaries between traders and authorities, while warehouse operations involve inventory managers and forklift operators handling the storage and movement of goods.

The sector offers diverse roles, from entry-level positions in cargo handling to specialized jobs in customs brokerage and senior management. With increasing digitalization, new positions have emerged in information technology (IT) systems and electronic documentation. This work requires coordination between multiple stakeholders while ensuring regulatory compliance and security across borders.

Economic corridor projects aim to improve transport efficiency and safety on critical trade routes, enhancing trade and connectivity. They involve institutional strengthening, capacity building, customs modernization, trade facilitation, road safety enhancements, and infrastructure improvements. Investments may include modernizing land ports and developing port and logistics facilities. These projects also seek to reduce trade costs, boost transport efficiency, and foster regional market access and investment, promoting economic growth and regional integration.

Mobility

The lack of mobility options in economic corridors significantly impacts women's participation in the transport and logistics sectors, influencing their access to employment opportunities, ability to meet job requirements, and personal safety. These challenges play crucial roles in shaping women's entry, retention, and advancement in the industry, ultimately affecting overall gender dynamics.

Availability

Availability of transport poses significant challenges for women in economic corridors. The remote locations of economic corridors, often far from urban centers, present serious mobility constraints for women in this sector. These professionals often have no choice but to be physically present at land ports, customs stations, and logistics facilities to ensure proper communication regarding cargo shipments and to build relationships with government officials for efficient clearance processes. The scarcity of readily available public transportation and safer travel modes thus disproportionately affects women traders, freight forwarders, and custom brokers, who typically rely more on such means rather than personal vehicles. Due to long commutes, many women traders and custom brokers often choose jobs and skill training opportunities closer to their homes, potentially opting out of logistics sector jobs despite their qualifications or interest.
Table 7.1 highlights some key interventions to address availability of transport for women in economic corridor projects, along with the corresponding indicators.

Table 7.1. Addressing Availability of Transport for Women in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Assessment to understand differentiated mobility barriers women and men traders, customs brokers, and logisticians face in navigating their way to and from ports, customs stations, and other critical facilities. • Travel patterns and preferences for the women staff (preferred modes of transport, peak travel times, frequency of facility visits, route selections and alternatives). • Transport costs as percentage of business expenses. • Affordability of different transport options. • Impact on business operations. • Lost opportunities due to mobility constraints.	A survey to collect and analyze data about travel patterns, frequency, modes of transportation, trip purposes, travel times, and distances, broken down by sex and other demographic and socioeconomic factors.	• Number/percentage of women in trade and logistics reporting new/improved access to work and business locations as a result of transport-focused interventions. • Number/percentage of women reporting increased income, client base, or market access attributed to better connectivity to economic corridor facilities.
Availability of public transportation: Provide public transit services linking urban centers to remote economic corridor hubs. This could include scheduled bus services and dedicated shuttles to serve key transit points along the corridor.	• Number of new public transport routes connecting to economic corridor hubs introduced. • Number of corridor facilities or zones where transport solutions (e.g., shuttles, transport subsidies, on-demand services) have been adopted.	

Affordability

Affordability emerges as another related barrier. The high cost of private transport options to reach remote work sites such as land ports and customs stations significantly impact women's operational expenses. This financial burden can affect their long-term competitiveness and sustainability in the industry, potentially discouraging women from seeking or retaining positions in these sectors. Enhancing the availability of public transport services eases the burden for women traders, women logistics service providers, and women staff working at border areas. Table 7.2 highlights some key interventions to address affordability of transport for women in economic corridor projects, along with the indicators.

Table 7.2. Addressing Women's Transport Affordability in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Introduce subsidized transport passes for women involved in the logistics sector, including women traders, freight forwarders, customs brokers, and staff working in economic corridors.	Number of women benefiting from transport subsidies.	Change in number/percentage of women participating in logistics, trade, and customs operations as a result of reliable, affordable shared transport services. Change in women-led and owned businesses' profitability or sustainability due to reduced transportation expenses.
Establish shared transport services specifically designed for women, such as shared shuttles or vanpooling services to connect remote work sites (e.g., ports, customs stations, industrial parks).	Number of women benefiting from transport routes serving economic corridor hubs.	

Accessibility

Women face multiple accessibility barriers in economic corridor projects, largely due to the remote and male-dominated nature of the infrastructure involved—such as land ports, customs stations, logistics hubs, and warehouses. These sites often lack adequate facilities like safe and hygienic restrooms, well-lit waiting areas, and designated spaces for women, making them less accessible and more intimidating for female professionals and entrepreneurs. Navigating these spaces can be especially difficult for women unfamiliar with the area or those traveling alone. Inadequate signage, limited availability of travel information, and poor digital connectivity further restrict women's ability to independently access and navigate these locations. The absence of rest areas, emergency support systems, and basic amenities disproportionately affects women traders, customs brokers, and logistics workers, discouraging them from participating fully in corridor-related economic activities. Table 7.3 highlights some key interventions to address accessibility barriers for women in economic corridor projects, along with the indicators.

Table 7.3. Addressing Women's Accessibility Barriers in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Infrastructure: Develop safe rest areas, well-lit waiting areas, hygienic restrooms and changing rooms at land ports, customs stations, logistics hubs, and warehouses.	Number of women-friendly facilities established at land ports and logistics facilities, including waiting areas, toilets, and changing rooms.	Number/percentage of women participating in logistics and trade activities due to improved/more accessible infrastructure.
Digital Connectivity and Information: Improve access to digital services such as route maps, station information, real-time transport updates, and digital help desks to help women navigate these areas independently.	Number of digital platforms, apps, or websites developed or improved to provide real-time updates and navigation support.	Change in women's independence and confidence in using economic corridors due to increased availability of travel and route information.

Safety and Personal Security

Safety concerns also pose one of the most significant mobility constraints in economic corridors. Women traders, custom brokers, and freight forwarders may be reluctant to commute due to safety issues, particularly when jobs involve traveling to remote or perceived high-risk locations such as land ports, warehouses and inland container depots. Long commute times, unsafe public transport, and unfamiliarity with new areas present additional challenges. The requirement for late-night work, such as visiting logistics facilities at the ports for timely shipment clearance, can be particularly problematic. The lack of gender-sensitive infrastructure heightens the perception of vulnerability and fear of sexual harassment in these isolated locations poses a significant concern. The absence of women marshals, and staff further exacerbates these issues. Table 7.4 highlights some key interventions.

Table 7.4. Addressing Women's Safety and Personal Security Barriers in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
• **Safe Infrastructure:** Enhance infrastructure to promote safety, including improved sanitation and hygiene facilities, adequate lighting, security and surveillance systems, clear way finding, designated waiting areas, and transport/transit safety features. • **Protocols:** Establish clear protocols to address harassment and violence against women in economic corridor hubs. This should include accessible reporting mechanisms (such as hotlines and in-person reporting points) and referral services for survivors. • **Staff Training:** Provide training for transport and logistics staff, law enforcement, and security personnel on how to respond to harassment and violence with empathy and without judgment.	• Number of corridor locations with improved safety infrastructure. • Number and percentage of staff trained on protocols. • Number of incidents of harassment reported and addressed. • Number of reporting mechanisms (e.g., hotlines, online platforms, physical help desks) set up across key locations.	• Change in number/ percentage of women participating in logistics, trade, and customs operations as a result of improved safety measures. • Change in number of incidents of violence, harassment, or safety-related complaints over time.

Employment

Despite its vital role in the economy, the economic corridor sector often exhibits significant gender disparities in formal employment. Women are underrepresented in leadership positions, technical roles, and unskilled and semi-skilled jobs. This gap between women and men can be attributed to societal stereotypes, discriminatory practices, and limited access to training and resources. These barriers significantly impact women's career advancement and earning potential in this sector.

Attraction and Recruitment

The attraction and recruitment of women in economic corridors face multifaceted challenges that begin even before the hiring process. The prevailing view of the sector as male-dominated deters many women from considering it a viable career option. This perception is often reinforced by the visible lack of female representation in various roles, creating a self-perpetuating cycle of low female participation. The limited awareness of diverse job roles within the sector further exacerbates this issue. Many women, particularly those from less privileged backgrounds or rural areas, may be unaware of the opportunities available in logistics, supply chain management, freight forwarding, and customs brokerage. This information gap is widened by the persistent digital gender divide,

where women often have less access to digital resources and platforms that could inform them about potential career paths. The lack of awareness of specific job roles significantly contributes to the underrepresentation of women in economic corridors. Many companies within economic corridors fail to showcase an inclusive work environment or highlight the diverse career possibilities available for women in trading, freight forwarding, and customs brokerage.

The nature of international trade and customs clearance requires flexibility with working hours due to varying border agency timings across different time zones. This unpredictability in operations, combined with the need for physical presence during cargo clearance, creates significant challenges for women professionals balancing work and personal responsibilities. Table 7.5 presents some interventions to attract and employ women in the economic corridor sector, along with the corresponding indicators. Case Study 19 highlights interventions initiated in Ukraine.

Table 7.5. Attracting and Employing Women in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Assessment to identify barriers for women's employment in corridor projects and an action plan: • Conduct an analysis of the barriers women face in recruitment, retention, and promotion in the corridor projects (logistics, customs, or trade) identifying share of women's and men's employment in total, as well as across different positions; explore topics such as career advancement, access to training, work-life balance, perceptions of gender bias, awareness of job opportunities, and experiences with HR policies to develop a good understanding of the barriers women face, enabling the identification of common themes and trends. • Create an action plan with targeted activities, such as training programs, HR policy enhancements, and communication strategies to address identified barriers.	Assessment undertaken resulting in actionable recommendations and a time-bound and budgeted action plan.	• Number/percentage of women's employment in economic corridors in total and across different job roles. • Number/percentage of female interns securing employment in the transport and logistics sector within X months of completing the internship program. • Number/percentage of women securing employment in the transport and logistics sector within X months of completing the training and certification programs in logistics and commercial trucking.

Interventions	Output Indicators	Outcome Indicators
Career awareness programs: • Transport authorities and logistics providers conducting educational presentations at schools and universities, highlighting opportunities in economic corridors. • Organizing interactive field visits at operational sites to give potential candidates, particularly women, direct exposure to port and logistics operations.	• Number of female students enrolling in the programs. • Number of partnerships established between logistics/corridor sector companies and educational institutions.	
Internship Program for Female Students: Offer x month-long paid internships to female university students and recent graduates in technical fields such as, IT, logistics, and transport operations. The program will be hosted by project beneficiaries (for example, companies, logistics hubs, transport authorities) within the transport economic corridor. The aim is to provide hands-on experience in critical project components, such as infrastructure development, supply chain management, and transport logistics.	• Number/percentage of female students enrolled in the internship programs.	
Training in logistics and commercial trucking: Increase the representation of women in the commercial trucking and logistics industry by training and certifying them in these key roles (a licensed commercial truck driver, certified supply chain professional, and so on).	• Number/percentage of certified female professionals in commercial trucking and logistics.	

Case Study 19

She Trucker—Training Women as Commercial Truck Drivers to Address Driver Shortages in Ukraine[43]

The Challenge

In response to Ukraine's critical labor shortage of professional commercial truck drivers, a challenge further exacerbated by Russia's invasion of Ukraine, the Ministry for Development of Communities and Territories of Ukraine, in partnership with the NGO Foundation for Institutional Development, has launched an initiative to train women as truck drivers—a profession traditionally dominated by men. This project seeks to address workforce shortages in the logistics sector while empowering women through targeted training and employment opportunities. The initiative is crucial for maintaining supply chains and strengthening the transport and logistics sectors now and during the recovery phase.

Intervention

The project equips women with training, reskilling, exam preparation, soft skills development, and mentorship throughout the process of obtaining their driving licenses, followed by job placement in logistics companies. Over 1,000 women applied for the program, which had only 120 available spots, and 30 transport and logistics companies have expressed interest in hiring, underscoring the critical importance of this initiative for both employees and employers. As of March, 2025, more than 60 women have already obtained their driver's licenses and begun the employment process (18 women are already employed).

Conclusion

By providing training, reskilling, and job placement in critical transport roles, the She Trucker program not only sustains essential services but also empowers women in a traditionally male-dominated industry. This initiative tackles Ukraine's urgent labor shortages while building the foundation for a more inclusive and resilient workforce. To ensure its long-term sustainability, it is essential to establish a comprehensive system for training and certifying both drivers and instructors—aligned with European standards, modern teaching methodologies, and innovative technologies—and to expand the initiative nationwide.

[43] The team thanks Inna Hanushevych, Project Manager, Ministry for Development of Communities and Territories of Ukraine for the case study.

Human resources policies and practices

Human resource policies and practices within the economic corridor sector often exhibit both overt and subtle gender biases. Some upper management members hold prejudiced mindsets toward women, particularly those who are about to marry or are pregnant. This bias can manifest in various discriminatory practices, such as overlooking qualified female candidates for promotions in customs brokerage or freight forwarding, assigning fewer challenging projects to women traders, or creating hostile work environments that push women to leave these sectors. The issue is further complicated by the unique challenges posed by the nature of work in economic corridors. Table 7.6 highlights some key interventions.

Table 7.6. Improving Human Resources Policies and Practices in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Flexible work-life policies: Introduce policies that provide flexible working hours, job-sharing arrangements, and part-time options for staff in logistics and economic corridor sectors. **Sexual harassment policy:** Develop and implement a sexual harassment prevention policy, including procedures for reporting and redress, and ensure it is accessible to all staff and published on the company website. **Isolated worker policy:** Develop an isolated worker policy with an accompanying implementation plan that is accessible to all staff and available on the employer website.	• Policies rolled out with staff-wide communication. • Number/percentage of staff trained on the sexual harassment policy. • Number of sexual harassment reports received through the formal redress mechanism and addressed. • Number/percentage of women utilizing flexible work options.	• Increased retention and return-to-work rates among parents, especially women. • Number/percentage of women retained in key operational roles that require on-site presence or irregular hours. • Number/percentage of staff reporting improved job satisfaction, after the introduction or improvement of company's human resources policies and practices; disaggregated by sex and other key organizational metrics.

Interventions	Output Indicators	Outcome Indicators
Childcare facility: Establish on-site childcare services at major logistics hubs (for example, land ports, warehouses) and offer subsidies for childcare services.	• Number of staff (women and men) benefiting from childcare support.	
Workplace Infrastructure and PPE: Ensure the provision of gender-sensitive workplace infrastructure, including separate toilets and changing rooms, adequate lighting, and PPE that is appropriately designed to fit both women and men.	• Number/percentage of workplace facilities equipped with separate toilets, changing rooms, and appropriate lighting. • Gender-sensitive PPE provided to all workers who require it.	
A staff satisfaction survey: Conduct periodic surveys to assess staff satisfaction with employment terms, working conditions, professional development, and perceptions of equal opportunity. Results should be disaggregated by sex and other demographics to inform and evaluate relevant initiatives and identify areas for improvement.	• Surveys completed periodically. • Results disseminated and discussed among staff. • Percentage of recommendations acted upon. • Staff feedback on overall communication improved.	

Career progression

The challenges of career progression for women in the corridor sector are equally significant and multifaceted. A primary factor is the disproportionate burden of unpaid care work and domestic responsibilities that society places on women. Across all income levels and job roles, whether employees or entrepreneurs, women consistently identify their domestic duties as the most critical factor influencing their career decisions. These responsibilities, which often include childcare, elder care, and household management, play a crucial role in determining whether women take career breaks, accept challenging work responsibilities (such as conducting fieldwork at ports and border crossings or night shifts), or pursue growth opportunities in their jobs or businesses. The nature of work in economic corridors, which often involves on-site presence, long or irregular hours, and potential travel, creates additional hurdles for women trying to balance their care responsibilities. Unlike some other sectors that have embraced flexible working arrangements, the logistics and

transportation industries have limited options for hybrid or work-from-home setups. This inflexibility disproportionately affects women in trading, freight forwarding, and customs brokerage, who are more likely to require adaptable work schedules to manage their dual responsibilities. Table 7.7. highlights some interventions to address women's career progression challenges in the sector.

Table 7.7. Addressing Women's Constraints to Career Progression in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
A performance review system: Develop a performance review system for staff with a standardized framework linking performance reviews to workforce competencies, skills development, and promotions. A range of actions can achieve this objective, such as: establishing a promotion committee comprised of both women and men, adopting a blind selection process where candidates' resumes do not include personal details, and testing participants without revealing their personal details so as to eliminate potential conscious or unconscious gender bias in promotion decisions.	• Number/percentage of promotion committee members completing training on unconscious bias and gender equality. • Gender balance in decision-making processes, ensuring a fairer and more diverse representation in promotion decisions.	• Number/percentage of women promoted within X months/years after the introduction of the formal performance review system. • Number/percentage of women promoted within X months/years after the introduction of the women's mentorship and networking programs. • Change in employee perceptions of organizational culture related to equal employment opportunities.
Women's networking and mentorship programs: Create women's networking events, mentorship programs, and peer support groups to foster guidance and career growth.	• Number of mentorship and networking events held. • Number of women participating in these events.	

Interventions	Output Indicators	Outcome Indicators
Annual review process: Implement an annual review to track progress in women's representation leadership roles, using specific metrics to measure effectiveness and adjust initiatives as needed.	• Employer introducing annual review process.	

Leadership

The challenge of women's leadership in the economic corridor sector is particularly acute and self-perpetuating. There is a noticeable lack of promotion and celebration of women's success stories and achievements within the industry. The absence of women in decision-making positions not only discourages aspiring female professionals from pursuing careers in this sector but also means that policies, practices, and workplace cultures continue to be shaped predominantly by male perspectives, potentially overlooking or undervaluing the unique challenges and contributions of women. Table 7.8 highlights some key interventions in these areas.

Table 7.8. Addressing Women's Constraints to Leadership in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicators
Leadership programs and role model initiatives for women: Establish leadership development programs specifically designed to equip women in the logistics and economic corridor sectors with the skills, knowledge, and support networks necessary to advance into decision-making roles. These programs should focus on executive coaching, negotiation skills, and strategic thinking.	• Number of women enrolled in leadership development programs within logistics and economic corridor sectors. • Increase in the number of women reporting greater confidence in pursuing leadership positions.	• Number/percentage of women being promoted to leadership roles within X months or years after completing the women's mentorship program. • Number/percentage increase in women being promoted to leadership roles after the introduction of the women's leadership training program.

Entrepreneurship

Women entrepreneurs in the economic corridor face significant challenges that hinder their ability to establish and grow successful businesses. These obstacles primarily fall into three categories: access to finance, business skill training, and business advisory support.

Access to finance

Access to finance remains a formidable barrier for women entrepreneurs in economic corridors, particularly affecting women traders, freight forwarders, and custom brokers. These professionals often require financing for training, purchasing shipments, and managing cargo. However, they report major difficulties in obtaining loans through formal channels. The loan acquisition process is frequently perceived as complex and biased, largely due to women's lack of collateral and asset ownership. Many women-led firms in freight forwarding and customs brokerage rely heavily on company savings as their primary source of finance, struggling to secure bank loans. Even when women traders or logistics service providers manage to obtain loans, they often face unfavorable terms compared to their male counterparts. This financial constraint significantly impedes business growth and expansion opportunities in the economic corridor sector. The unfamiliarity with formal financial institutions further exacerbates the problem for women in these roles, hindering effective resource management. This financial exclusion not only limits individual entrepreneurial potential but also hampers the overall economic development of the sector, particularly in areas crucial to international trade and logistics. Table 7.9 highlights some of the suggested interventions to improve women's access to finance in economic corridor projects.



Photo credit: World Bank

Table 7.9. Addressing Women's constraints in Access to Finance in the Economic Corridor Sector

Interventions	Output Indicators	Outcome Indicator
Conduct a study on barriers existing and potential women traders and entrepreneurs face in navigating their work in economic corridors, covering a range of topics including financial barriers (credit access, collateral/ guarantee terms, loan terms, alternative financing availability), awareness and financial literacy), institutional and policy barriers (for example, discriminatory lending policies or informal biases in financial institutions, business specific challenges in economic corridor projects), and recommendations on how to improve access to finance for them in the economic corridor regions.	Study undertaken with resulting recommendations and action plan on how to improve access to finance, training, and business advice for women traders and entrepreneurs.	• Number/percentage of women-led businesses that start/ improve their businesses after receiving funding. • Number/percentage of women-led businesses that remain operational and expand after receiving financing. • Number/percentage of women-led businesses that receive funding to improve their performance, in terms of growth in revenues, job creation including women's employment, and business formalization and market access.
Access to finance for women-led SMEs in the economic corridor region: Develop and offer tailored financial products specifically for women-led small and medium-sized enterprises (SMEs) in the corridor region. These products should cater to the unique financial needs of women, such as smaller loan sizes, flexible repayment terms, lower interest or lower collateral requirements, and export credit loans for businesses involved in cross-border trade. **Women-led SME financing window:** Set up a dedicated financing window within existing financial institutions or through a project-linked fund specifically for women entrepreneurs. This window would provide financial products and services, technical assistance for loan applications, and business support to enhance the growth and sustainability of women traders and entrepreneurs.	• Number and Percentage of women-led SMEs receiving tailored financial products through the dedicated financing window compared to the total number of SMEs receiving finance. • Number of women participating in financial literacy programs specific to logistics and economic corridors sectors.	

Skills training and business advisory support

Access to business skill training and advisory support presents a significant challenge, exacerbating the constraints women face in the corridor sector. The industry comprises specialized roles, such as logistics analysts, supply chain managers, and customs specialists, yet there is a scarcity of training programs that addresses women's needs. This shortage hinders women's ability to acquire essential skills, qualifications, and certifications needed to operate specialized equipment and advance in the sector. Rapid technological advancements further necessitate continuous upskilling, yet women often lack access to programs that keep pace with these changes. Additionally, mentorship and advisory support are crucial for retention, enabling women to navigate sector complexities and achieve career goals. However, the workplace culture can be unsupportive; many women face reluctance from male colleagues to accommodate, train, and work collaboratively, creating an uncomfortable environment that may lead to higher attrition rates and limit women's advancement to leadership roles.

Market access and linkages

Market access is another challenge for women entrepreneurs due to inadequate transport infrastructure and poor digital access, especially in rural areas. This restricts their ability to reach broader markets and expand their businesses across the borders. Complex customs procedures and trade regulations, combined with insufficient information on tariffs and cross-border requirements, further hinder their participation in international trade. Additionally, women often face informal fees and delays at borders, reducing profitability. The lack of specialized infrastructure, such as cold storage and advanced logistics services, confines many women-led businesses to small local markets, limiting their growth potential.

The professional networking barriers are equally significant and perhaps more subtle in their impact. Women remain underrepresented in key industry bodies. This limited presence extends to crucial regulatory committees like the National Trade Facilitation Committees (as required under the WTO Trade Facilitation Agreement) and regional trade blocs (like COMESA), where important policy decisions are discussed and implemented. The lack of representation in these forums has far-reaching consequences. Women miss out on timely information about regulatory changes, struggle to build relationships with customs officials and port authorities, and have limited access to informal business networks that often facilitate trade operations. Table 7.10 highlights some interventions. Case Study 20 presents a project initiated in Bangladesh.

Table 7.10. Addressing Constraints to Women's Access to Business Support in the Economic Corridor Sector

Interventions	Corresponding Indicators	Outcome Indicators
Business skills training: Provide targeted training programs for local women traders and entrepreneurs based on the needs identified by the earlier mentioned assessment to enhance their business, financial, and regulatory skills covering topics such as business and financial management, trade and customs procedures, digital and e-commerce, and legal and business compliance. These programs can also include tailored business advisory support on overcoming trade barriers, scaling up, or accessing financing.	• Number of women receiving and completing trainings and business advisory support.	• Number/percentage of women-led businesses that start or improve their businesses after receiving funding. • Number/percentage of women-led businesses that remain operational and expand after receiving financing. • Number/percentage of women-led businesses that receive funding to improve their performance, in terms of growth in revenues, job creation including women's employment, and business formalization and market access and business advisory support.
Access to trade information: Establish accessible platforms (for example, mobile apps, information kiosks) along the corridor that provide traders with real-time trade information, market prices, and regulatory updates, reducing information asymmetry and enhancing their decision-making in cross-border trade.	• Number of trade information platforms established. • Number or percentage of female traders using the platforms (for example, mobile apps, information kiosks) to access real-time trade information, market prices, and regulatory updates.	

Interventions	Corresponding Indicators	Outcome Indicators
Consultations between the government and the private sector, especially women-led businesses. The consultation mechanism should be accompanied by an efficient communication strategy to ensure that the trader and all customs brokers are aware of any proposals for laws and regulations or suggested amendments to these.	• Number and percentage of women traders engaged in all regular consultations and consulted on all critical matters pertaining to trade efficiency, reducing transport and logistics bottlenecks, and enhancing cross-border trade.	
Networking platforms: Develop forums for women entrepreneurs in corridor and logistics sector to connect, share experiences, and collaborate through regular events and conferences.	• Number/percentage of women entrepreneurs participating in networking platforms focused on corridor and logistics sector.	

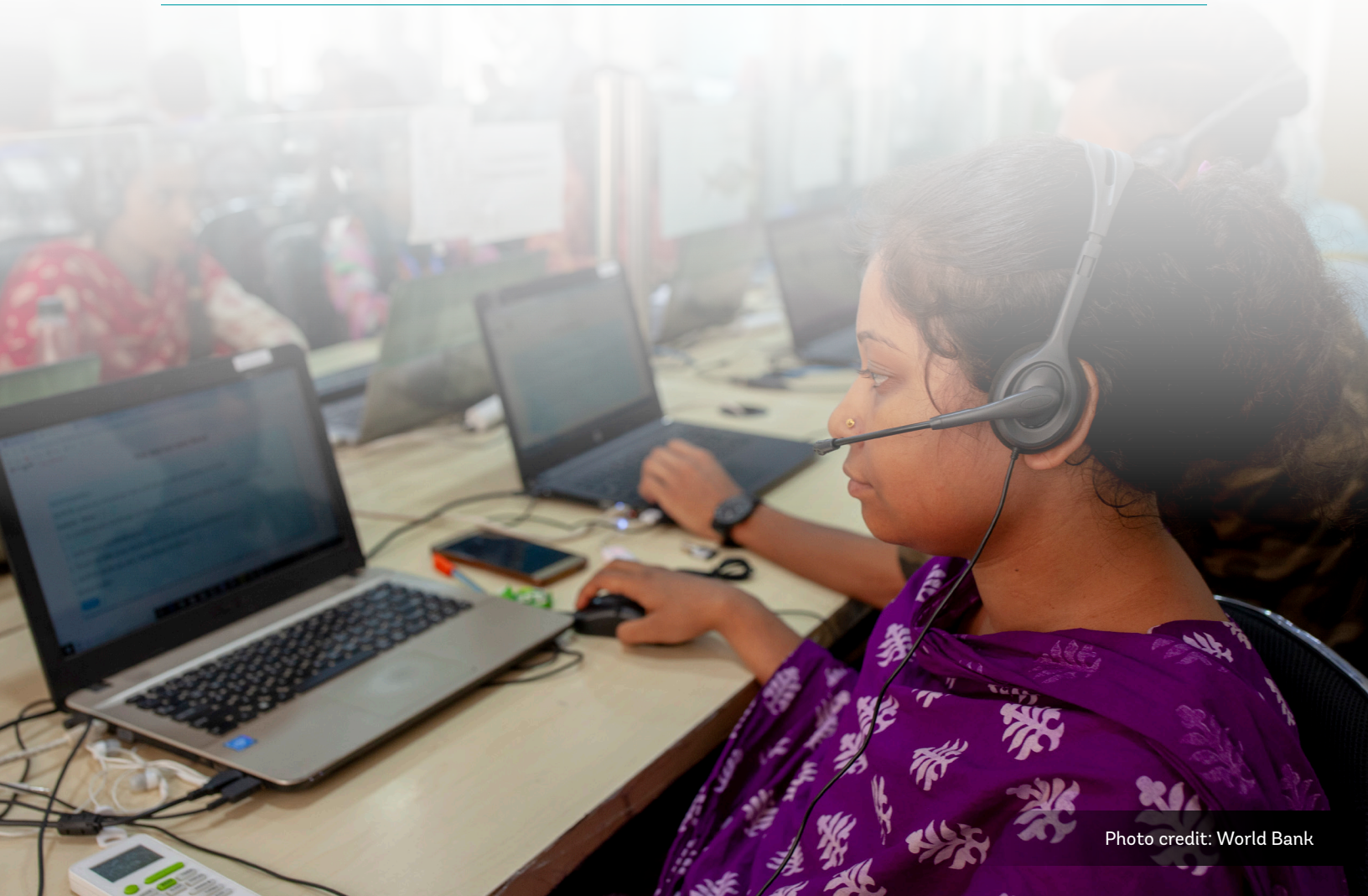


Photo credit: World Bank

Case Study 20

Supporting Women Entrepreneurs in Bangladesh

The Challenge

Women workers make up more than one-half of Bangladesh's overall labor force. The garment trade, for example, relies heavily on women's work, and as in many other jobs women are heavily concentrated in the lower value, lower-compensated end of the supply chain. This is particularly evident in border regions, where women are the primary laborers in construction materials, agriculture, and light manufacturing.

Women face challenges when they trade across borders. They often encounter harassment, unwarranted taxes, and poor working conditions. Many are compelled to make informal payments or risk having their merchandise seized. Poor infrastructure at border stations, slow and inadequate transport logistics, and complex and time-consuming red tape push women traders toward informal channels, where the barriers they face are even higher. All of this is made harder by the fact that only 20 percent of women have access to credit, compared to 40 percent of men, and women-owned businesses represent only 10 percent of all enterprises.

The digital divide is yet another obstacle; women have limited access to the technology essential for modern trade. Also, a lack of data on women traders and their needs means there is little information on which to design policies.

The Intervention

The World Bank's Bangladesh Regional Connectivity Project 1 (BRCP1)[44] takes a comprehensive look at improving regional trade. It also addresses disparities between women and men in trade by removing the bottlenecks facing women. The project helps women develop new skills that include training them to connect to global value chains, building new infrastructure at trading points, t improving temperature-regulated transport and storage to reduce crop spoilage, and simplifying trade rules. The project's beneficiaries include traders, producers, and transport providers.

Networking is another important part of the project. The Women Entrepreneurs Networking Platform (WENP), developed by the Ministry of Commerce (Government of India), serves as both a marketplace and a networking hub, a place for women entrepreneurs to both showcase their products and get access to trade information. This digital platform is designed to be user-friendly and lets entrepreneurs connect across industries. Its messaging system makes it easy to communicate with domestic and international partners.

[44] Bangladesh Regional Connectivity Project 1 (P154580).

Challenges and Successes

The project has achieved notable successes in its pilot training programs in cut flower production and agricultural processing. It is launching a third program to train women in information and communications technology. WENP was established through a collaborative two-year development initiative. With support from industry associations, private sector partners, and think tanks, the program led comprehensive data collection efforts covering 25,000 women entrepreneurs between 2021 and 2023.

Lessons Learned

Integrating women in trade: The project shows that addressing disparities between women and men in trade requires a comprehensive approach. The WENP, for example, grew out of a two-year process and was supported by industry associations, the private sector, and think tanks.

Sector-specific training programs: The pilot training programs are a successful model for boosting women's participation in trade. Targeting specific industries, like flowers, has offered women, especially those who were stuck in low-value work, a chance at upward mobility.

Collaboration across agencies: The project's success in coordinating across multiple agencies demonstrates the importance of institutional collaboration in addressing the constraints women face. This approach proves valuable in addressing complex challenges such as infrastructure, procedural barriers, and limited access to resources.

Conclusion

The Bangladesh Regional Connectivity Project 1 presents potential paths to address barriers to women's economic participation. The project's remarkable current network of 32,000 female entrepreneurs illustrates how well-designed tools can integrate women into formal trade networks. The project provides a replicable model for moving women into better opportunities for trade. This case study from Bangladesh offers valuable insights for similar plans to change dynamics in trade to create pathways for women's economic empowerment.[45]

[45] The team is grateful to Ms. Nusrat Nahid Babi and Ms. Amali Rajapaksa (World Bank's Senior Transport Specialists) for their review of the case.

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