

Making Transport Work for Women and Men: Challenges and Opportunities

In the Middle East and North Africa

Lessons from Case Studies



September 2011

World Bank Report

Middle East and North Africa Region, Transport and
Energy Unit

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Abbreviations and Acronyms

ADB	Asian Development Bank
BRT	Bus Rapid Transit
DH	Moroccan <i>Dirham</i>
FGD	Focus Group Discussion
GMS	Greater Mekong Subregion
IFAD	International Fund for Agricultural Development
IFRTD	International Forum for Rural Transport Development
ILO	International Labor Office
IMT	Intermediate Mode of Transport
JICA	Japan International Cooperation Agency
LMI	Low and Middle Income Countries
MDG	Millennium Development Goal
MENA	Middle East and North Africa
NIS	Israeli <i>Sheqalim</i>
SEACAP	South East Asian Community Access Program
UNDP	United Nations Development Program
USD	U.S. Dollar
YR	Yemeni <i>Rial</i>

Acknowledgements

Grants from the World Bank Gender Action Plan Trust Fund supported all four studies, the regional report and dissemination of findings. The regional report was prepared by Mari Clarke, senior gender consultant to the MENA Transport and Energy Unit, under the guidance of Jean Charles Crochet, Senior Transport Economist, Middle East and North Africa Region's Transport and Energy Unit and Julie Babinard, Environmental and Social Development Specialist, Transport, Water, Information and Communication Technologies Department, Sustainable Development Vice Presidency.

The study in Morocco was conducted by a team of researchers led by Mohammed El Aouad, Axetudes Consulting, under the guidance of Mr. Crochet and Ms. Babinard. The study in rural Yemen was conducted by the Yemeni Center for Social Studies and Labor research under the leadership of Mr. Khalil Manour Al-Shargabi, and the guidance of Ms. Lamis Aljounaidi, Economist, Middle East and North Africa Region's Transport and Energy Unit, and Mr. Crochet. The study in Urban Yemen was conducted by the Yemeni Center for Social Studies and Labor Research under the leadership of Mr. Mohammed Sallam Noaman and the guidance of Ms. Lamis Aljounaidi and Mr. Crochet. The study in the West Bank was conducted by Riyada Consulting and Training Center, under the Leadership of Mrs. Shuaa Marrar and the guidance of Ms. Lamis Aljounaidi and Mr. Ibrahim Dajani, Senior Operations Officer, Middle East and North Africa Region's Transport and Energy Unit. The transport authorities and community men and women interviewed in Morocco, West Bank and Yemen generously shared their time and experiences with the researchers.

The final draft benefited from thoughtful, in depth comments from Julie Babinard and Jean-Charles Crochet.

Executive Summary

1. Introduction

Expansion of transport networks can facilitate many positive impacts on women's and men's lives. However, inequitable distribution of benefits from improved transport exacerbates gender and income disparities. Transport planning in MENA and other regions does not routinely address gender issues and sex disaggregated data is limited as is gender and transport expertise.

Gender and Transport in MENA: There is wide socio-cultural and other diversity within MENA. Overall, the region has made tremendous strides in transport and human development. However, MENA female labor force participation is significantly lower than other regions, youth unemployment, particularly female's, is very high, and entrepreneurship opportunities for females are limited. Laws in some countries constrain women's travel and work outside the home. There are serious gaps between rural and urban infrastructure; congestion, pollution, and traffic accidents are increasing with rapid urbanization. Concerns about gender-based violence, harassment, and crime are widespread.

Case Study objectives and Methodology: Four case studies conducted in Casablanca, Morocco, Sana'a and rural Yemen, and the northern part of the West Bank in Palestine aim to help fill the gender data gap by increasing understanding of the ways in which transport services are facilitating or constraining women's access to resources, markets, training, information, and employment. The studies also identify priority areas for public action to improve women's mobility and enhance their access to economic opportunities and empowerment. The studies use similar methodologies with stratified sampling of respondents for a structured questionnaire, along with focus groups and travel diaries.

2. Key Findings for Gender and Rural Transport in Yemen:

Travel Patterns: Poor infrastructure and limited transport services constrain male and female mobility but women face additional socio-cultural constraints. Women can travel alone by foot in the village but they can only travel in covered motorized vehicles with a male family member. The further a women travels the greater her obligation to travel with an escort. Most of women's travel is by foot for domestic and farming tasks within the area of the village. Men travel farther making much greater use of motorized transport to reach markets to sell produce and buy food and to engage in jobs in urban centers.

Availability, Reliability, Quality: The presence and quality of a road determine transport options for women and men. New roads (2-3 years) are best served by passenger cars, the mode of transport considered most appropriate for women. The presence of a road decreases travel time by 30 percent. Villages with no road are only accessible by truck, donkey or by foot. Most women feel roads do not meet their needs while most men find them adequate.

Affordability: Motorized transport costs more per trip for women because they need to use more expensive modes of transport. Men spend three times as much as women on transport because they control the family finances and travel more.

Socio-economic Impacts: Transport increases male access to employment, markets, and education. Female benefits are largely indirect in the form of reduced transport burdens and increased time for education and productive activities when wood, water, and flour are purchased because incomes are higher and goods cost less along an old road (in place more than 15 years) with established transport services. Lack of appropriate transport severely limits female access to education and health care.. Cases from Morocco, Afghanistan, and Indonesia show similar constraints. Bangladesh started with severe mobility constraints for women but reduced this over time.

3. Key Findings for Gender and Urban Transport in Casablanca, Sana'a , and the West Bank

3.1 Women's and Men's Travel Patterns: Socio-cultural restrictions constrain women's but not men's travel in all three urban areas. In Sana'a and Casablanca, socioeconomic status, and central or peripheral location in urban

areas also affect travel patterns and choice of mode for women and men. In the West Bank, checkpoints constrain men's and women's travel and transport mode choice from villages and towns to cities and within urban centers.

3.2 Mode and Purpose of Transport: Women and men walk most in Casablanca and least in the West Bank. Women walk more than men in Sana'a. Women use public transport extensively in Casablanca and West Bank and much less in Sana'a. Casablanca's households own and use the most private cars and West Bank's own the least.: In Casablanca, male and female differences in travel purpose for social, education, health work and markets are small compared to Sana'a and West Bank where most men's travel focuses on work and markets and most women's travel focuses more on education and health care for children and social activities than work and markets.

3.3 Availability and Reliability and Quality: In all three areas, men and women complain about irregularity of public transport. In Casablanca and Sana, services cannot meet growing demands; in the West Bank, check points impede service. Old Sana'a has adequate transport but the urban periphery is poorly served. Passengers in Casablanca and West Bank are most concerned about the dilapidated, dirty state of public transport vehicles and terminals; in Sana'a the greatest concern is poor service.

3.4 Affordability: Transport costs are affordable for men and women with good incomes but not for the poor in the periphery of Casablanca and Sana'a, or the refugee camps of the West Bank. Women often pay higher fares per trip because they need to change buses and pay several fares. Their ability to negotiate fares with drivers is limited by socio-cultural norms. Drivers often charge above standard rates, particularly where roads are poor.

3.5 Road Safety and Security: In all three areas, the pedestrian environment is unsafe due to lack of sidewalks and pedestrian crossings. The urban periphery is particularly dangerous. Poor vehicle maintenance, and unsafe driver behavior contributes to accidents in all three areas. Bus overloading is a problem in Sana's and West Bank. Security is a serious mobility constraint for women in all three areas due to verbal and physical harassment and theft in public spaces. In the West Bank, body searches at the check points pose additional risks for women.

3.6 Socio-economic impacts: In Sana'a and Casablanca there is a direct correlation between access to transport infrastructure and services and women's economic empowerment. In the West Bank, checkpoints and economic impacts of occupation disempower men as well as women. Many educated women have given up aspirations for employment. In the peripheral areas of Sana'a and Casablanca, lack of transport services limited opportunities, particularly for women. Cases in urban Oman, Bangladesh, Indonesia, and Turkmenistan, reveal similar constraints and some approaches to address them.

4. Lessons Learned from the MENA and Other Country Studies

- **MENA shares many basic gender and transport trends and challenges with other developing countries with experience to offer effective solutions to problems for adaptation in MENA.** For example, the Bangladesh Rural Roads and Markets project establishment of women's market areas and employment of poor women in road maintenance could be adapted to MENA rural areas.
- **It is important to look beyond stereotypes about socio-cultural constraints on women's mobility.** Although social-cultural norms restrict women's mobility in all four MENA cases and in most of the other cases described, the extent and ways in which women's opportunities are limited varies significantly among the four cases and even within the Casablanca and Sana'a contexts. The findings from the Casablanca case and the Bangladesh cases suggest that access to transport can facilitate access to education and economic opportunities which can contribute to greater mobility, autonomy, and empowerment even in contexts with strong socio-cultural constraints on women's mobility. But often specific measures are needed to jump start economic opportunities for poor women with limited mobility.
- **The findings in Sana'a and Casablanca underscore the importance of looking at differences in travel patterns and constraints among women (and among men) based on socio-economic status, age, location**

and other differences among women and among men. Poor women and men living in the urban periphery of both cities have limited transport access and poor security which constrain economic and educational opportunities, particularly for females. Wealthier residents near the wealthier city center enjoy better transport, higher paying jobs, and more education.

- ***It is important to look at the links between rural and urban areas as well as the differences between them.*** The Sana'a, West Bank, and Rural Yemen cases all described important rural-urban transport and economic linkages. The West Bank case noted the challenge of taking taxis from the villages to connect with the urban bus system on the other side of a check point as well as the high cost of transport between the villages and the city. The Sana'a case study characterized the peripheral zone as "a junction point between rural and urban ways of life." Given the importance of the linkages, in the longer term, integrated transport systems, will be needed to facilitate access of poor male and female rural and urban periphery residents to urban markets, services, and economic opportunities.
- ***Fragile political contexts and conflict-affected settings, such as the West Bank, present special mobility and access challenges to males and females that require targeted analysis.*** Economic realities may push in the direction of greater equality for women. But socio-cultural traditions may pull in the opposite direction, as is the case in Iraq where war widows struggle to survive in increasingly restricted space dominated by conservative values. Post-conflict or political transitions such as those occurring in a number of MENA countries can offer opportunities for positive change gender relations and women's economic empowerment

5. The Way Forward in MENA: Suggested Actions and Processes to Address the Challenges

5.1 Suggestions for Actions to Increase Access and Mobility for Women and Men

- ***Increasing Availability, Reliability, and Quality of Transport.*** When transport services are available, on schedule, in convenient locations, with quality service, women and girls in cities are more likely to travel to access education, employment, and markets. And women in rural areas have better access to labor saving products and services such as butane gas cylinders, and water as well as health care, education, and entrepreneurial opportunities. Measures to achieve this, which need to be adapted to specific MENA contexts, include: upgrading, and maintaining rural roads and tracks, peri-urban streets and sidewalks to facilitate women's travel by foot or walking to public transport stops and to reduce the cost of travel and goods for people in the urban periphery and rural areas; expanding coverage of transport services appropriate for females.
- ***Increasing Affordability:*** Paying transport fares is a major challenge for poor rural and urban women, particularly when cultural restrictions limit their travel to more costly modes of transport and they have no individual source of income. Measures to address this can include: regulating and monitoring fares charged by transport operators, fare integration between different modes of transport, reduced off-peak fares and other measures to reduce the cost of women's and men's trip chaining, particularly from the urban periphery to the city center and between rural and urban areas.
- ***Promoting Traffic Safety:*** Traffic accident rates are high and growing in the MENA region. Because both rural and urban women rely heavily on walking, it is important to ensure that the pedestrian environment is safe. Measures to promote safety can include: unimpeded sidewalks, pedestrian crossings and islands, overpasses, wide shoulders on rural roads to facilitate walking, stop lights, traffic signs, traffic bumps, and enforcement of traffic regulations, passenger limits, and safety measures on public transport.
- ***Improving Personal Security:*** Risks of sexual harassment, gender-based violence and crime are major constraints on urban female mobility, education, and economic opportunities, particularly in the urban periphery. Measures to address these risks can include: employing security officers in terminals, on platforms, on buses and trains with strengthened security for hours when most women travel; hiring female as well as male security officers when possible; providing adequate lighting on sidewalks, at bus stops, on platforms, and in terminals; and introducing women-only buses train cars, and taxis where appropriate.

- **Expanding Positive Socio-economic Impacts:** Special measures are often needed to spark economic opportunities for poor women with limited mobility. Effective measures can include: engaging teams of poor rural or peri-urban women in road maintenance and bioengineering adapted from approaches such as that of the Bangladesh Rural Roads and Markets Project; fostering female entrepreneurship in poor rural and peri-urban areas; and using appropriate non-transport solutions, such as piped potable water and constructing nearby markets and health centers, to address gender-related transport problems.

5.2 Integrating Gender into Transport Policies and Programs

- **Gender-informed transport policies, strategies, and regulations:** Inform transport policies, strategies, and regulations through social and gender analysis and participatory planning that includes both female and male beneficiaries; and ensure that adequate human and financial resources are allocated to address gender and other social dimensions of rural transport.
- **Routine analysis of gender and transport issues during transport planning and implementation:** Social and gender analysis can assist in determining affordability and access of transport for different populations. Understanding how travel patterns differ by gender requires disaggregated data on men's and women's travel modes, schedules, expenditures, trip chaining, satisfaction, constraints, and unmet demands.
- **Gender-inclusive consultation:** Mechanisms are needed to increase women's participation, such as focus group discussions with women by women, scheduling town meetings when women can attend, providing project information in locations and types of media that women can access, using focus group discussion with women led by women.
- **Awareness-raising and capacity building for transport agencies and service operators:** Building gender awareness within the organizational structures of transport related ministries as well as private sector transport businesses, transport unions, etc. is essential to create capacity to address gender issues in transport and to build a constituency to ensure that gender issues are systematically addressed. This can be done by: working with intermediary organizations; creating multi-sectoral transport planning committees; adding social and gender experts to transport staff, and gender and transport training.
- **Public awareness-raising about women's mobility needs with respect for local culture.** This is an essential first step to gain the support needed to expand women's and girls' mobility and access to health services, education and economic opportunities. Working with the media, mosques, local leaders, girls' and boys' schools, and women's organizations, networks, and a government willing to partner with them, it is possible to mobilize local support for transport projects and road maintenance, and increase women's participation in decision making.
- **Equitable compensation for resettlement:** displacement and resettlement due to infrastructure construction generally have more negative impacts on women. Too often, compensation for lost property is given to male heads of households. Inclusive participatory approaches, issuing deeds to compensation property in both the wife's and the husband's names, and depositing the wife's share of cash compensation in her own bank account can increase the economic security of displaced women and their children.
- **Gender-informed monitoring and evaluation.** It is important to monitor project implementation to guide mid-course corrections, inform future projects, and ensure that important gender-related activities are implemented and the impacts are measured through gender informed monitoring and evaluation. Baseline data can include: transport constraints of women, men, girls, and boys; women's and men's unsatisfied transport needs; how services can be modified to meet those needs. Evaluations could examine changes in women's and men's travel patterns and transport modes as a result of a project, and specific project impacts on women, men, girls, and boys such as increases in income, education, access to health services, and greater voice in community household and decision-making

1. Introduction:

Expansion of transport networks can facilitate many positive impacts on women's and men's lives by increasing access to markets for labor and goods, reducing the cost of taking goods to market, creating access to health and other services, expanding educational opportunities, and facilitating civic participation. However, inequitable distribution of benefits from improved transport exacerbates existing gender and income disparities. A substantial body of evidence makes it clear that transport is not "gender neutral" in any context because men's and women's socio-culturally defined roles and responsibilities lead to different patterns of transport access, needs, and use. Unfortunately, transport planning does not routinely address these differences and sex-disaggregated data on transport needs and patterns is very limited in the Middle East and North Africa (MENA) and other regions, as is expertise on gender and transport issues (Babinard 2011, Fernando and Porter 2002; Graeco 2002; IFRTD 2004, 2010a,b; Peters 2002, 2011; SSATP 2011, Turner 2003, World Bank 2010a).

Gender and Transport in MENA

It is important to acknowledge the wide socio-economic diversity within the MENA region including the socio-cultural constraints on female mobility. Yemen and Djibouti, the poorest countries in the region have lower indicators of human development that sharply contrast with Qatar and Kuwait, which are among the wealthiest countries in the world. Many countries in the region have been affected by conflict. For West Bank and Gaza, this has continued for decades affecting mobility of both men and women. There are also significant mobility and autonomy differences within countries based on socio-economic status and other factors (World Bank 2010c). For example, in Casablanca, professional women with independent incomes have more autonomy while poor women have little or none (World Bank 2010d).

Overall, MENA has made tremendous strides in human development and transport over the past two decades. MENA's maternal mortality rate is less than half of the average for Low and Middle Income Countries (LMI), and female life expectancy is nearly four years longer than the LMI average. Primary school enrollment rates for girls in MENA are well above the LMI average and close to the world average, reflecting the substantial investments in children's health and education in recent decades by governments, communities, and families. With the exception of Yemen and Djibouti, most countries have extensive road networks with high capacity in some areas (World Bank 2011b).

Box 1: Women's and Men's Different Transport Needs and Travel Patterns.

Around the world, gender and transport issues are grounded in broader gender inequalities¹ in access to land, labor, financial, and product markets, the gendered division of labor, and associated time poverty (Graeco 2002; IFRTD 2010b; Peters 2002; van Riet 2008). Men and women play multiple roles (productive, reproductive, and community management), but men generally focus on a single productive role and play other roles sequentially. Most women need to juggle all their roles at the same time and balance competing claims on limited time. Women's time and income poverty often reinforce each other, with negative impacts for women, their families, and communities (Blackden 2003; Blackden and Woden 2006; Quisumbing 2003). Given their more limited control over resources, women generally have less access to private means of transport, leading them to take public transport if they can afford the fares. In some instances, they walk carrying heavy loads on their heads or backs. In rural areas, limited access to transport usually takes a heavier toll on women and girls than on males because females are responsible for nearly all the domestic tasks such as processing food, providing firewood and water, and caring for the young, elderly, and sick (IFRTD 2010b; Peters 2003, 2011).

However, female participation in the labor force and in civic and political life is significantly lower throughout MENA than in other parts of the world. The region is facing a serious unemployment challenge. A large share of young people are unemployed or underemployed, particularly young women at 40 percent, compared with young men at over 20 percent. This has serious implications in a region where one third of the population is 15-29 in most countries. Female students tend to cluster in subjects considered more appropriate for women but less in demand in the labor market. Female entrepreneurship opportunities are very limited as well (World Bank 2011b).

In addition, average indicator data masks significant access differences between wealthier and poorer women even in countries that have shown significant progress in reducing maternal mortality. For example, there are sharper differences in access to skilled birth attendants between higher and lower income women in Morocco, than in lower income Yemen. Low quality infrastructure and lack of public transport in rural and urban periphery areas make access to routine and emergency health care difficult for the poor (Oomman et. al. 2003). There are serious gaps between rural and urban infrastructure overall and traffic congestion is a serious and growing problem in most urban areas in MENA (World Bank 2010b)

Across the region, women and men of all ages have expressed deep concerns about verbal and physical harassment of women while traveling in public or working in mixed-sex offices. A range of countries, including the oil rich countries and low-income countries such as Yemen, still retain many laws that limit female mobility and autonomy. Applying for a passport, traveling outside of the country, and working outside of the home can all require male permission. A widow's or divorced woman's legal recognition as head of household can be very limited or non-existent in some countries (World Bank 2011b).

MENA Case Studies

The four case studies on gender and transport, conducted in Casablanca, Morocco, Sana'a and rural Yemen, and Nablus, Jenin, and Tulkarem in the northern part of the West Bank, help fill the gap in knowledge about differences in male and female mobility, access to, and uses of transport, and the extent to which transport systems respond to those needs in MENA. Yemen and West Bank were selected because they represent two special cases. Yemen is the poorest and least urbanized country in the region; the terrain is challenging; and strong socio-cultural norms constrain female mobility. West Bank norms about women's movement are not as strong as those of other MENA countries. Instead, negative economic growth and political restrictions on mobility created by the wall and checkpoints present a different set of barriers for women's and men's mobility. The case study in Casablanca was one of several studies conducted to inform the preparation of a World Bank Urban Transport Sector Development Policy Loan to Morocco.

Objectives of the Case Studies

The aim of the four case studies was to increase understanding of how transport services are facilitating or constraining women's access to resources, markets, training, information, and employment. The studies also identified priority areas for public action to improve women's mobility and enhance their access to economic opportunities and empowerment.

Methodology for the Case Studies

The four studies used similar methodologies for research conducted between September 2008 and September 2009 in Yemen and West Bank and between April 27 and May 19, 2009 in Morocco.

Stratified sampling was used to capture geographic, social, economic, and political variation within cities and countries in the selection of study sites and to ensure representation of women as well as men (16 years of age and older) in the selection of respondents.

Box 2: Sample Selection

In West bank, multiple locations in the northern regions were selected to represent the different types of settlements (urban, rural, and refugee camps) as well as mobility challenges faced (location vis-a-vis the wall and checkpoints, population density, and access to public transportation). The sample included 385 women and men (not sex-disaggregated) from 27 communities in three governorates.

In Sana'a Yemen, nine neighborhoods out of 90 were selected to represent different types of urbanization (historical area, planned city center, and informal urban periphery). The sample included 360 women and 180 men, randomly selected among employees, traders, housewives, and unemployed people.

In Rural Yemen, the selection took into account regional diversity in social norms, economic resources, and topography as well as the availability of roads (old, new, and no roads). The sample included 180 women and 180 men from six villages in six different districts.

In Casablanca Morocco, areas were selected to represent the center (historical medina), the transition zone, and the newly urbanized or urbanizing areas at the periphery. The sample included 600 women and 200 men from eight prefecture districts, reflecting socio-economic, demographic, and housing differences.

The studies in Yemen and West Bank complemented the quantitative data from the structured questionnaire with qualitative data gathered through focus group discussions to provide more in depth insights about transport uses, needs, challenges, restrictions, suggestions for improving women's access to transport. In Casablanca, researchers conducted semi-structured interviews with urban transport operators, officials of associations, and driver union leaders, transport professionals, elected officials responsible for transport at the community and central level, and civil society leaders.¹ In all three urban studies, respondents completed a transport log for the previous two days of travel. The rural study used rapid rural appraisal techniques such as mapping.

Organization of the Regional Report

This Regional Report summarizes the findings and recommendations of the four case studies, compares them with studies and good practice approaches elsewhere in MENA and other regions, and proposes actions and approaches to increase mobility and economic opportunities for poor women as well as men in the region.

The primary audience for this report includes technical experts and decision makers in public transport agencies and municipal transport authorities in MENA as well as World Bank transport specialists and social development and gender specialists working on transport policy and projects. It is also intended for staff of nongovernmental organizations concerned with gender and transport who can help raise the gender awareness of transport decision makers. Finally, the report offers researchers a contribution to the body of knowledge about gender issues in transport in MENA.

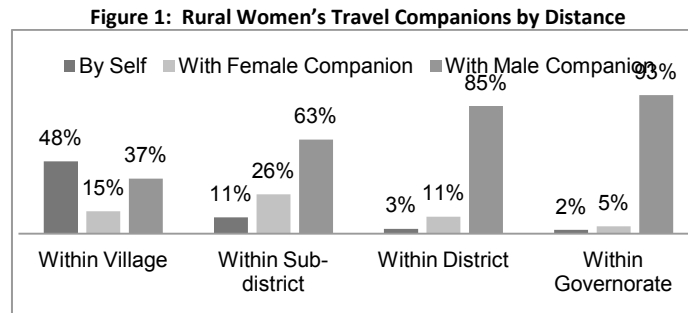
The introduction briefly highlights gender and transport issues in the MENA and describes the objectives and methodology for the four case studies. The second section examines the Yemen rural case study findings on women's and men's travel patterns, availability, reliability, and quality of transport, affordability, and the socioeconomic impacts of transport access. It also presents related findings in Morocco, Afghanistan, Bangladesh, and Indonesia. The Third section compares the findings of the

studies in Casablanca, Sana’a, and West Bank, taking into account the same factors and findings in Dhaka, Djakarta, Ashgabat Turkmenistan and Liaoning China. The fourth section presents lessons learned, highlighting the broader implications of the study findings. The final section proposes actions and approaches to address gender and transport challenges of availability, affordability, safety, security, and socio-economic impacts in urban, peri-urban, and rural settings in MENA, informed by the four case studies and good practice approaches in other countries.

2. Rural Transport Challenges and Opportunities: Yemen Study Findings

2.1. Rural Women’s and Men’s Travel Patterns in Yemen

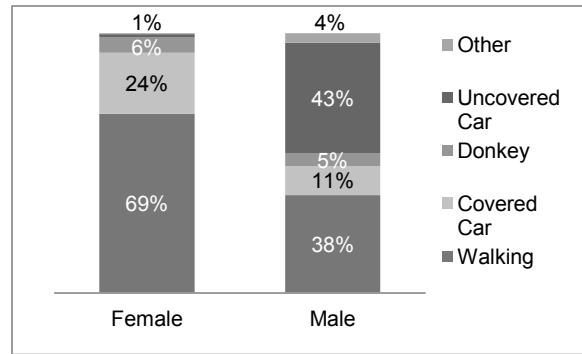
2.1.1. Poor infrastructure and limited transport services constrain male and female mobility but women face additional socio-cultural constraints. Females are not allowed to ride bicycles or motorbikes and their use of donkeys is limited to transporting loads. Females must travel in covered motorized vehicles, accompanied by a *muhram*, a male relative.ⁱⁱ Travel by foot within the village is socially accepted for women. However, the further a women travels, the greater the obligation to travel with a *muhram* (shown in figure 1)..



Source: World Bank 2010c p. 93

Most men do not think that women should be allowed to use public transport. Those who approve live in villages on old roads with more established public transport services. Many women feel that females should be allowed to travel on public transport under appropriate conditions, such as travelling in covered vehicles accompanied by a *muhram*. Free from these socio-cultural restrictions, men travel much farther than women, making greater use of all types of motorized transport (shown in figure 2).

Figure 2: Modes of Transport Used in Rural Yemen, By Gender

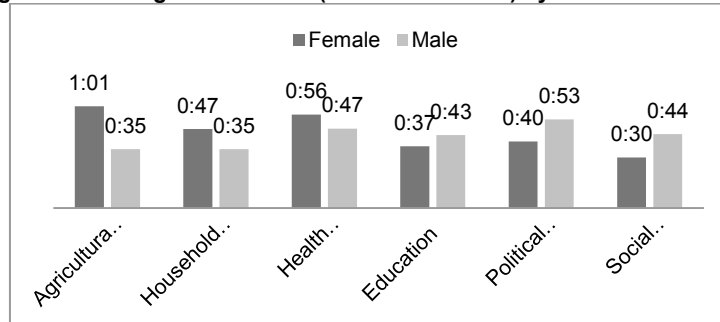


Source: World Bank 2010c. World Bank. p. 83.

2.1.2. Most of rural women’s travel is by foot for domestic and farming tasks within the area of the village. Women spend 40 percent more time traveling to agriculture-related activities and 25 percent more time travelling for household chores than men (see figure 3). Women transport heavy loads of fuel wood, gas cylinders, water, grains, and fertilizer on their heads or on donkeys. In some villages, women transport produce from their fields to the road where their husbands or kinsmen load them in pick-up trucks and transport them to markets for sale. Where village infrastructure is poor, transporters unload goods on the main road and women transport them to the village on their heads or on a donkey. Women are allowed to walk within the village or to neighboring villages to visit family and friends or participate in social events. More rarely women travel in cars for longer trips to access health services or shop for clothing, or wedding accessories. Girls attend village schools in walking distance from their homes but few girls pursue higher education due to the high cost or the lack of socially acceptable transport.

2.1.3. Men travel within and beyond the village to agricultural work, markets, employment, and higher education. Although men also walk to their fields and use donkeys to carry loads, in villages with roads, they also travel to market daily or to sub-district centers for employment. A few operate modes of transport. Men travel to the nearest weekly market to sell produce and shop for household needs. Some males work or study outside the village and travel back on weekends in passenger cars or pick-up trucks. Some younger men walk or use public transport to go to youth centers for cultural and sports activities. In contrast to girls, boys are allowed to travel outside the village to study. Males spend 33 percent more time attending social events, 25 percent more time travelling to electoral centers, and 15 percent more time going to schools than females.

Figure3 – Average Travel Time (in hours:minutes) by Gender and Activity



Source: World Bank 2010c. p. 86

2.2 Availability, Reliability, and Quality

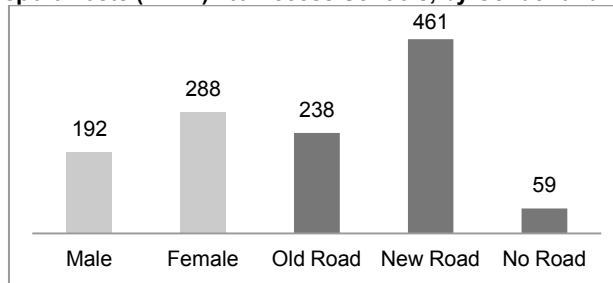
The presence and quality of a road determine transport options and waiting time for women and men.

New roads (2-5 years old) are best served by passenger cars, the mode of transport preferred by and for women. Villages with old roads (in place more than 15 years) rely more on trucks and buses. Waiting times for transport decreases with the number of years an asphalt road has been in place and is significantly higher for villages with no road. Villages with no roads are only accessible by pick-up trucks, donkeys, or by foot, leaving women no option but to walk or, very rarely, to ride in the cab of a truck accompanied by a *muhram*. Some roads are impassible during the rainy season and tribal conflict prevents the use and maintenance of certain roads. The presence of a road decreases travel time by 30 percent. Given the limited options of transport available and socially appropriate for their travel, a majority of the women (56 percent) felt that available transport failed to meet to their needs, while only one fourth of the men found it inadequate. Men and women in villages with new roads gave a higher assessment of road quality than did those with old roads.

2.3 Affordability

Motorized transport costs per trip are significantly higher for women and girls than for men but females spend less than men per month because they travel less. For example, females pay 50 percent more than males to travel to schools because they need to travel in more expensive, covered modes of transport with a *muhram* (shown in figure4). Males can simply jump on the back of a pick-up truck

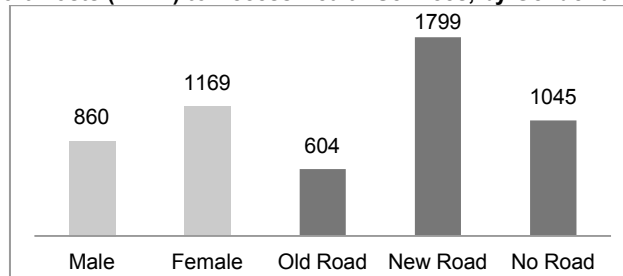
Figure 4 –Transport Costs (in YR)ⁱⁱⁱ to Access Schools, by Gender and Road Availability



Source: World Bank 2010c. p. 90

Similarly, females pay 35 percent more than males to access health services (shown in figure 5). As a result, 70 percent of the women find transport costs too high while most men find them acceptable; 80 percent of the men but only 37 percent of the women are willing to pay for transport costs.

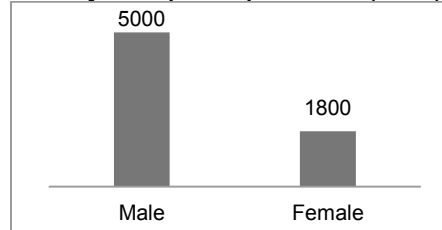
Figure 5 –Transport Costs (in YR) to Access Health Services, by Gender and Road Availability



Source: World Bank 2010c. p. 91

Transport tariffs also vary according to activity, type of goods transported, availability of village infrastructure, and services. Tariffs are lowest for villages with an old road with a well-established bus service or other collective transport and highest in villages with a new road. Men control family finances which enables them to give priority to their own travel needs and spend nearly three times as much on motorized travel per month as women who primarily travel by foot (shown in figure 6).

Figure 6 – Monthly Transport Expenditures (in YR), by Gender

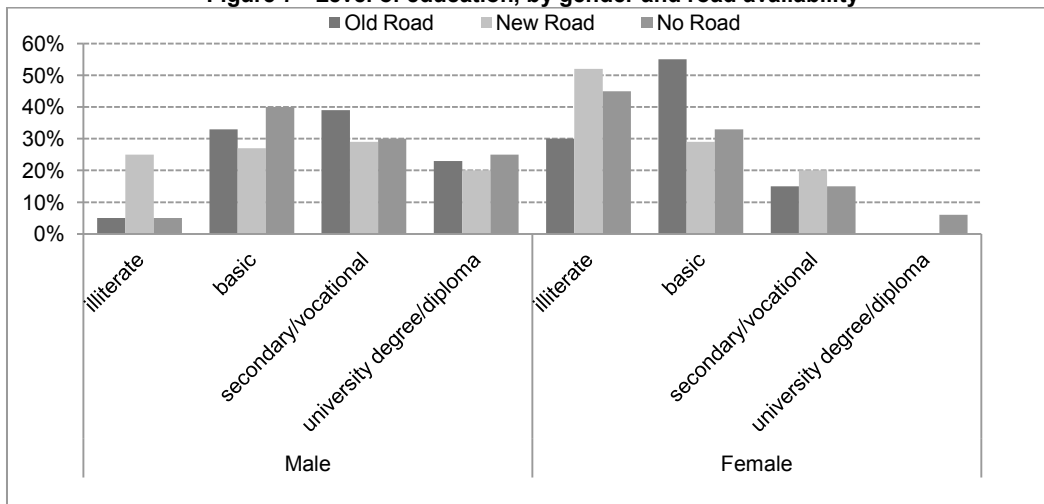


Source: World Bank 2010c. p. 91

2.4 Socio-Economic Impacts of Access to Transport

Women gain positive indirect benefits from improved transport including reduced domestic burdens and increased literacy. While transport increases males access to employment, markets and education, the impact of improved transport infrastructure and services on women is as limited as their mobility and mainly indirect. Villages with roads access goods at lower cost. Households in the villages that have had a road for a long period have higher incomes than those with more recent or no roads. They often use their higher income to buy water, firewood, and milled grain as well as cell phones, reducing the burden of women and girls, freeing time for education or productive activities, and offering access to information from the world beyond the village. In some villages women have started weaving and handicrafts for sale. Some women have opened stores for women’s and children’s goods, relying on male relatives to purchase their merchandise in regional markets. Villages with roads have higher female literacy rates and greater access to health care for mothers and children (shown in figure 7).

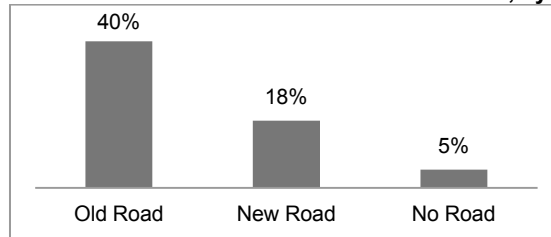
Figure 7 - Level of education, by gender and road availability



Source: World Bank 2010c p.14.

Lack of transport severely limits female access to education and health care. One third of the women interviewed said that the lack of transport facilities deprives them of access to education. Nearly one third deliver their babies at home without skilled medical assistance due to the lack of transport facilities. Only five percent of the women in villages with no road have access to maternal and child health care; 18 percent living near a new road have access, and 40 percent living near an old road have access (shown in figure 8).

Figure 8 – Women’s Access to Maternal and Child Health Care, by Road Availability



Source: World Bank 2010c. p. 95

Findings from Gender and Rural Transport Studies in Other Countries

Morocco

The case of Morocco shows positive impacts of increased rural access similar to those in Yemen and suggests additional impacts that investments in rural access in MENA can have, particularly when they include a sex-disaggregated social database to monitor impacts.

Box 3: Rural road construction and rehabilitation has increased school enrollment, especially for Moroccan girls; and has reduced in the time spent by women and girls collecting firewood for cooking.

A 1996 socio-economic impact study of four pilot rural road projects in Morocco that found improved road accessibility and reduced travel time and transport costs also facilitated the introduction of butane gas cylinders for cooking and heating instead of wood gathered by females. School enrollment doubled and women gained greater access to health services and employment opportunities. Prior to the pilot, more than half of the rural areas were isolated with no access to an all-weather road and one out of nine women was illiterate. Officials used the study findings as a rationale to expand rural road construction in the National Rural Roads Program (1995-2005) and request additional research on other rural roads projects. This reflected a shift in focus from road construction to improving access for rural women and men. The Moroccan Roads Directorate also established a social database including data on girls’ and boys’ school attendance and women’s and men’s activities in the zone of the road (Levy 2004).

Afghanistan

Women in Afghanistan face even more severe socio-cultural restrictions on their mobility combined with the isolation and poverty that constraints male mobility as well. The solutions proposed for Afghan women’s travel could be adapted to Yemen and other poor rural areas in MENA.

Box 4: The mobility of rural Afghan females is limited by social constraints while that of males was limited by unreliable transport, poverty, and a lack of opportunities.

A survey carried out in 2008. found High poverty, poor security, and unreliable, irregular transport constrain rural mobility. Women’s mobility is even more limited than in Yemen due to cultural norms forbidding them from travelling alone outside of the homestead. Men, boys, and girls collect most of the water and fuel wood needed for the household. Most men travel no further than the district boundary – roughly 90 minutes travel. Men’s limited mobility is due in part to lack of economic opportunities or knowledge of such opportunities as well as risk aversion. Use of health services is only curative, not preventive. Girls cannot not travel to school outside of their villages; boys can but often drop out to work. Women’s access to health services is limited to childbirth and they travel in passenger cars. Men, boys, and girls access health services for various ailments, using various modes of travel but girls, unlike boys, never travel alone. Public transport services are externally managed and not trusted. The researchers suggest providing socially acceptable transport for women through locally owned private transport that would be trusted local people. They also suggest a locally owned shuttle to take girls to school (Ahmed 2009, Holste 2009).

Indonesia

Maternal mortality remains high in Yemen and Djibouti due to mobility issues similar to those described in the Eastern Indonesia case.

Box 5: Poor transport is a barrier to Eastern Indonesian women’s access to maternal health services during pregnancy and immediately after delivery.

Research conducted in the rugged mountainous region of Manggarai District, Eastern Indonesia found that, as in Yemen, poverty, poor roads, and inadequate transport services are important factors in delays in seeking skilled assistance for preventive and emergency obstetric care. The health knowledge of the poor is limited due to the distances to health centers and poor transport services. Poor transport is also an obstacle for health personnel travelling to health centers, resulting in absenteeism and inadequate staffing, further discouraging women’s travel to get antenatal check ups and skilled delivery assistance (IFRTD 2010)

Bangladesh

The dramatic improvement in women’s mobility and economic empowerment in rural Bangladesh offers a possible approach that could be adapted to increase the economic opportunities for poor rural women in Yemen and other rural areas in MENA.

Box 6: The Bangladesh Rural Roads and Markets Project (2003-2011) empowered poor women as well as men.

A quasi-experimental impact evaluation in 21 districts found that the project has increased road access and reduced isolation to 56 million people. Prior to the project, social constraints, similar to those in rural Yemen, severely limited women’s mobility, preventing them from traveling to markets, using public transportation, or earning income. In the project area, poverty has fallen from 31 percent to 16 percent, girls’ school enrollment increased by 5.7 percent, and the number of health facilities has doubled. Women’s employment has increased 45.2 percent in the project area and only 7.5 percent in the control area. The project achieved these outcomes by employing poor women directly in road construction, maintenance, and bioengineering.¹ Increased road accessibility opened up new employment opportunities for women in health and agriculture as well. The project has established sections of markets exclusively for women vendors and buyers and facilitated formation of women’s trade associations, and rotating loan groups to help them develop their businesses (Pulley et.al.2003; Quadar 2011;World Bank 2010g).

3. Urban and Peri-Urban Transport Challenges and Opportunities: Study Findings in Casablanca, Sana’a, and West Bank

3.1 Women’s and Men’s Travel Patterns

Socio-cultural restrictions constrain women’s but not men’s travel in all three urban areas. In Sana’a and Casablanca, socioeconomic status, and central or peripheral location in urban areas also affect travel patterns and choice of mode for women and men. In the West Bank, checkpoints constrain men’s and women’s travel and transport mode choice from villages and towns to cities and within urban centers .

3.1.1. Transport Mode Use

The transport modes most frequently used vary across the three urban centers, between women and men, and among women of different socioeconomic classes, particularly in Morocco.

Walking: In Casablanca, walking is an important travel mode, particularly for the middle and lower income groups and people in the urban periphery. Overall, 70 percent of the women and 60 percent of the men walk in their neighborhoods; 33 percent of the women walk beyond their neighborhoods as do 26 percent of men. In Sana'a, walking is important for women but not for men; 56 percent of the women travel by foot compared with only 15 percent of the men. While walking is socially accepted for women, walking long distances is discouraged because it often exposes them to harassment. In West Bank, fewer people walk due to security issues and checkpoints; only 19 percent of the women and 18 percent of the men travel by foot.

Public Transport: In Casablanca, public transport is widely used by women and men; 76 percent of the women and 61 percent of the men use the bus; 72 percent of the women, and 63 percent of the men use large taxis; and 65 percent of the women and 55.5 percent of the men use small taxis. In the West Bank, an area in conflict since 1967, public transport is the predominant form of transport due to the extensive network of checkpoints, concrete barriers, earth mounds, and the separation wall; 73 percent of women and 61 percent of men use public transport.^{iv} Travel on buses is considered the most socially acceptable form of public transport for women in the West Bank; the use of shared taxis is accepted, except when all the other riders were men; but the use of private taxis is not well accepted. Despite the importance of public transport, 27 percent of the people interviewed consider it inappropriate for women to use public transport. In Sana'a, women's travel by bus is socially accepted but their use of shared taxis is allowed only if they traveled with a *muhrum*. Twice as many men (51 percent) as women (25 percent) use public buses.

Private Cars: Casablanca's households have the highest rate of car ownership at 46 percent (concentrated in the wealthier central and historic areas), followed by Sana'a at 33 percent, and lowest in West Bank at only 25 Percent. In Casablanca, nearly three times as many men have driver's licenses (54 percent) as women (18 percent) and women with driver's licenses hold managerial, professional, or other jobs. In Sana'a old and historical Sana'a, residents have the highest vehicle ownership rate, at 43 percent. Cars (both privately owned and taxis) are used for 20 percent of women's travel and 29 percent of men's. In West Bank, the percentage of women who use private cars is small at eight percent, compared to 19 percent for men. Only 13 percent of the women have a driving license compared with 45 percent of the men.

Motorcycles and bicycles: In Casablanca, 33 percent of the households own motorcycles and 15 percent own bicycles. In both Sana'a and West Bank riding bicycles and motorcycles is socially unacceptable for females. In Sana'a, men use motorcycles and bicycles for five percent of their travel. In West Bank, only 2 percent of the men use bicycles and motor cycles.

Figure 9: Use of Transport Means in West Bank, by Gender

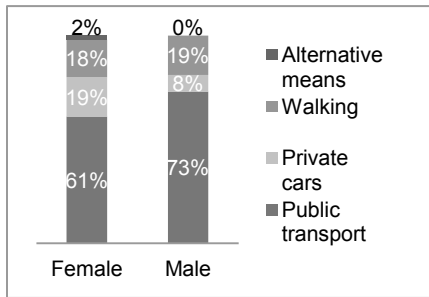
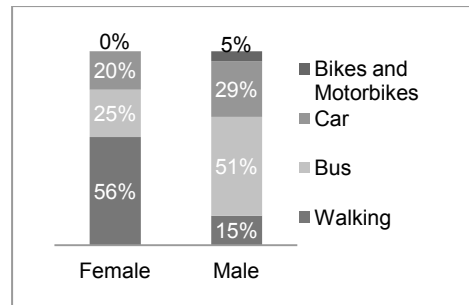
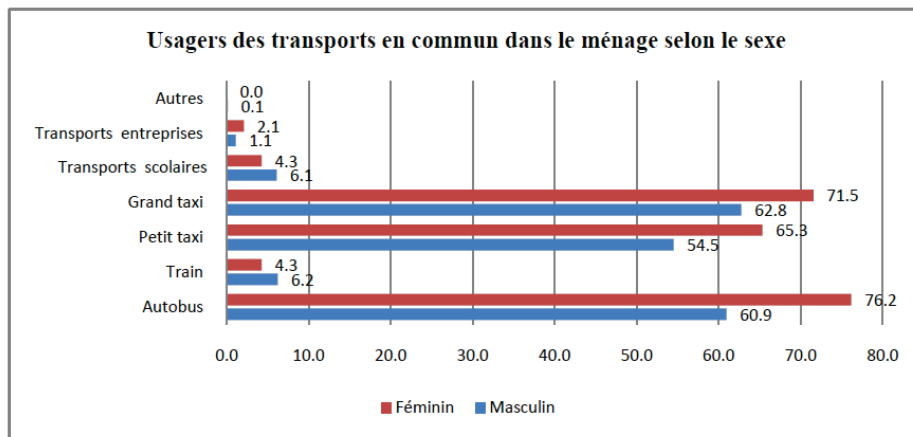


Figure 10 - Use of Transport Means in Sana'a, by Gender



Source: World Bank 2010c p. 16

Figure 11: Use of Public Transport Means in Casablanca by Gender



Source: World Bank 2010d. p.26

3.1.2. Travel Purpose: In Casablanca, the differences in purpose of travel between males and females are much smaller than those in Sana'a and West Bank. In Casablanca both men and women travel in the neighborhood to food shops, health centers, and schools. In the commune men travel slightly more than women to administrative services and the workplace and significantly more to secondary schools; females travel slightly more to the hospital. In the wider prefecture women travel slightly more for recreation, clothing, and to the workplace than men who travel slightly more to the hospital^v (shown in Figure 14).

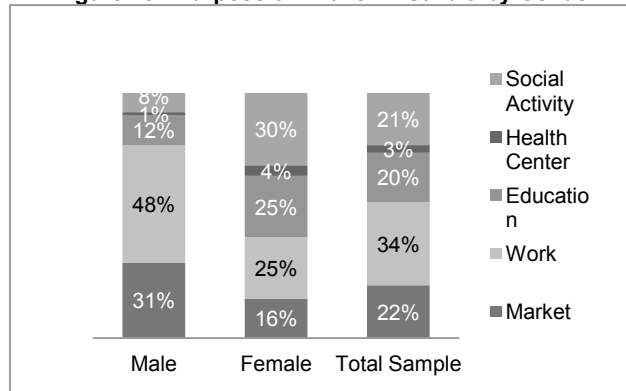
Figure 14: Purpose of Travel in Casablanca by Distance and Gender

Pour retracer les déplacements que vous faites, veuillez indiquer l'emplacement des espaces que vous fréquentez ?	le quartier		la commune		la préfecture		l'extérieur de la préfecture		l'extérieur de l'espace urbain		Total	
	m	f	m	f	m	f	m	f	m	f	m	f
le marché pour faire les courses alimentaires	93,1	86,3	4,0	9,9	3,0	3,2	0,0	0,5	0,0	0,0	100,0	100,0
le marché pour faire les achats vestimentaires	27,9	13,9	24,4	24,1	41,3	52,6	5,2	8,1	1,2	1,2	100,0	100,0
l'établissement scolaire (école primaire, collège)	45,5	46,7	36,4	26,7	9,1	13,3	9,1	0,0	0,0	13,3	100,0	100,0
l'établissement secondaire (collège, lycée, FP)	38,9	32,1	50,0	22,6	11,1	41,5	0,0	3,8	0,0	0,0	100,0	100,0
l'établissement supérieur (université, école, FP)	6,1	9,3	18,2	19,8	57,6	58,1	18,2	12,8	0,0	0,0	100,0	100,0
le lieu de travail	12,7	13,0	33,1	21,1	43,9	49,4	9,6	15,8	0,6	0,8	100,0	100,0
le centre de santé	78,8	76,9	15,1	16,2	4,8	6,6	1,4	0,3	0,0	0,0	100,0	100,0
l'hôpital	3,1	3,9	26,2	31,1	68,5	60,6	2,3	4,1	0,0	0,3	100,0	100,0
les services administratifs	27,7	41,8	52,2	43,4	20,1	12,6	0,0	1,9	0,0	0,3	100,0	100,0
les espaces récréatifs de loisirs	27,1	11,0	12,1	6,7	52,9	64,1	6,4	17,4	1,4	0,9	100,0	100,0

Source: World Bank 2010d p.40

In Sana'a, men's travel is largely focused on work and markets (79 percent) while women's travel is divided among health, education, social activities (59 percent), and work and markets (only 41 percent) (shown in Figure 15).

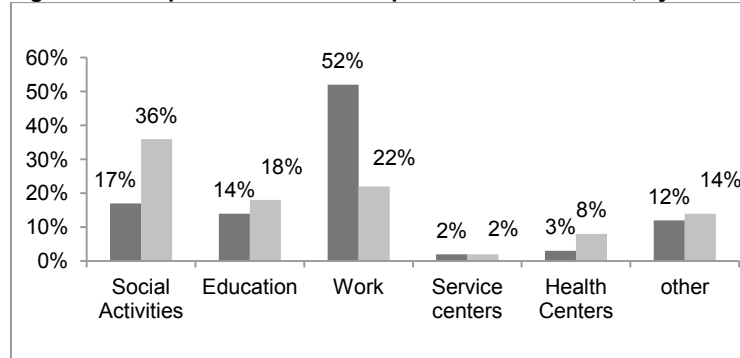
Figure 15 - Purpose of Travel in Sana'a by Gender



Source: World Bank 2010c p. 62

In West Bank as well, men's travel is largely to the work place (52 percent) while women's travel is focused more on social, family, and health related trips and only 22 percent for work.

Figure 16 - Purpose of Public Transport Use in West Bank, by Gender



Source: World Bank 2010c p. 37

3.1.3. Travel in groups: In West Bank, most women and men travel in groups. Men travel in larger groups of four to six compared with two to three for women. Only 38 percent of all travel is done individually. In contrast, in Sana'a, most men (89 percent) travel alone while more than half of the women travel in groups (20 percent with friends, 22 percent with a family member, and nine percent with a *muhram*). In the Casablanca case, there is no mention of *muhrams* or the need to travel in groups.

3.2 Availability and Reliability

In all three urban areas men and women complain about inadequate, unreliable public transport services.

3.2.1 In Casablanca, existing public transport cannot meet the demands of the city's expanding population. Men and women stress that buses do not arrive on schedule. Transport operators say delays are due to and traffic congestion because there are no separate bus lanes. Traffic delays make it difficult for passengers to arrive at work or school on time and return home at a reasonable hour. The buses are old, poorly maintained, and break down frequently further decreasing their reliability. Most taxis are also old but more reliable. Roughly half of the people have access to buses and taxis; 53 percent of the women and 39 percent of the men report that buses pass near their homes every 15 minutes and 48 percent report taxis passing in the same time frame. The walk to the bus stop is more than 10 minutes for 40 percent of the women. Many areas in the urban periphery do not have any bus service.

3.2.2. In the West Bank, travel is most constrained by check points. Public transport is available to 97 percent of the respondents and private cars are available to 67 percent. Checkpoint delays can hold up passage for up to an hour, complicating the travel of workers and students. This problem is particularly difficult for the peripheral areas and the distant villages where it is necessary to take a taxi to a check point and wait for a bus on the other side. Taxis only travel early in the morning and in the evening to drop off and pick up passengers going through the check point.

3.2.3. In Sana'a, residents in the old and historical areas are satisfied with transport while those in the urban-periphery are not. Only 42 percent of the people feel that available transport adequately responded to their travel needs and 41 percent feel that their transport needs were only partially served. Residents of old and historical Sana'a are most satisfied, at 94 percent and residents in the peripheral zone are least satisfied at only 21 percent. The peripheral zone is poorly served by means of

transport that are socially acceptable for women. As a result, women have to walk long distances to their destination or to the nearest bus stop and then wait inside the bus until it is full. Men can simply jump on passing trucks. Buses are available in 68 percent of areas of Sana'a studied and 16 percent of the areas are served by shared taxis. Some areas can only be reached by smaller cars (10 percent), motorcycles (3 percent) or by foot (3 percent). Most people (64 percent) complain about travel delays due to inadequate public transport services and traffic congestion.

3.3 Quality

Passengers in Casablanca and West Bank are concerned about the dilapidated, dirty public transport vehicles and terminals; in Sana'a the greatest concern is poor service. Passengers in Casablanca feel that the public buses are low in quality because they are dirty, old, dilapidated, uncomfortable, and have no spaces for luggage or seats for the disabled. They are overcrowded and pollute the air. Travelers are also dissatisfied with facilities at terminals. In West Bank, nearly half of the male and female respondents think that public transport is not child-friendly. Only 32 percent of the women and 41 percent of men believe that public transport is comfortable for women and 33 percent of the people complain about loud music. Other concerns include broken seats, windows, and even doors. Most terminals are dirty and very few have sanitary facilities, information/complaints centers, seating, or protection from bad weather. In Sana'a, passengers feel that transport services are organized with no concern for quality of service. Because terminal operators are paid for the number of passengers leaving the terminal, they hold buses until they are full, even though additional men and women are waiting for transport on the bus routes. Because routes are not enforced, operators avoid areas they consider unprofitable. Over half of the respondents think that public transport is comfortable while 40 percent think it is uncomfortable.

3.4. Affordability

Transport costs are affordable for men and women with good incomes but not for the poor in the periphery. Higher transport costs for women and poor people who live in the urban periphery of Casablanca and Sana'a, or in refugee camps of the West Bank are due to their need to take two or three modes of transport to reach their destination, paying a separate fare for each. Transport services charge higher fares where roads are poor.

3.4.1. In Casablanca, the cost of transport is affordable for men and women with their own income but not for students, large families, housewives, and very poor women. When asked the cost of a single trip, 25 percent of the women and 18 percent of the men replied that they travel at no cost as pedestrians or passengers in cars; 47 percent of the women and 35 percent of the men spend between 5 and 8 DH; 23 percent of the women and 42 percent of the men spent more than 9 DH^{vi}. Travel by private car as driver is the most expensive mode of transport.

3.4.2 In the West Bank, most people (68 percent) particularly women, consider fares an economic burden. Overcharging is a major concern; 59 percent of the respondents believe that the drivers do not comply with fare regulations (64 percent of females compared to 54 percent of males). Women note that they have less capacity than men to negotiate fares with male drivers, due to cultural and social constraints. Because women frequently take more than one transport mode to reach their destination and pay each time they change vehicles, the cost of a trip is, on average, higher for women than for men (12 NIS^{vii} for women versus 10 NIS for men). The check points make remote villages harder to access and travel costs very high.

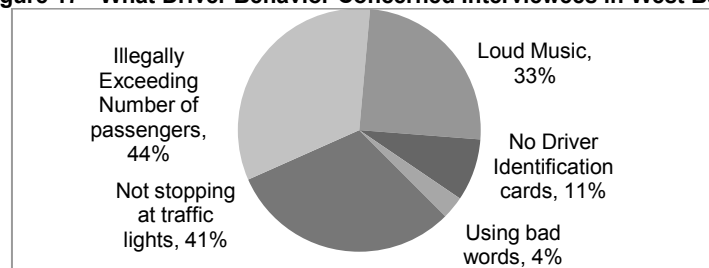
3.4.3. Residents of old and historical Sana'a spend the most on transport, and residents of the urban periphery spend the least even though public transport operators double their rates in the peripheral areas with rough roads. In old and Historical Sana'a men spend a monthly average of 8000 YR for men (\$40 USD) and women spend 4000 YR (\$20 USD); men in the peripheral zone spend 6600 YR (\$33 USD) and women spend 3500 YR (\$17.5 USD). The average female trip cost is 325 YR (\$1.6 USD) is 17 percent more than for men at 280 YR (\$1.4 USD)

3.5 Traffic Safety

3.5.1. In all three urban areas, the pedestrian environment is largely unsafe. Pedestrian safety is jeopardized by lack of sidewalks and pedestrian crossings as well as the failure to respect the few crossings that are in place. The urban periphery in Sana'a is particularly dangerous for women, children, and elderly pedestrians. There are holes full of sewage but no street lights. Highways surrounding the zone lack pedestrian crossings, signs, or traffic police.

3.5.2. Poor public transport vehicle maintenance and unsafe driver behavior, contributes to accidents in all three areas. In Casablanca, dilapidated, poor maintained public transport vehicles jeopardize rider safety along with inadequate measures to prevent accidents. Respondents feel that drivers discriminate against pedestrians and women driving cars. In the West Bank, nearly half of the interviewees are concerned about bus overloading and 41 percent say drivers exceed speed limits and ignore traffic lights.

Figure 17 - What Driver Behavior Concerned Interviewees in West Bank?



Source: World Bank 2010c. p.41

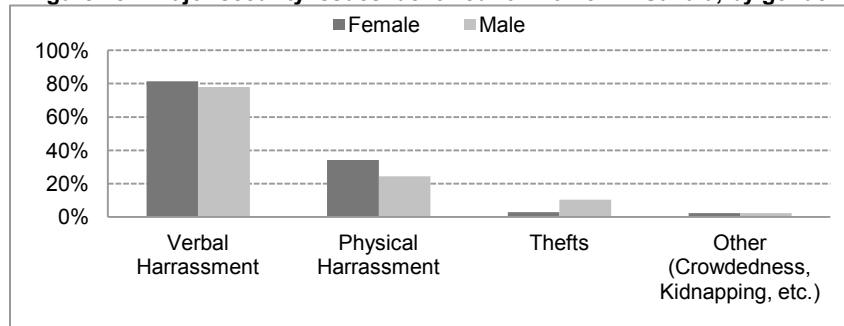
In Sana'a, respondents feel that all public transport is unsafe because operators overload vehicles. Accidents are frequent; 29 percent of the male and 23 percent of the female respondents have been involved in a traffic accident.

3.5 Personal Security

Security is a major concern and constraint for women in all three urban settings. Walking to and using public transport places women at risk of verbal or physical harassment and theft. Many women take the first transport that arrives rather than waiting for adequate transport, in order to avoid the risk of physical and verbal harassment on the street. When public transport lack a regular schedule, women often stop seeking work rather than wait on the street for a bus. In Casablanca, women complained about overcrowding and inadequate security on the buses. Sexual harassment and theft are common walking to the bus stop and traveling on the bus. The bus companies have 300 ticket control and security staff to protect drivers but no traveler protection. Women prefer the greater security of taxis which have more direct security control than other modes of transport. Clients report any wrongdoing to the taxi company or directly to the police.

Women’s security is a major concern in Sana’a, particularly in the peripheral zone where women traveling alone are at greater risk of harassment in the streets and on buses as well as kidnapping by taxi drivers. More than half of the interviewees are concerned about thieves targeting women pedestrians.

Figure 18 – Major security issues identified for women in Sana’a, by gender

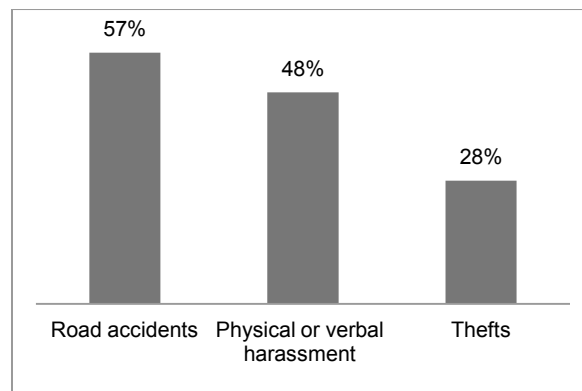


Source: World Bank 2010c. p.19

In the urban periphery of Sana’a and Casablanca, the lack of street lighting makes women feel unsafe walking any distance after dark. Families in Sana’a’s periphery, restrict female movement outside of the house after sunset due to insecurity and lack of street lighting.

In West Bank, 53 percent of the respondents feel that checkpoints are the greatest constraint on mobility and 42 percent consider various types of harassment the main problem. All women agree that their journeys are not safe, and even more so when they passed through the gates where women undergo body searches.

Figure 19 – Incidents faced by female interviewees or their relatives in the West Bank



Source: World Bank 2010c. p. 18

3.6 Socio-economic Impacts of Access to Transport

In Sana’a and Casablanca, there is a direct correlation between access to transport infrastructure and services and women’s economic empowerment; in West Bank checkpoints and economic impacts disempower men as well as women.

3.6.1 In Casablanca, where transport is poor, women’s health, education and economic opportunities and autonomy are limited; 60 percent of the women interviewed feel that the lack of transport has reduced their ability to improve their income; 52 percent feel that poor transport prevents them from reaching areas of employment and 47 percent believe it negatively impacts their careers. Lack of transport has a negative impact on men as well but not as great as for women. Limited access to

transport also impacts health, education and access to recreation more for women than for men. Most women (80 percent) feel that poor transport limits women's autonomy.

3.6.2 In the West Bank, check points, economic constraints and inadequate public transport limit opportunities. Mobility is dramatically reduced for both men and women because of checkpoints, and other physical barriers to movement, economic closures, lack of physical infrastructure, and underperforming public transport providers. The restrictions on the mobility of people and goods have had adverse social and economic impacts. Because transport is very expensive, and waiting times at checkpoints unpredictable, the economic viability of the transport sector, is greatly reduced. The impacts of the conflict and the higher transaction and financial costs fall more heavily on women than men because men have better social networks and trade links outside their community and access to more sophisticated and flexible means of transport. Given the difficulties of travel and the reduced employment opportunities, many educated females have given up aspirations for careers.

3.6.3 In Sana'a, the old and historical areas have positive impacts while the peripheral areas had negative impacts. In the Old Sana'a and historical areas, good quality of road infrastructure, associated with pedestrian facilities and street lighting, availability of public transport means and proximity to the commercial zones help men and women access opportunities such as work and education. Because they know that they can move securely and efficiently at a relatively low cost, women seek one or even two jobs. The availability of markets helps some women buy sewing supplies and sell products to storekeepers. In sharp contrast, most areas in the peripheral zone face serious access constraints. Poor road quality and lack of street lighting negatively impact the ability of women to access even the most basic services. The lack of infrastructure in general and transport infrastructure and health and education services in particular negatively impacts women's access to education and employment resulting in high rates of female illiteracy and unemployment. Most residents cannot afford fare for a *muhrum* to accompany girls to schools and universities which limits their access to education. Men are also negatively affected by the scarcity of public transport. Their low educational level and the isolation of the peripheral zone block their access to well-paid jobs.

3.7 Findings from Urban Gender and Transport Studies in Other Countries

3.7.1 Oman

The case of Oman further illustrates the diversity within the region with its wealth and predominance of passenger cars, sharply contrasting Sana'a and the West Bank. The idea of specially colored taxis driven by women for women could be adapted to other MENA cities.

Box 7: Omani women are more reluctant than men to use public transport to commute to cities for work and shopping. A survey on attitudes toward public transport conducted with residents who commute to Sohar, a large industrial and port city in Oman, found a strong preference for travel in private cars, even though the traffic fatality rate is the highest in MENA. Over 59 percent of the people commute to work in private cars and only 17 percent use public transport. Only 5.6 percent of the people depend entirely on public transport. Nearly half of the people using public transport travel in trains; nearly 26 percent use shared taxis; and nearly 21 percent use buses. Women are not willing to travel in public transport shared with other people. They feel safer and more secure in private cars. Reasons given for car preference include privacy, flexibility, safety, cultural reasons, unwillingness to wait for buses in high temperatures, and the lack of availability of public transport. Both women and men propose separate public transport for women and specially colored taxis driven by women for women (Bewal and Bewal 2010).

3.7.1 Dhaka, Bangladesh

The case of Dhaka Urban Transport suggests the potential for future economic empowerment of women in MENA cities. The recommendations for improving the transport system in Dhaka could be adapted to MENA cities.

Box 8: Socio-cultural constraints on women’s mobility have decreased over time with female entry into gainful employment in Dhaka.

A 2008 study of transport patterns, constraints, and priorities of women and men in Dhaka examined changes since an earlier study. In 1997, both women and men viewed cultural constraints as significant restrictions on women’s mobility. By 2008, women and men viewed other travel constraints as more significant than the cultural constraints still faced by women (frequent inability to get on crowded buses because men occupy the seats reserved for women, disrespectful behavior of transport operators, co-passengers and pedestrians toward women, and sexual harassment of young women commuters) similar to those faced by women in Casablanca, Sana’a, and West Bank. A constraint of greater concern to women than men is the poorly maintained footpaths and foot bridges over roads and other obstacles to pedestrians. Housewives, the elderly, the upper income group, and students, particularly females, are most dissatisfied with the transport system. Male and female commuters’ priorities for improving the Dhaka transport system include: 1) reducing congestion by widening the road and constructing flyovers; 2) improving transport services by providing: more large buses with timely service; buses for students; and car parking; 3) enhancing security; and 4) more affordable fares. Women also prioritize more foot bridges and reserved seats for women on buses while men prioritize reducing the number of private cars and banning rickshaws (Zohir et. al 2008).

3.7.3. Jakarta, Indonesia

A system such as the light rail in Jakarta could offer a longer term solution for linking the urban periphery to the center in MENA in a gender-informed way. The recommendations for rail could be adapted to other modes of transport in MENA as well.

Box 9: Light rail is a popular transport choice for people living in Jakarta’s periphery and working in the center, particularly for women.

A 2006 study of gender and transport issues in Jakarta found that the physical separation of living areas from working areas has led to increasing travel distances with high costs in time and fares, huge volumes of traffic, and disruption of non-motorized mobility. Most new arrivals to the city settle in the periphery because rents in the business center are too high, as is the case in Sana’a and Casablanca. An estimated 37.5 percent of all working-age women in Indonesia are engaged in paid work in Greater Jakarta. Given the double burden of earning a living and caring for the family, the time and reliability of transport systems is very important to women. Thus 59 percent of the women and 42 percent of the men prefer urban light rail, because travel time is considerably shorter than any other public means of transport and fares in the cheapest class are low due to state regulation and subsidies. However, the light rail network is old, needs repair, has few lines, and too few trains to respond to the growing demand. The survey showed that all of the women and nearly half of the men favor the introduction of special compartments for women. They also suggest lighting and activity on the boarding platform and in stations, a sufficient numbers of clean toilets for women, steps on the platform to make it easier for women in *saris* to board trains, and hand straps at an appropriate height for women. They propose integration of light rail with existing bus and footpath networks and long distance trains through measures such as traffic free access to stations and integrated fares (Spitzner et. al. 2007).

3.7.4. Ashgabat, Turkmenistan

The Ashgabat case illustrates the potential unintended negative impacts of privatization of transport services on poor women’s economic opportunities which need to be avoided in MENA as well.

Box 10: Ashgabat Women Walk More, Wait Longer for Transport and Seek Employment in Walking Distance.

Transport user surveys in Ashgabat Turkmenistan found highly gender-differentiated use of various modes of transport services; 28 percent of the women walk to work compared to 14 percent of the men; seven percent of the women commute by car as compared to 20 percent of the men; and 10 percent of the women use transport provided by their workplace as compared to 20 percent of the men. Women’s waiting times are longer than men’s and their average total journey time is 10 to 15 percent greater. Researchers also found that that privatization of transport has resulted in increased fares and reduced access to transport services for the poor, particularly women, who have responded by shifting to lower paying employment within walking distance of their homes (Kudat 1998: Kudat et. al. 1997).

4.1. MENA shares many basic gender and transport trends and challenges with other developing countries with experience to offer effective solutions to problems for adaptation in MENA. Women tend to walk or take public transport while men tend to take private transport. Security issues are of greater concern to women because they are vulnerable to gender based violence, verbal harassment, and theft. Traffic safety is a greater concern to women because they often travel with children. Poor transport generally constrains women's economic and other opportunities more than for men (Babinard 2011; World Bank 2010a). The Bangladesh Rural Roads and Markets Project, described earlier, is one example of a tested approach that could be adapted to MENA rural areas.

4.2. It is important to look beyond stereotypes about socio-cultural constraints on women's mobility. Although social-cultural norms restrict women's mobility in all four MENA cases and in most of the other cases described, the extent and ways in which women's opportunities are limited varies significantly among the four cases and even within the Casablanca and Sana'a contexts. Practices associated with women's socio-cultural constraints in MENA such the need to travel in groups can be the practice of men as well as in politically uncertain contexts such as the West Bank.

The greatest socio-cultural restrictions on women's mobility in the four cases are those placed on women in rural Yemen and the least are those of professional women in Casablanca. As noted earlier, while rural Yemeni women walk or travel only in covered vehicles with a *muhram*, working women in Casablanca take public buses, taxis, and some professional women even drive their own cars. Even in rural Yemen, women walked alone within the village and with other women to neighboring villages.

In Casablanca, greater mobility and autonomy of women are associated with higher levels of education and employment of women.^{viii} The findings from the Casablanca case and the Bangladesh cases suggest that access to transport can facilitate access to education and economic opportunities which can contribute to greater mobility, autonomy, and empowerment even in contexts with strong socio-cultural constraints on women's mobility. But often specific measures are needed to jump start economic opportunities for poor women with restricted mobility, such as the women's markets in Bangladesh, and employment of poor women in road work.

4.3. The findings in Sana'a and Casablanca underscore the importance of looking at differences among women (and among men) based socio-economic status, age, location and other differences rather than simply comparing women and men. Poor women and men living in the urban periphery of both cities have limited transport access and poor security constrain economic and educational opportunities, particularly for females. Wealthier women and men near the wealthier city center enjoy much better transport, higher paying jobs, and more education. In Casablanca, respondents noted that "autonomy depends on social class; poor women who do not have an opportunity to take a means of transport are not independent" (World Bank 2010d p.70) As noted earlier, there is a larger health care access gap between poor and non-poor women in Morocco than in Yemen. Unequal distribution of income is reflected in the Gini index^{ix} for Morocco at 40.9 compared with only 25 in Sweden, the country ranked with the nearest to equal distribution of wealth to date^x (UNDP 2011). Identifying these differences as well as the high levels of unemployment of youth is important to ensure that transport planning serves the needs of poor women and men and opens up opportunities to move out of poverty.

4.4. It is important to look at the links between rural and urban areas as well as the differences between them. The Sana'a, West Bank, and Rural Yemen cases all described important rural-urban transport and economic linkages. The West Bank case noted the challenge of taking taxis from the villages to connect with the urban bus system on the other side of a check point as well as the high cost of transport between the villages and the city. In the rural Yemen case, some of the men in villages with

a road traveled to urban centers for employment daily and a few worked or studied returning to the village only on weekends. Rural men also travelled weekly to urban markets to shop for food and clothing and sell produce and mats woven by their wives in urban and their wives occasionally traveled there as well for clothing, wedding goods, and delivering babies. The urban periphery is generally the only affordable area for new migrants from rural areas. The Sana'a case study characterized the peripheral zone as "a junction point between rural and urban ways of life," which even included some agricultural activities in most neighborhoods (World Bank 2010cp. 59). Given the importance of the linkages, in the longer term, integrated transport systems, of the sort described in the Jakarta case, will be needed to facilitate access of poor male and female rural and urban periphery residents to urban markets, services, and economic opportunities.

4.5. Fragile political contexts and conflict-affected settings such, as the West Bank, present special mobility and access challenges to males and females that require targeted analysis. In conflict and post conflict settings such as the West Bank, and countries affected by the 2011 "Arab Spring" movements, it is important to assess the gender dimensions of the conflict and their implications for women's mobility and opportunities compared with men's. Economic realities may push in the direction of greater employment and equality for women. But socio-cultural traditions may pull in the opposite direction, as is the case in Iraq where war widows struggle to survive in an increasingly restricted space dominated by conservative ideology. Post-conflict or political transitions such as those occurring in a number of MENA countries can offer opportunities for positive changes in gender relations. (Bowen 2011).

5. The Way Forward in MENA: Suggested Actions to Address the Challenges

It is important to keep in mind the great cultural, economic, and geographic diversity in MENA and to adapt the gender and transport recommendations to respond to local values and realities. Lessons learned in gender-informed transport planning in other countries can be adapted to MENA socio-cultural contexts to increase poor women's as well as men's mobility and economic opportunities. Improving women's mobility and access will require coordinated efforts by ministries of transport, municipalities, transport operators, and civil society. The following section provides recommendations for actions and procedures to improve the availability, reliability, quality, affordability, safety, security and expanding positive socio-economic impacts of rural and urban transport for both women and men. These suggestions are drawn from the case studies and good practice projects in other countries.

5.1. Suggestions for Actions to Increase Access and Mobility for Women as Well as Men

5.1.1. Increasing Availability, Reliability, and Quality of Transport

When transport services are available, on schedule, in convenient locations, with quality service, women and girls in cities are more likely to travel to access education, employment, and markets. And women in rural areas have better access to labor saving products and services such as butane gas cylinders, and water as well as health care, education, and entrepreneurial opportunities. Lack of transport services in the urban periphery and rural areas is a constraint to male as well as female mobility, but to lesser degree.

Measures that have been effective in enhancing transport availability, reliability, and quality for females as well as males in various countries which need to be adapted to specific contexts in MENA include:

- Upgrading, and maintaining rural roads and tracks, peri-urban streets and sidewalks to facilitate women's travel by foot or walking to public transport stops and reduce the cost of travel and goods for people in the urban periphery and rural areas.
- Expanding coverage of transport services appropriate for females.
- Increasing the frequency, regularity, and predictability of public transport services, to reduce the time women wait on the street at risk of harassment or theft.
- Establishing regular bus stops and constructing bus shelters with seating, lighting, and protection from bad weather.
- Providing features to make it easier for women and children to board trains and buses, sit comfortably, and store their shopping and other goods.
- Providing training for bus drivers on courteous customer service particularly for females.
- Providing clean separate bathrooms for females and males in transport terminals
- Light rail linking urban centers with the periphery.
- Promotion of women's access to IMTs such as donkeys to reduce their burdens. In one village in Yemen, an entrepreneur rented donkeys to people who did not own one. Micro-credit and business development skills training could facilitate the growth of more of these enterprises.

5.1.2. Increasing Affordability

Paying transport fares is a major challenge for poor rural and urban women, particularly when cultural restrictions limit their travel to more costly modes of transport and they have no individual source of income. Women in the urban periphery often need to make multiple stops for different tasks and pay separate fares for each trip segment. Rural women need accompaniment by a *muhram*, increasing the cost. Measures to address affordability issues can include:

- Regulating and monitoring fares charged by transport operators.
- Introducing fare integration between different modes of transport.
- Reduced off-peak fares and other measures, to reduce the cost of women's and men's trip chaining, particularly from the urban periphery and rural areas to urban centers.
- Providing micro-lending and other support to local rural and urban periphery entrepreneurs to establish trusted, safe, affordable transport for women and families.
- Exploring the potential public-private partnerships with restaurants, hotels, and other businesses benefiting from the public transport system and businesses seeking to advertise products at bus stops and on and in public transport vehicles. In Nairobi Kenya a company installed 185 lights on main roads and in poor neighborhoods in exchange for placing their advertising on the light posts.

5.1.3. Promoting Traffic Safety

Traffic accident rates are high and growing in the MENA region. Improved traffic safety is important for both men and women. Because both rural and urban women rely heavily on walking, it is important to ensure that the pedestrian environment is safe. The need is particularly great in the urban periphery surrounded by highways with no crosswalks, lights, or other measures to assist pedestrians to safely cross the street. Rural areas also need measures to slow traffic near schools, health centers, and homes. Driving and passenger safety measures are also needed to prevent accidents and injuries, particularly for women, children, and the elderly. Some of the measures that have been effective in increasing pedestrian, passenger, and driver safety in a number of countries include:

- Introducing stop lights, traffic signs, traffic bumps and other measures to slow traffic.
- Increasing street lighting, particularly in the urban periphery.
- Improving the pedestrian environment: unimpeded sidewalks, pedestrian crossings, pedestrian islands, and pedestrian overpasses, and wide shoulders on rural roads to facilitate walking.
- Enforcing traffic regulations, passenger limits, and safety measures on public transport.
- Modifying payment systems for terminal and bus operators to eliminate the incentive for overloading buses.
- Training drivers and conductors on safety measures, with special attention to safety of women, children, the elderly and people with disabilities.
- Monitoring regular maintenance and upgrading of public and private vehicles.
- Launching public traffic safety media campaigns segmented to reach different audiences (commuters, housewives, students, bus drivers, car drivers, IMT drivers, and pedestrians).
-

Box 11: Rapid Bus Transit in Bogota Colombia Decreases Traffic Fatalities

After *TransMilenio*, the rapid bus transit system in Bogota Columbia was built, fatalities on the road corridor decreased by 93 percent after one year of operation. *TransMilenio* paid bus operators per kilometer not by customer and constructed segregated median bus ways (Kunieda and Gautier2007).

5.1.4. Improving Personal Security

The risk of sexual harassment, gender-based violence and crime is a major constraint on urban female mobility, education, and economic opportunities, particularly in the urban periphery which lacks lighting and has a higher crime rate. Measures that have proved effective to increase personal security and reduce crime in transit to transport, while waiting for transport, and on public transit vehicles in various countries include:

- Employing security officers in terminals, on platforms, on buses and trains with strengthened security for hours when most women travel; hiring female as well as male officers if possible.
- Providing adequate lighting on sidewalks, at bus stops, on platforms, and in terminals.
- Launching a public campaign on appropriate behavior toward females in public transport.
- Increasing lighting and reducing vacant areas and abandoned buildings that make pedestrians and people waiting for buses more vulnerable to crimes. One way to approach this is through combined urban development and transport planning including the promotion of business development to transform empty spaces into areas with people shopping and engaging in activities.
- -Where appropriate, introducing women-only buses, train cars, and taxis with female drivers.

Box 12: Women-only Transport: Pros and Cons

In Beirut Lebanon, Banat Taxi --pink taxis driven by women for women-- have gained the trust of families for transporting their daughters. A similar service is available in Tehran on a larger scale with 700 women drivers (World Bank 2010c). Women-only light rail or metro cars have been introduced in Mumbai, New Delhi, Chennai, Calcutta, Tokyo, Kuala Lumpur, Taipei, Mexico City, Rio de Janeiro. However, separate services do not provide an adequate long term solution. They tend to serve higher income women, run only during rush hour, and perpetuate divisions rather than addressing the deeply rooted gender biases that limit women's mobility and lead to gender-blind transport planning (Peters 2011 and World Bank 2010a).

5.1.5. Expanding Positive Socio-economic Impacts

As noted earlier, special measures are often needed to spark economic opportunities for poor women with limited mobility. Measures that have proved effective in other countries include:

- **Engaging teams of poor rural and peri-urban women in road maintenance and bioengineering.** Adapt approaches such as that of the Bangladesh Rural Roads and Markets Project to offer culturally appropriate economic opportunities for groups of poor rural women through road maintenance cooperatives or microenterprises that also sustain the rural and peri-urban road systems. International Labor Organization (ILO) studies in Islamic countries globally have found that, under Islamic law, women are permitted to carry out virtually all building and construction works except climbing ladders and descending into well or working underground (Salter et. al. 2009).
- **Fostering female entrepreneurship in poor rural and peri-urban areas.** The case study findings suggest that the spirit of entrepreneurship is already in place. As noted earlier, a number of women in Sana'a have already started sewing for income; some rural women in Yemen have started weaving and handicrafts for sale and a few have opened shops selling goods for women and children. Nearly half of the women in rural Yemen already own cell phones and could charge fees to other women for using them. Microcredit and business development training (to identify markets, purchase merchandise at good prices, and manage finances) would build capacity for more sustainable businesses.
- **Using appropriate non-transport solutions to gender-related transport problems.** Increased rural and peri-urban road access can facilitate non-transport solutions to reduce women's transport burdens such as increased access to butane gas cylinders, as was the case in Morocco, as well as provision of potable water in or near households. Construction of markets, schools, and health centers near rural villages or peri-urban settlements, or bringing mobile services to the areas and increasing access to information communication technology such as cell phones, reduces the need to travel and provides health, education, and information access to women with constrained mobility (Clarke 2008, SSATP 2011).

5.2. Suggested Procedures to Integrate Gender into Transport Policies and Programs

In addition to the specific measure to increase mobility and access for women as well as men, specific processes are needed to integrate gender into transport policy, programs, and institutional structures, systems, and procedures.

5.2.1. Gender-informed transport policies, strategies, and regulations. Ensure that rural transport policies, strategies, and regulations are informed by social and gender analysis and participatory

planning, implementation, and monitoring and evaluation that includes both women and men. Inform rural transport policies, strategies, projects, and project adjustments with social and gender analysis. It is essential to understand and address gender differences in transport needs, constraints, and potential impacts. Ensure that adequate human and financial resources are allocated to address gender and other social dimensions of rural transport (SSATP 2011). For example, the Mumbai Second Urban Transport Project conducted a gender assessment as a part of the urban reform emphasizing inclusive urban transport (Babinard 2011). Gender audit checklists provide a means for public and private transport providers, regulators and interest groups to assess how well gender and transport issues have been integrated into policies, plans and projects (Peters 2011).

5.2.2. Routine analysis of gender and transport issues in social and environmental assessments, resettlement surveys etc. Transport intervention designs need to be informed by data on gender differences in transport to ensure they meet the travel needs of women as well as men. Social and gender analysis can assist in determining affordability and access of transport for different populations. Understanding how travel patterns differ by gender requires disaggregated data on men's and women's travel modes, schedules, expenditures, trip chaining, satisfaction, constraints, and unmet demands. It may also may require analysis of control of household income, ownership, and control of the means of transport. Gender action plans, such as those prepared for the Bangladesh Rural Roads and Markets Project and the Second Mumbai Urban Transport project noted earlier, can provide a blueprint for integrating gender into transport projects and programs (World Bank 2010g).

5.2.3. Gender-inclusive participatory consultation to inform transport planning. Use of participatory approaches does not automatically include women. Mechanisms are needed to increase women's participation, such as focus group discussions with women by women, scheduling town meetings when women can attend, providing project information in locations and types of media that women can access, and consultation with women as well as men throughout the project as is being done in the Liaoning China Medium Cities Project.

Box 13: Inclusive Participatory Consultation in Liaoning Province, China

In the Liaoning Medium Cities Project, an extensive, gender-inclusive public participation process fundamentally changed the project design, adding large investments in secondary road rehabilitation, and street lighting, as well as improvements in public transport scheduling, traffic management, and safety to a design originally focused only on construction of more ring roads. The participatory process also increased local decision-makers' understanding of transport-related problems faced by people affected by the project, less than 10 percent of whom had access to cars. The participatory process included groups often excluded from the transport planning process such as women, the elderly, disabled people, pedestrians, bicyclists, and drivers / owners of motorbikes, three-wheeled vehicles, buses, and trucks. The use of separate male and female group discussions enhanced female involvement and identified Urban Transport issues from women's as well as men's perspectives. All participants expressed concerns about the poor secondary road pavement and drainage, poor sidewalk conditions and road facilities, and the lack of separation between motorized and non-motorized traffic. Women, much more than men, raised concerns about security issues related to the lack of street lights, poorly designed underpasses, and long waits at bus stops. (Chen and Mehndiratta 2006; Mehndiratta 2008, World Bank 2010g).

5.2.4. Awareness-raising and capacity-building for transport agencies, municipalities, and transport service operators. Building gender awareness within the organizational structures of transport related ministries as well as private sector transport businesses, transport unions, associations, etc. is essential to create capacity to address gender issues in transport and to build a constituency to ensure that gender issues are systematically addressed. This can be done by: working with intermediary organizations; creating multi-sectoral transport planning committees; adding social and gender experts

to transport staff, and gender and transport capacity building (SSATP 2011; World Bank 2010g). The survey conducted in Afghanistan, noted earlier, was part of a larger effort to sensitize agencies implementing the Rural Access Program to gender and broader social issues. The interest generated by the survey led to the appointment of six regional social inclusion officers for the project (Babinard 2011). In Bangladesh, a gender capacity-building process led to a gender action plan and integration of gender analysis in transport planning, monitoring and evaluation systems and procedures.

Box 14: Capacity Building on Gender for Bangladesh Local Government Engineering Department (LGED)

Training-of-trainers courses on gender and development were conducted for LGED senior officials including project directors, in 2002. A training manual was developed and gender training was institutionalized for project staff. Based on an assessment of attention to gender issues in LGED projects, an agency gender mainstreaming strategy was developed for 2002-2007, with support from the Embassy of the Netherlands. LGED project directors and other team members attended ADB workshop on gender mainstreaming in specific subsectors. In 2007, LGED conducted its own internal review of progress on its gender action plan and developed a new gender action plan through 2015. In a 2007 workshop, it was agreed that all projects must have gender and development components with monitoring mechanisms set out in gender action plans. In project design, each component must be analyzed to identify ways to involve women (ADB 2009)

5.2.5. Public awareness-raising about women’s mobility needs that respects local culture. This is an essential first step to gain the support, needed to expand women’s and girls’ access to transport and health services, education, and income generation opportunities. Working with the media, mosques, local leaders, girls’ and boys’ schools, local women’s organizations, NGOs, networks with strong institutional capacity, and a government willing to partner with them, it is possible to mobilize local support for transport projects and road maintenance, increase women’s participation and decision making, and raise the awareness and knowledge of local communities. In Vietnam, the National Women’s Union mobilized ethnic minority women for paid rural road maintenance work in an isolated mountainous area coordinating with the Provincial Department of Transport which provided skills training and oversight. Local awareness of the importance of road maintenance increased along with greater access and increased women’s voice in community and household decision-making (Tran et. al. 2010). Other awareness raising measures can include radio programs targeting specific audiences, posters, school programs for students and parents, and messages from *mullah’s* to the faithful. It is important to recognize that not all groups have the human, organizational, or financial capacity to provide the necessary assistance and some may require capacity building (SSATP 2011).

5.2.6. Equitable compensation to both women and men displaced by transport construction. Although not discussed in the four MENA case studies, displacement and resettlement due to infrastructure construction generally have more negative impacts on women because in most contexts they are responsible for providing water, fuelwood, and food for their family in unfamiliar environments, often without the help of social support networks disrupted by resettlement. Too often, compensation for loss of property and livelihood is allocated to male heads of households, who do not necessarily share it with other household members. Women and others with use rights but no titles to land are seldom compensated (ADB 2003; Mehta 2002). In Mumbai India, an inclusive participatory process led by a women’s organization facilitated the equitable and orderly resettlement of 60,000 people, preserved social networks, and provided livelihood opportunities for women.

Box 15: Gender-Inclusive Resettlement for the Mumbai, India Urban Transport Project

The Mumbai Metropolitan Regional Development Authority established working relationships with civil society organizations including the women's association *Mahila Milan*, the National Slum City Dwellers' Federation, and the Slum Resettlement Society to facilitate orderly resettlement of over 60,000 people using a strong participatory process and community mobilization. The affected households were surveyed to assess and disclose resettlement and rehabilitation compensation. The resettlement plans ensured that resettled women could continue their support systems and economic activities. Joint titling of final resettlement properties in both husbands' and wives/ names has given women more security in their new residences. The project provided all the resettled households with maintenance and management grants so that they could manage their new buildings and assets on a sustainable basis and implemented the Livelihoods Enhancement Action Plan for resettled women (Mishra

5.2.7.. Gender informed monitoring and evaluation is important to guide mid-course correction and can inform the next phase or related projects. It is also important for accountability, to ensure that necessary gender-related activities are properly implemented and impacts are measured. A gender-responsive monitoring and evaluation system should provide baseline data on: travel and transport constraints of women, men, girls, and boys; women's and men's unsatisfied transport needs; levels of women's and man's involvement in project identification and design; feedback on how services can be modified to meet the needs of women as well as men, changes in women's and men's travel patterns and transport modes as a result of the project, and assessment of the specific impacts of the project on women's, men's, girls' and boys' in areas such as education, access to health services, and economic opportunities (SSATP 2011; World Bank 2010a and 2010g). The Vietnam Mekong Delta Infrastructure Development Project initiated such a process with a gender-informed baseline study.

Box 16: Vietnam Mekong Transport Infrastructure Baseline Identifies Gender Differences in Transport Patterns

The baseline survey design included gathering data on poor women and men at the bottom of the supply chain already targeted for socioeconomic benefits, collection of data on trip chaining, and measurement of women's and men's travel to main supply corridors. The survey showed that women's travel times were longer because they walked or use bikes more than men, even though men traveled somewhat longer distances. Women made more journeys per month to collect fuel and travel to farms and markets, while men made more journeys to telephone and postal facilities. Women had lower levels of education and lower incomes than men, making up nearly 79 percent of the unskilled workforce. Men constituted 71 percent of the employees in transport logistics and 74 percent of the managers. Men had more information about transport projects and predominate in project decision-making and supervision while . Women were mainly involved in project implementation (World Bank 2011a).

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ENDNOTES

ⁱ Interviews replaced focus groups in Casablanca due to delays in getting permits required for focus group meetings.

ⁱⁱ A *muhram* is the husband or any other male family member whom a woman cannot marry (such as her father or brothers).

ⁱⁱⁱ One US dollar exchanged for 206.25 Yemeni *Rial* (YR) at the time of the study.

^{iv} The West Bank Study did not provide a break-down of use of specific types of public transport. It did indicate preferences for specific types of public transport; seven percent of women and six percent of men preferred small buses; 42 percent of women and 61 percent of men preferred large shared taxis; 31 percent of women and 29 percent of men preferred small taxis.

^v Unlike the other studies, the data on purpose of travel for Casablanca was broken down in terms of distance from the household.

^{vi} One US Dollar is currently equivalent to 8. 8.73 Moroccan *Dirham* (DH). The report did not specify the dollar value of DH at the time of the study.

^{vii} One US Dollar was equivalent to 3.729 Israeli *Shekalim* (NIS) at the time of the research.

^{viii} Significantly more women in the Casablanca sample are economically active (54 percent) compared with 15 percent in West Bank and seven percent in the urban periphery of Sana'a. A greater proportion of the female sample in Casa Blanca had a university education at 28.1 percent than women in Sana'a at 14 percent and West Bank at eight percent (World Bank 2010d).

^{ix} The Geni index measures income inequality-- the extent to which the distribution of income in a country deviates from a perfectly equal distribution (UNDP 2011).

^x Available Gini index figures for other countries in MENA include: 32.1 in Egypt, 37.7 in Yemen, 38.8 in Jordan, and 40.8 in Tunisia (UNDP 2011).