AudienceScapes
Development Research Brief

AudienceScapes • www.audiencescapes.org • Tel. 202.652.2271 • Fax. 202.434.9560

Gayatri Murthy

Email: murthyg@intermedia.org

Phone: 202.434.2269

Mobile Futures

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Unprecedented growth in mobile phone access in emerging economies is the success story of this decade -- but what about disadvantaged citizens in these countries who continue to confront a digital divide? In many cases, they also represent the largest potential market for mobile operators. Gayatri Murthy digs into the data so that development practitioners and mobile operators can understand the disparities and opportunities in these countries.

While the growth of mobile technology is approaching saturation in the developed world, in many emerging and developing economies, a different story is unfolding. The developing world increased its share of mobile subscriptions from 53 percent of total mobile subscriptions at the end of 2005 to 73 percent at the end of 2010.

Just this last year, mobile subscriptions increased by 16 percent, compared to just 1.6 percent in the developed world (Source: ITU, 2010). This growth is made possible largely because of the falling costs of simple mobile phones and the sharing of devices among friends and family.

Unprecedented growth in access to mobile phones has not only made communication easy, but also spurred economic and socio-economic benefits in many countries. It is somewhat surprising to pause and note that mobile applications that emerged out of local inventions for local needs -- such as mobile money for the unbanked, crowdsourcing tools used during elections or humanitarian crises, and citizen mobile journalism -- were virtually unheard of only 5-6 years ago.

Gender Inequities Persist

Even as mobile penetration has grown exponentially in countries such as India, Kenya and Egypt, the digital divide between citizens in these countries remains an issue. Despite rising access to mobile phones and the steady growth of these countries' economies, gender inequities and income disparities continue to present barriers.

Gayatri Murthy is on the research team of the AudienceScapes Project at InterMedia, and helps in data analysis, writing the Country Profiles and overall maintenance of the website. She holds a Masters Degree in International Communications from American University's School of International Service and a BA in Economics (with honors) from St. Xavier's College, Mumbai.

The nationally representative surveys used here are part of a broader project aimed at improving communication programs and needs assessments in developing countries. To access the complete analytical reports on the AudienceScapes surveys as well as other research and information, go to

In many fast-emerging economies like India and South Africa, the privileged live in a highly connected information society, while those at the bottom of the income pyramid (BOP), and especially BOP women, remain disconnected. This means that **not only are some unlucky citizens deprived of access to modern communication devices because of rigid and systemic inequities, they are also deprived of the added social and economic benefits of mobile phone access. As the segment of the population experiencing the most impediments, women at the BOP are thus the biggest losers when it comes to mobile phone access and related benefits.**

Women in these countries face multiple challenges resulting from cultural, economic and educational factors. In households of limited incomes, male members are more likely than women to be given access to mobile technology. Cultural barriers also inhibit access; in many conservative societies, the widely held belief that women will behave improperly with a cell phone (texting boyfriends, etc.) keeps the technology out of their hands. Further, many poor women in these countries are illiterate, making it difficult for them to use some applications.

Despite the obstacles preventing women in the BOP from obtaining and using mobile phones, they may represent the largest potential market for mobile access growth. According to a recent GSMA report, "Women and Mobile: A Global Opportunity", the globe's most disenfranchised women could actually present mobile operators with a US$13 billion incremental, annual revenue opportunity. In this light, closing the mobile phone "gender gap" serves not only development goals, but may also be in the interest of mobile operators aiming to be market leaders.

To help development practitioners and mobile operators be alert to the disparities and opportunities as countries continue to experience economic growth and greater access to ICT technologies, we look at three distinct regions below: **South Asia, Sub-Saharan Africa and the Middle East**. We focus on countries which have **1) a large BOP population, 2) experienced rapid economic growth, 3) witnessed fast growth of mobile phone access, and 4) high gender inequality.**

South Asia

South Asia is one of the most economically inequitable regions in the world. Despite the fact that four South Asian countries have had women as head-of-states -- suggesting that women with higher socio-economic status perhaps enjoy similar rights as men -- women in the lower socio-economic groups experience entrenched discrimination. In fact, gender discrimination and lower economic status can converge to make it especially hard for women in the BOP in South Asia to have access to mobile phones. A woman is 37 percent less likely to own a cell phone than a man in South Asia.

India

India represents a noteworthy case study -- growth in mobile access has reached the less prosperous strata of society, thanks to some of the lowest rates and cheapest handsets. While internet access, cable television and mobile phones are ubiquitous in big cities and affluent homes, the mobile phone has been accessible to the nation's most rural and poor regions. With an economy rising at an average of 8 percent and the lowest mobile phone tariffs in the world, more than 60 percent of people own mobile phones and the market is growing by between 8 and 18 million new users a month.

The recent telecommunication scandals aside, the real telecom story in India is the increase in connectivity for India's large and inequitable market of 1.21 billion people. Farmers have benefitted from better market information thanks to their mobiles. They can find which wholesaler and retailer pay the best price for their produce and eliminate the expense of using brokers to sell their goods. Fishermen can check weather reports and find out which fish are attracting the best prices at market before they take to the seas.

For a country that is growing rapidly, however, India also has the highest Gender Inequality Index (0.748) when compared to the other featured countries in this region (see Table 1 for more details). According to the latest figures by World Bank, close to 40 percent of Indians live below the international poverty line. This is approximately 420 million people—more than the total number in Sub-Saharan African countries; and among this sub-group those that suffers most are women.

Despite its phenomenal economic rise (India is the 10th largest economy in nominal terms and the 4th largest in PPP terms), and availability of cheap mobile plans, women remain far behind socially. Women at the BOP are much likely to be worse off economically than men. Women in rural India are found to have lower rates of mobile access than women in urban areas or women who are in school (Source: GSMA study).
Growth in mobile access can help extend economic and social benefits to them.

Pakistan

Pakistan, like many other developing countries, has seen an explosion in its mobile communications market in recent years; from 2004 to 2007, the number of subscribers in the country more than doubled annually.

By 2008, according to the Pakistan Telecommunication Authority, there were some 94.3 million subscribers, compared to only 5 million at the beginning of 2004. The number of mobile phone subscriptions in Pakistan was close to 100 million by August 2010, although future subscription growth could be very slow in a saturated market. (AudienceScapes, 2010)

Amid this boom in connectivity, Pakistan struggles with a volatile economy and political climate, further hampering economic growth and development.

Like its neighbor India, economic and gender-related inequity contributes to a sizeable disparity in Pakistanis' access to mobile technology. Our research shows significant gaps between men and women in terms of socio-economic roles, levels of education and literacy, and comprehension of English (one of two national languages used in government as well as the language of business, commerce and upward social mobility). See AudienceScapes: Pakistan and Gender

These gender gaps are more pronounced in rural areas of Pakistan: Notably, 64 percent of rural women say they are illiterate, double the overall national average. Literacy, language and socio-economic role issues have a direct effect on women's access and use of media and ICTs.

Vital Statistics: South Asia

Country	Base of Pyramid (% of population) From World Bank (2005)	GDP growth (%) 2000-2005-2009 From World Bank	Mobile Cellular Subscriptions (ITU) per 100 inhabitants 2000-2005-2009	Gender Inequality Index (UNDP) 2008 The smaller the value, the lesser the gap	Population (2009)
India	75.6% (2005)	4.0 --9.3—7.7	0.3—8—44	0.748	1.21 billion (2011 recently released)
Pakistan	60.3% (2005)	4.3-- 7.7--3.6	0.2—7—52	0.712	169,708,303 (2009)
Bangladesh	81.3% (2005)	5.9--6.0--5.7	0.2--6—32	0.734	162,220,762
Sri Lanka	Not available	6.0—6.2—3.5	2--17—70	0.599	20,303,477 (2009)
Nepal		6.2-- 3.1 -- 4.7	0.04—0.84 – 19.09	0.716	

Attitudes about women's interaction with technology are a reason that women are actively prevented from gaining access to mobile phones. Many with conservative opinions believe that the vulgarity on television would negatively influence women, and that mobile phones would give women secret access to nefarious influences (such as males). For all these reasons, women face a digital divide in Pakistan, especially in rural areas.

Also see: AudienceScapes: Pakistan and Mobile Phones

Sub-Saharan Africa

As mobile phones have spread through Africa in the last decade, what is remarkable is that the continent has not just adopted applications from the West; in fact mobile telephony has spawned many locally relevant innovations such as mobile money and SMS-crowdsourcing tools. The success and spread of these tools show that innovations crafted with a tacit understanding of the local conditions are more likely to be useful and widely adopted. In turn, this results in a greater availability of information, greater access to financial instruments and consequently a greater opportunity for growth and development.

When such advantages are on display, it is more pressing that these advantages are available to both genders; especially in lower economic classes. In Sub-Saharan Africa, a woman is 23 percent less likely to own a mobile phone than a man -- this divide is lower than in the Middle East and South Asia (GSMA Study).

Vital Statistics: Africa

Country	Base of Pyramid (% of population) From World Bank	GDP growth (%) 2000-2005 From World Bank	Mobile Cellular Subscriptions (ITU) per 100 inhabitants 2000-2005-2009	Gender Inequality Index (UNDP) The smaller the value, the lesser the gap	Population
Ghana	53.6 (2006)	5.9—4.7	0.6—13—63	0.709	23,837,261
Kenya	40 (2005)	5.9—2.6	0.4—13—49	0.735	39,802,015
Nigeria	NA	5.4—5.6	0.02—13—48	NA	154,728,892
South Africa	NA	5.3—(-1.8)	19—70—93	0.637	49,320,150
Mozambique	NA	8.4—6.3	0.3—7—26	0.721	22,894,294
Botswana	NA	1.6—(-3.7)	13—31—96	0.627	1,949,780
Uganda	76 (2005)	6.3—7.1	0.5—5—29	0.704	34,612,250
Zambia	NA	5.3—6.3	0.9—8—34	0.730	12,935,368

Nigeria

Nigeria is Africa's most populous nation, and mobile access has increased rapidly in the last decade. Due to both poor infrastructure and services provided by the state-owned Nigeria Telecommunications (NITEL) over the years, Nigerians have embraced commercial mobile service providers. Consequently, Nigeria is one of the fastest growing mobile markets in Africa.[i] Although mobile communication was only introduced in 2001, it has long surpassed fixed-line penetration.[ii] Nigeria has shown one of the highest growth rates of mobile phone access -- registering triple-digit growth rates in subscriber numbers. Cell phone subscribers grew from 0.02/100 subscribers in 2000 to 48/100 subscribers in 2009.[iii]

Unfortunately, the increase in access is not equal for men and women. Research ICT Africa's 2010 research paper titled, "Gender Assessment of ICT Access and Usage in Africa 2010," reports that 82 percent of men (16+) own a mobile phone or an active SIM card, while only 71 percent of women do, pointing to gender gap.

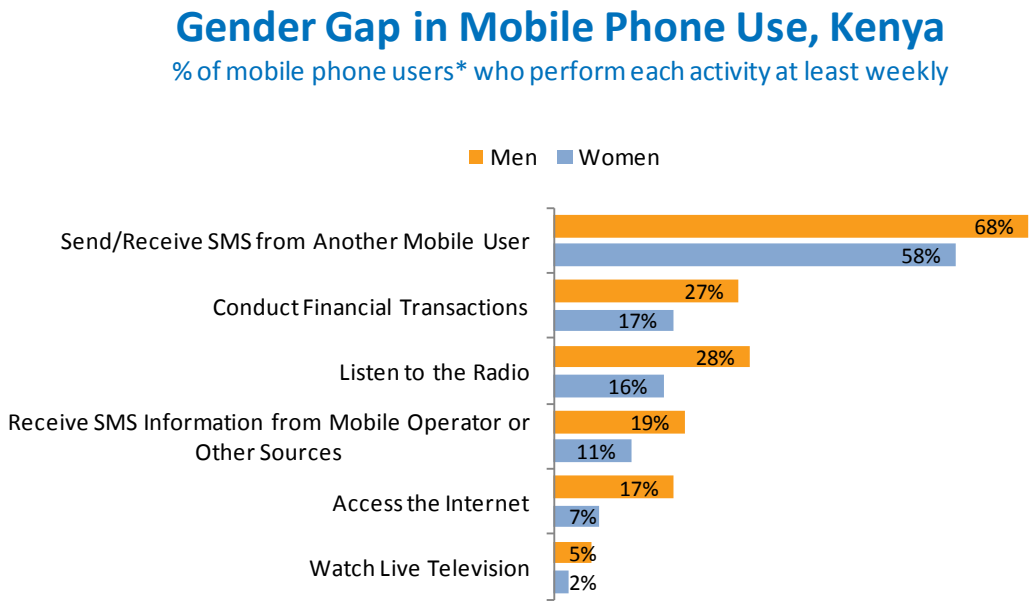
MTN Nigeria – which owns 50 percent of the market share in Nigeria -- has a social corporate investment implementing vehicle called MTN Foundation. For a number of years now, the MTN Foundation has partnered with credible nongovernmental organizations to help women improve their access to quality health, education and economic independence. The women, called Phone Ladies, were provided with tools and funds to start off. Today, many of these women have extended telecommunications services to thousands of other women too poor to own phones of their own. In the process, they are fending for themselves and their families, while many have also become employers of others. [iv]

As the most populous country in Africa, with expanding mobile access, there is a distinctive paucity of research on mobile access and use, especially for Nigerian women. While countries such as Kenya, Tanzania, Zambia, South Africa, have been studied extensively for growth in mobile money and mobile banking, a country like Nigeria should also be examined at its early stages of mobile penetration.

Kenya

Mobile phones are becoming widespread in Kenya, with 42 mobile phone subscriptions per 100 people in 2008, compared to an average of 32 per 100 for Sub-Saharan Africa as a whole. The level of access has grown rapidly since 2003, when Kenya was on par with the continent's average, which was five mobile phone subscriptions per 100 people. Much of the growth has come from the expansion of a single company, Safaricom. Safaricom's strategy has focused in large part on low-cost, pay-as-you-go plans that are affordable even for households below the poverty line. Safaricom's M-Pesa mobile money program (now Vodaphone) is often called the most successful in the continent -- and indeed has given those without any prior access to a bank the option to conduct financial transactions. Thirteen million people in Kenya and 6 million in Tanzania have adopted M-Pesa (see here: http://www.fistulacare.org/pages/pdf/technical-briefs/mobile_phone_brief_updated4.5.2011.pdf).

The 2009 AudienceScapes national survey in Kenya highlights a significant gap for cell phone ownership -- 67 percent of men versus 55 percent of women. Factoring in education as well as gender into cell phone ownership gives a fuller picture of access for Kenyan women. The gap in cell phone access between Kenyans with formal education and without is also substantial: 93 percent of formally educated Kenyans in our survey reported access, compared to just 50 percent of those without a formal education. Despite the country's free education system, a greater proportion of Kenyan men than women receive a formal education. In our survey, women were more likely than men to have received no formal schooling (14 percent of women in the survey reported having no formal education versus 8 percent of men), while they were half as likely as men to achieve a university degree.



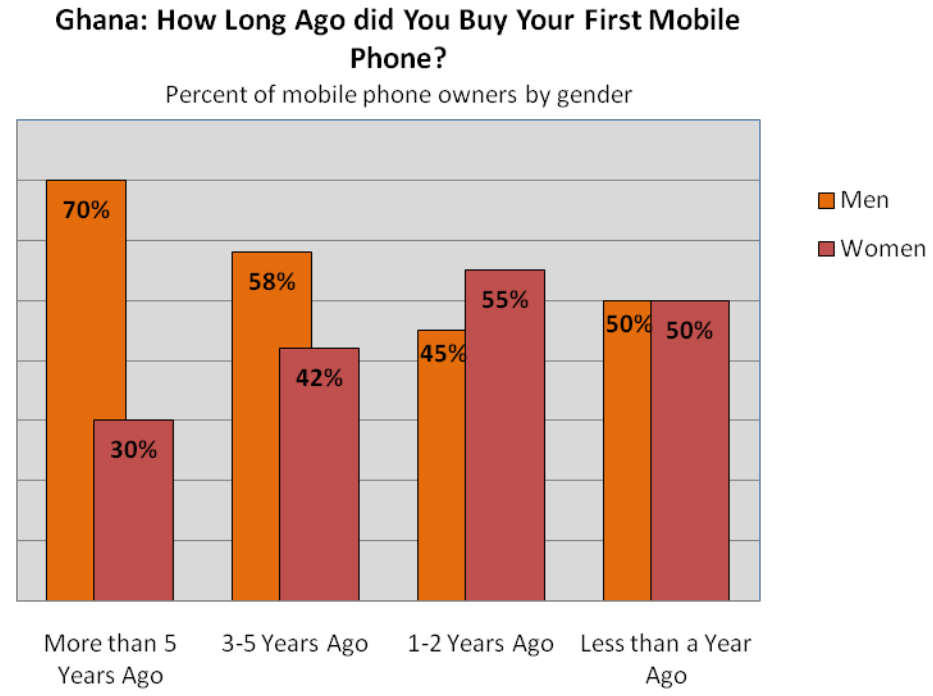
AudienceScapes National Survey of Kenya, July 2009. N=1810 adult (15+) mobile phone users. *"Mobile Phone Users" are respondents who used a mobile phone for any purpose in the past year.

The survey also shows **a gender gap in the use of cell phones for information-gathering**. Women are less likely than men to use cell phones for receiving news and information, relying instead on personal sources of information. This finding challenges the assumption that such technologies democratize the information environment by providing ready access to multiple sources for anyone. For more details: AudienceScapes **Gender Gaps in Kenya**

Ghana

According to the Ghana AudienceScapes 2009 survey, mobile phone access in Ghana is quickly outpacing that of landline phones. **Three quarters of the survey respondents said they had used a mobile phone for some purpose in the last week alone, and 88 percent had used a phone within the last year.**

But men were more likely than women to say that they used a phone in the last week. Also, only 58 percent of women surveyed said they own a phone, well behind 72 percent of men.



AudienceScapes National Survey of Ghana July 2009: survey of adults (15+) who own a mobile phone n= 1319

For more info- [Communication and Gender in Ghana]

Middle East

The Middle East is economically more advanced than South Asia and Africa; and consequently the level of mobile access is also higher. Compare the status of women in the region, however, and most countries have similarly high levels of gender inequality (see table). In fact, Yemen has the highest Gender Inequality Index among all nations (as reported by the UNDP).

As many citizens across the region are fighting for better governance and freer societies, it is important to ensure that all segments of society have access to basic mobile technology, especially women.

Egypt

Egypt has one of the fastest growing mobile markets in terms of absolute subscriber numbers.[v] This is due to its large population, compared to the rest of the Middle East region, as well as its large untapped market potential.

Reports suggest that stiff price wars among mobile operators have driven the prices low enough to give sections of the population with low incomes greater access. Our 2009 research in Egypt shows that 71 percent of the BOP population owns mobile phones. As the world has observed, mobile phones and other new media have played a big role in giving the most underrepresented segments of society a voice and a stake in their future.

But the gender disparity is blatant: When broken down by gender, 98 percent BOP men and 48 percent BOP women said they own cell phones. The GSMA study, "Women and Mobile: A Global Opportunity," states that traditional roles for men and women are prevalent in Egypt. [vi] In fact the report suggests that "traditional female roles in the household help to explain the relatively large mobile penetration gap between men and women. A woman is 26 percent less likely to own a mobile phone than a male in Egypt."[vii]

Given the tumultuous events in Egypt early this year, it would serve development practitioners to revisit the country and observe whether the revolution had any effect whatsoever (or was likely to have future repercussions) on women's access to and use of mobile phones.

Vital Statistics: Middle East

Country	Base of Pyramid (% of population) From World Bank	GDP growth (%) 2000-2005-2009 From World Bank	Mobile Cellular Subscriptions (ITU) per 100 inhabitants 2000-2005-2009	Gender Inequality Index (UNDP) The smaller the value, the lesser the gap	Population
Egypt	18.5 (2005)	5.4--4.5—4.6	2--18—67	0.693	82,999,393 (2009)
Syria	NA	2.7--4.5—4	0.1—15—46	0.635	21,092,262
Yemen	47% (2005)	4.4--5.6-3.8	0.1—11—35	0.835	23,580,220
Jordan	3.5 (2006)	4.2--8.1--2.3	8--56—95	0.693	5,951,000
Iraq	NA	-4.3---0.7—4.2	0--5—64	0.614	31,494,287
Lebanon	NA	1.3--0.9—9	19--24—57	NA	4,223,553
Morocco	14% (2007)	1.6--3—5	8--40—79	0.6555	31,992,592
Oman	NA	5.4--4-13(2008)	7—51—140	NA	2,845,415

Syria

According to figures from the Syrian government, 11.4 percent of the population lives in extreme poverty. High unemployment and high inflation has plummeted many middle-class Syrians further into poverty in the last decade.[viii] As Syria becomes the latest country to join the Middle East uprisings, economists in the country have issued warnings about the growing inequity between the rich and poor and acute joblessness. Extreme poverty is largely a rural phenomenon, with the UN Millennium Goals report suggesting that poverty doubled between 2004 and 2007 in rural

parts of southern Syria.[ix] Being a fairly traditional society, women in Syria's poorer regions endure greater hardships than men.

Mobile phones entered the Syrian market in 2000.[x] Syria's cell phone market is limited to two cell phone providers, South Africa's MTN and Syriatel. But mobile phone access has increased from 0.1 (per 100) mobile phone subscribers in 2000 to 46 (per 100) mobile subscribers in 2009, one of the fastest growing subscription rates in the world. To help expand the mobile market, the government last year approved an auction for a third license and decided to change the contracts of the two current operators, Syriatel and MTN Group's MTN Syria unit, to build-operate-transfer (BOT) license protocols.[xi] Arab Advisors report that Syria's cellular market is at the threshold of a radically new era: A new regulatory body and the upcoming award of a third mobile license.[xii]

Mobile phone services remain tightly controlled by the state, however; reports suggest that Syria has the most regulated telecom sector in the Middle East and one of the least developed. At the beginning of the Arab Spring in Syria, communication networks failed one day after authorities arrested dozens of pro-democracy activists in a crackdown against anti-government protests. In addition, MTN Syria and Syriatel, the two mobile operators operating under BOT contracts in the country, offered customers one hour of free calls between April 2 and 6 "in recognition of the people who stood with the President (Bashar) al-Assad during the day of dignity." They were referring to pro-regime demonstrations in the capital. Given the growing economic inequity and the tight government regulation, it would be important to observe how women, especially, were affected.

Yemen

World Bank estimates that 47 percent of Yemenis live below the poverty line. Its Gender Inequality Index is the highest in the region and the world (0.835 from UNDP). While economic growth has slowed down in the last year, mobile phone access has increased steadily from 0.1 (per 100) mobile phones in 2000 to 35 (per 100 mobile phones) in 2009. With a population of 23.5 million, this represents a sizeable potential market for future growth. The Arab Advisors Group projects Yemen's cellular market to grow at a CAGR of 15.7 percent from 2008 to 2012, reaching 10.537 million subscribers (a cellular penetration rate of 42.4 percent). Today, Yemen is a nation that is struggling hard against backdrop of violent tribal clashes and a growing haven for terrorists. Given the high gender inequality and growing mobile phone access, we should monitor women and their access to mobile phones.

The AudienceScapes project (www.audiencescapes.org) is aimed at bridging knowledge gaps about media preferences, personal communication habits and the use of information and communication technologies (ICTs) in Africa and in other developing regions. It is also a tool for identifying needs in media, communication technologies, development information and development policy.

The project's name refers to the benefits for development organizations of understanding the changing communication preferences and needs of their 'audiences'—the target populations and policymakers whom they are trying to support. Launched in April 2009 with support from the Bill & Melinda Gates Foundation*, AudienceScapes comprises four main elements:

- ***National quantitative surveys*** looking at (1) the general population's access to and use of media, access to and use of information and communication technologies (ICTs), and word-of-mouth communication habits; and (2) how these factors affect people's acquisition of knowledge about key development topics. Pilot projects are taking place in Ghana, Kenya and Zambia.

- ***In-Depth Interviews with policymakers*** to find out how they gather, assess, share and disseminate critical information related to development topics, and find out how global development partners can play a constructive role in this process**.** The interviews were begun in the same three African countries.

- ***The AudienceScapes website*** which provides access to the program's analytical reports as well as the quantitative survey data. The website also has detailed "Country Communication Profiles" of several countries in multiple developing regions, plus other resources for development practitioners working in communication, media development, technology development and policy dialogue.

- ***Custom Research and*** **Analysis** for organizations and companies in need of reports catering to their specific research needs.

For more information, contact us at audiencescapes@intermedia.org.

InterMedia (www.intermedia.org) is a nonprofit research, evaluation and consulting company with expertise in media, communications and development. We creatively equip clients to understand audiences, design projects, target communications and gauge project impact in developing and transitional societies worldwide.

**The findings and conclusions of the AudienceScapes research project are those of InterMedia and do not necessarily reflect the positions or policies of the Bill & Melinda Gates Foundation.*

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[i] http://www.mobilemonday.net/reports/MobileAfrica_2011.pdf, Pg 15

[ii] http://www.africantelecomsnews.com/resources/AfricaOpp_Nigeria.shtml

[iii] Source: ITU

[iv] http://www.vanguardngr.com/2010/04/women-and-call-against-ict-gender-divide-the-mobile-world-reflections/

[v] http://www.africantelecomsnews.com/resources/AfricaOpp_Egypt.shtml

[vi] http://www.mwomen.org/Research/women-mobile-a-global-opportunity_1

[vii] http://www.mwomen.org/Research/women-mobile-a-global-opportunity_1 pg 45

[viii] http://www.syria-today.com/index.php/may-2010/560-focus/7733-assessing-the-poor

[ix] http://www.syria-today.com/index.php/september-a-october-2010/616-news/12150-third-millennium-development-goals-progress-report-released

[x] http://www.escwa.un.org/wsis/reports/docs/Syria-07-E.pdf

[xi] http://www.mubasher.info/portal/CASE/getDetailsStory.html?storyId=1855794&goToHomePageParam=true&siteLanguage=en

[xii] http://www.arabadvisors.com/publishedreports.htm?filter0[]=**ALL**&filter1[]=Syria