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Culture's consequences: Economic barriers to owning mobile phones experienced by women in India

1. Introduction

This study broadens our understanding of the role of culture in creating different types of economic barriers for women, which dim their chances of owning a mobile phone in a male-dominated Indian society. Study findings reveal the *specific ways* in which *cultural* factors like (i) the long power distance between men and women, (ii) the gender role defined by Indian society for women, (iii) women's attitudes of avoiding uncertainty, and (iv) collectivistic practices, make it challenging for all of the study participants (here onward referred to as participants) to own some of the most inexpensive mobile phones worth $15 or so on monthly installments of $1 a month.

India, the case in point, is a nation with 1.3 billion people where the coverage of mobile telephony has expanded, and mobile phone subscriptions have increased by over 500% since 2000. The liberalization policies enforced by the Telecom Regulation Authority of India have promoted fierce competition in the Indian mobile phone industry (Gandhi, 2010). Inexpensive mobile phone handsets worth $15 or so and one of the cheapest tariff rates in the world (e.g., less than two cents per minute) have made mobile phones affordable for all. As a result, by December 2013, India had more than 900 million

mobile phone subscribers with approximately 7 million new mobile phone users joining the ranks every month (Telecom Regulatory Authority of India, 2014).

However, the favorable conditions for owning a mobile phone do not benefit men and women equally in the country. For instance, in 2011, women owned less than 30% of the total mobile phone subscriptions in India (Vodafone India Group, 2011), when there were 940 females per 1,000 males in the country. Historically, men are advantaged over women in terms of accessing information and communication technologies (ICTs) in the male-dominated Indian society (Shirazi, 2012; Venkatesh, 2000). This gap between men and women with regards to accessing ICTs is known as the *gender digital divide*.

The existing research on the gender digital divide frequently finds that economic barriers play the most significant role in preventing women from owning ICTs in developing nations. For instance, after surveying women in 12 Latin American and 13 African countries between 2005 and 2008, the most extensive empirical study on the gender digital divide concluded that women's unfavorable conditions with respect to their employment and income are primarily responsible for their diminished access to and use of ICTs in developing nations (Hilbert, 2011). The cost of maintaining ICTs (Mijumbi, 2002), women's limited economic progress (Hafkin and Taggart, 2001), and their lessened or lack of access to financial resources required for accessing ICTs (Huyer and Sikoska, 2003; Zainudeen et al., 2010) are some of the most frequently identified economic barriers creating and maintaining the gender digital divide in developing nations. In support, one of the latest studies on bridging the gender digital divide reports that the cumulative cost of (i) a mobile phone handset, (ii) a SIM card, (iii) purchasing a

mobile phone on installments, and (iv) charging a phone battery, is the topmost barrier preventing women from owning a mobile phone in India (GSMA, 2015).

To completely understand and address the widespread phenomenon of gender digital divide in developing countries like India, it becomes necessary to identify the root cause of economic barriers that prevent women from owning a mobile phone. Past studies often find economic factors (e.g., inflation, lack of economic opportunities, lack of access to formal financial services, etc.) to be responsible for creating economic barriers to owning mobile phones (Potnis, 2011; Zainudeen et al., 2010). However, past studies rarely show the specific ways in which non-economic factors such as cultural inequalities create economic barriers to owning mobile phones in male-dominated societies. This study fills in this gap in the existing research on the gender digital divide related to the most widely adopted ICT in the world.

1.1. Research Questions

This empirical research explores the non-economic factors responsible for creating economic barriers precluding women from owning a mobile phone in the male-dominated Indian society. In particular, the research questions are as follows:

RQ1: What types of economic barriers preclude women from owning a mobile phone in India?

RQ2: What are the non-economic factors responsible for creating the economic barriers that prevent women from owning a mobile phone?

RQ3: In what specific ways do these non-economic factors create the economic barriers obstructing women's ownership of a mobile phone?

To answer these questions, this qualitative study conducts semi-structured surveys with 245 female slum-dwellers who cannot own a mobile phone despite their strong desire to own the device. One of the primary reasons to conduct this study with female slum-dwellers is that they represent one of the most economically disadvantaged communities in the country. Hence, they are more likely to experience a wide range of economic barriers to owning a mobile phone than any other female population in India, which would facilitate the identification of the root cause of the economic barriers precluding women from owning a mobile phone in the country.

1.2. Organization

This paper is organized as follows. Based on the past literature revealing the cause and effect relationship between culture and economic barriers, the second section predicts cultural factors to be responsible for creating economic barriers for participants to own a mobile phone. The third section presents details of data collection and data analysis. The fourth section illustrates the specific ways in which cultural factors create different types of economic barriers for participants to own a mobile phone, which is one of the unique contributions of this study to the existing literature on the gender digital divide. The concluding section discusses implications of this study, the limitations of this study, and future research opportunities.

2. Background & Conceptual Lens

2.1. Barriers to Adopting Mobile Phones in Developing Countries

Past studies show that cultural, economic, technical, demographic, and psychological factors prevent people from owning or using mobile phones in developing countries (Chib and Chen, 2011; Duncombe, 2011; Shaikh and Karjaluoto, 2015).

A study conducted with poor women earning less than a dollar a day reveals a number of cultural barriers experienced by them when using mobile phones in the male-dominated Indian society. For instance, men's tendency to discourage women from using ICTs creates hurdles preventing them from owning a mobile phone. Unwanted, abusive calls from unknown men deter women from owning a mobile phone in rural India (Potnis, 2011). Sometimes, rumors create confusion, doubt, or fear concerning using mobile phones, which prohibits women from owning or using mobile phones in rural parts of developing countries (Huyer and Mitter, 2003). Cultural factors play a key role in preventing women from owning and using mobile phones in developing countries (Hofstede, 2014; Huyer and Sikoska, 2003; Mohanty, 2003; Recabarren et al., 2008; Zainudeen et al., 2010).

Economic opportunities (Potnis, 2010), employment status (Ling, 2000), disposable income (Daly, 2007), cost of mobile communication in developing countries including the cost of mobile phones (Mbarika, 2002), and mobile access tariffs as a percentage of per capita income (Hafkin and Huyer, 2008) are some of the most common economic barriers preventing the adoption of mobile technologies in developing countries. For instance, the limited economic opportunities in rural parts of India decrease the perceived utility of mobile phones, discouraging women from investing their precious financial resources into mobile phones (Potnis, 2010).

Poor technology infrastructure in developing countries leads to a number of quality-of-service issues including networks with inconsistent signal strength and unreliable electricity supplies for operating mobile phones (Cecchini and Scott, 2003; Duncombe, 2011; Rao, 2005). Mobile user interfaces in foreign languages like English, complex menu sequences on small screens, and the tiny buttons of mobile devices represent some of the most common human-computer interaction barriers to owning or using mobile phones in developing countries (Gitau et al., 2010). Sometimes illiterate and semi-literate mobile phone users find it difficult to retrieve account information from password-protected mobile phones since they are likely to forget their passwords, discouraging them from using mobile phones (Mohan and Potnis, 2015).

Demographic factors such as age, lack of education, and technical illiteracy may create or reinforce psychological barriers in the form of a lack of confidence or a negative attitude among people toward using mobile phones in developing countries (Slade et al., 2013). Psychological barriers are reinforced among mobile phone users in developing countries when they are unable to resolve minor technical issues during operation (Shaikh and Karjaluoto, 2015), deterring them from using their mobile device. The inability to conduct electronic transactions on mobile phones may discourage mobile phone users from exploring and benefitting from a number of functions and services available on their mobile phones (Gitau et al., 2010).

2.2. Culture & Gender Digital Divide in Male-Dominated Societies like India

The degree of gender differentiation in a country is highly dependent on its culture (Hofstede, 2014; Huyer and Sikoska, 2003; Mohanty, 2003; Recabarren et al., 2008; Zainudeen et al., 2010). Cultural norms and practices in the society explain a sizable

amount of variation in the adoption of innovation products including ICTs like mobile phones (Dwyer et al., 2005). Van Dijk (2001) identifies the role of cultural inequalities such as power differences between men and women and gender inequalities in bureaucratic and professional text and talk in creating the gender digital divide in the developing world. Discriminatory Iranian laws grounded in the country's religious and cultural practices prohibited Iranian women from accessing ICTs for decades (Shirazi, 2012). A number of past studies (e.g., Chib and Chen, 2011; Hafkin and Huyer, 2006; Huyer and Mitter, 2003) confirm the role of culture in creating the gender digital divide in developing nations.

2.2.1. Indian Cultural Context

Rampant female feticide in pursuit of a male child (Ahmad, 2010; Puri et al., 2007), one of the highest female child mortality rates in the world (Agnihotri, 2001), the large number of unreported cases of dowry murders (Gangoli and Rew, 2011; Sharma and Gupta, 2013), and the growing number of rapes and murders of women, irrespective of their age, indicates the oppressed living conditions for Indian women and exemplifies some of the national cultural values and practices of the Indian society.

Women's oppression in the country is grounded in its cultural norms and beliefs practiced for centuries by the male-dominated society. For instance, traditional Hindu and Muslim beliefs portray a *daughter as a burden*; *kanya-daan,* a religious ceremony in Hindu weddings, which literally translates to donating your daughter to her husband, is considered as one of the greatest duties of a Hindu father. It is important to note that parents neither consider their son as a burden nor donate him to his wife. Several parents wish to get rid of the *burden* by arranging her wedding, even against her wishes. In an

anticipation of offering dowry, parents start saving for their daughter's wedding right from her birth (Agnihotri, 2001; Sharma and Gupta, 2013).

2.2.2. Cultural Factors Creating Economic Barriers for Indian Women to Own ICTs

The existing literature on the gender digital divide suggests that cultural factors lead to economic barriers, making it challenging for women to own ICTs in male-dominated societies like India. Khan and Ghadially (2009) observed that cultural beliefs were the strongest predictors of Muslim women's ownership of ICTs in India. Gender roles, one of the manifestations of cultural values, affect female ICT users the most in India (Vodanovich et al., 2010). Patil et al. (2009) conclude that oppressive gender relations and men's hegemony inhibit women's ownership of ICTs. In addition, the cultural environment at home and at work play a critical role in creating persistent economic barriers for Indian women (Gajjala, 2002).

However, only a small number of studies show the specific ways in which culture creates economic barriers precluding women from owning ICTs. For instance, Mijumbi-Epodoi (2003) reveals that unequal economic opportunities and access to and control over financial resources and economic benefits lower the status of women in comparison to men. As a result, men often times control women's access to ICTs in developing nations.

To learn the specific ways in which culture creates economic barriers, this study employs Hofstede's conceptual lens with the following four dimensions: (a) power distance, (b) masculinity versus femininity, (c) uncertainty avoidance, and (d) individualism versus collectivism.

2.2.2.1 Why Employ Hofstede's Lens?

There are several competing theories and sophisticated cultural frameworks (e.g., Dickson et al., 2003; Inglehart and Welzel, 2005; Myers and Tan, 2002; Trompenaars and Hampden-Turner, 2000, etc.) available to study the effect of culture on the ownership and usage of ICTs by individuals. However, Hofstede's cultural lens allows researchers to compare and contrast the unique cultural characteristics of individuals against the cultural characteristics of their group, organization, and society; this flexibility is useful in studying the role of culture in shaping a specific phenomenon, especially when individuals don't necessarily identify with the culture of their family, group, organization, or society. The dimensions of Hofstede's cultural lens provide a taxonomy of culture, which equips researchers with the tools to assess a number of social trends and phenomena such as the barriers to adopting mobile phones on all levels (i.e. individual, group, organization, and society as a whole), in a systematic and structured way (Hofstede, 2001).

Hofstede (1980) defines culture as a "collective programming of the mind which distinguishes the members of one human group from another" (p. 25). Hofstede's lens is based on his multi-year cross-cultural study conducted with around 120,000 employees of IBM in 40 countries. The dimensions of his cultural lens reflect in all the spheres of social life, including the ownership of mobile phones. Hofstede's lens introduced in 1980 play a key role in shaping individuals' attitudes and behavior related to ICT adoption, and hence, remains one of the most popular ways to measure and predict the influence of culture on ICT adoption (Ford et al., 2009).

For a number of years, researchers (e.g., Carpenter and Fredrickson, 2001; Gefen and Straub, 1997; Igbaria and Zviran, 1996; Jarvenpaa and Leidner, 1998; etc.) have

applied his lens or have developed ancillary theories based on his lens to study ICT adoption. However, previous studies have rarely applied his cultural dimensions to study the gender digital divide as a consequence of culture in a developing nation, which is one of the unique contributions of this study.

2.3. Hofstede's Conceptual Lens

Table 1 synthesizes key attributes of Hofstede's four cultural dimensions.

[Insert Table 1 Here]

Table 1. Hofstede's Cultural Dimensions

2.3.1. Criticism

Hofstede's viewpoint of culture – the shared values and assumptions held by individuals within a nation – has been criticized heavily by researchers and practitioners alike (McSweeney, 2002). The main criticism against Hofstede's cultural dimensions can be synthesized as follows: (a) Culture cannot be treated as a static, homogenous factor in the society; (b) Culture cannot be equated to nation; (c) Hofstede's cultural dimensions do not take into account the flexible and changing nature of culture; and (d) His conceptualization of culture does not take into consideration the sub-cultures of various ethnic and regional communities and differences among them (Baskerville, 2003; McSweeney, 2002; Recabarren et al., 2008).

2.3.2. Applying Hofstede's Cultural Dimensions

Hofstede's dimensions may not indicate the culture of entire nations but they are useful in studying individual cultural values and their impact on ICT adoption, since central tendencies in any nation are replicated by individuals in their practice (Hofstede, 2014).

This study uses Hofstede's original four dimensions as a proxy for culture. It analyzes the gender digital divide, a macro-level phenomenon, using a micro-level unit of analysis, i.e. the economic barriers to owning mobile phones in India are studied using *personal* experiences in relation to the national culture and personal ways of responding to various cultural dimensions.

2.4. Assumptions about the Role of Culture in Creating Economic Barriers

Since this was an exploratory study, no specific hypotheses for testing were formulated. However, the past literature helped this study formulate a list of potential cultural factors creating economic barriers for participants to own a mobile phone.

1. Hofstede categorizes India as a masculine society since the society is driven by material success, competition, and achievements (Hofstede, 2014). He claims that one-way devices (e.g., fax) are more prominent in masculine countries, while two-way devices (e.g., mobile phones) are more likely to be adopted in feminine countries, as they enable contact even after regular working hours (Hofstede, 2001). Hence, the researcher assumed that only financially independent participants would be able to own a mobile phone. This study defines financial independence in terms of one's ability to earn personal income above the poverty line in the country.
2. Hofstede (2014) finds a high appreciation for hierarchy and unequal distribution of power in Indian society. In cultures with long power distance, a weaker faction feels psychologically secure when controlled and dominated by a stronger faction in the society. For countries with long power distances and paternalistic families, people cannot use ICTs at their will; in such cultures, there is a higher preference, and

hence higher practice, for the hierarchical use of ICTs and individuals' access to ICT is controlled by superiors, authorities, or people with higher socioeconomic status (Kambayashi and Scarbrough, 2001). Hence, the researcher assumed that male members of participants' families would control participants' income sources and financial decisions, making it challenging for them to own a mobile phone.

3. In cultures with low uncertainty avoidance, there is less need for predictability and people rely less on rules to perform tasks; due to less rule-dependency, these cultures trust and rely more easily on ICTs than others (De Mooij, 2000). Low-uncertainty-avoidance cultures make greater use of technological innovations like the Internet or mobile phones when compared to high-uncertainty-avoidance cultures. Indians have a medium low preference for avoiding uncertainty (Hofstede, 2014). As a result, the researcher assumed that participants would not invest in a mobile phone until they are convinced of deriving financial returns on it.
4. India is a society with both collectivistic and individualistic traits (Hofstede, 2014). Hence, the researcher assumed that this cultural dimension may encourage or discourage participants from owning a mobile phone.

3. Methods

3.1. Data Collection

This study was conducted at multiple research sites, i.e. slums, located in and around Dombivli and Shirwal, an urban and a rural area in Maharashtra, one of the western states in India. Due to traditional cultural norms, beliefs, and practices, it was unlikely that female slum-dwellers would share their stories and struggles to own a mobile phone with an unknown male researcher (Suppressed for peer review). Hence, the

researcher recruited two middle-aged poor female social workers with college degrees as his local assistants. Due to their social work with female slum-dwellers, they had easy access to the communities of women who could potentially participate in this study. Snowball sampling was adopted to locate female slum-dwellers who did not own mobile phones but had access to the mobile phones owned by their male family members. The local assistants would check with family members, especially children of the women or neighbors, to make sure that the women selected for the study had not owned a mobile phone ever in their life. With the help of the local assistants, the researcher distributed semi-structured surveys to 245 participants living in rural and urban slums.

The survey questionnaire was composed in Marathi, a native language of the participants and the researcher. The survey was based on the past studies (e.g., Gandhi, 2010; Mijumbi, 2002, etc.) exploring economic barriers to owning ICTs in developing countries. Some of the questions that elicited the most pertinent and rich qualitative responses were as follows: (1) Can you describe three main reasons for not owning a mobile phone? (2) Does any other family member living with you own a mobile phone? If yes, how many times, in the last month, were you able to access their mobile phone at your will? (3) Have you experienced any loss due to lack of ownership of a mobile phone? If yes, do you wish to describe that loss? (4) Why would you like to own a mobile phone? (5) Would anybody resist you owning a mobile phone? If yes, why? (6) Would anybody assist you in owning a mobile phone? If yes, how? (7) How do you plan to pay phone bills after you start owning a mobile phone?

The researcher had specifically instructed the local assistants to record the non-verbal communication during their interaction with participants; as a result, the assistants

took notes of the emotional reactions of some of the participants, which offered a perspective to the researcher allowing easier communication and better interpretation of the qualitative responses collected in his absence. Many native expressions, adages, and local references helped to capture attitudes, perceptions, feelings, and thoughts of the participants effectively. The notes regarding the non-verbal communication of local assistants with participants, their periodic reporting of the data collection process to the researcher, and his familiarity with the cultural norms, beliefs, and practices in the area helped him better interpret the qualitative responses to identify the role of cultural factors in creating economic barriers to owning a mobile phone. It took approximately 10-15 minutes for the participants to select multiple choice answers and answer open-ended inquiries. The survey responses were read back to the participants to seek their approval and confirm that the local assistants had captured exactly what the participants meant.

The researcher then translated the survey responses, and the translation was cross-checked by a female social scientist whose native language is also Marathi. The inter-rater agreement between the researcher and the female social scientist was 95%, which confirmed the level of accuracy for the translation.

3.2. Data Analysis

The qualitative responses of the participants were analyzed using the data presentation and analysis methods proposed by Miles and Huberman (1994), including development of summary sheets for each survey response (see Table 2). Each summary sheet reflected actual response by participants and observations recorded by local assistants.

[Insert Table 2 Here]
Table 2. Sample Summary Sheet

Individual survey response data was coded followed by the coding of the overall dataset. Participants report income and savings related individual- and family-level economic barriers to be mainly responsible for their inability to own a mobile phone. For instance, they (a) depend on their husbands financially, (b) earn only through the ways approved by their in-laws or husbands, (c) spend most of their income to support a majority of financially dependent family members (e.g., children, in-laws, etc.), or (d) use a majority of their savings for their in-laws, husbands, or relatives in return for the safety and security assured by being member of a family, which precludes participants from owning a mobile phone. Table 3 synthesizes the coding of barriers reported by participants for not owning a mobile phone.

[Insert Table 3 Here]
Table 3. Reasons for Not Owning a Mobile Phone

All of the responses, including the reasons for not owning a mobile phone, were read and assessed repeatedly using Hofstede's cultural lens to identify the specific ways in which cultural inequalities create economic barriers to owning mobile phones in male-dominated societies. Each response was analyzed on an individual level and then compared across subjects to identify patterns and common categories. The researcher utilized help from a female social scientist who provided rating reliability checks by independently coding and analyzing samples of interview transcripts.

Data analysis reveals that cultural inequalities in the male-dominated Indian society create a majority of economic barriers reported by participants, preventing them

from owning a mobile phone. Not all of the economic barriers experienced by participants resulted from cultural factors. For instance, economic barriers caused by sudden financial losses in business, low profit margins in business, and inflation were not related to any cultural inequalities in the male-dominated society. However, culture serves as the root cause of a majority of the economic barriers hindering participants' ownership of mobile phones.

Table 4 identifies and maps the specific role of each of the Hofstede's cultural dimensions in creating a specific economic barrier preventing participants from owning a mobile phone, which is one of the unique contributions of this study.

[Insert Table 4 Here]

Table 4. Cultural Factors Creating Economic Barriers to Owning Mobile Phones

4. Findings & Discussion

The average age of participants, who belong to lower caste Hindu and Muslim minority communities in rural and urban India, was 37. Around 60% of participants were between the ages of 25 and 45. Approximately 40% of participants were illiterate; thirty percent of participants dropped out of school before the 10^{th} grade; twenty percent of participants left school after the 10^{th} grade; and the remaining participants were college graduates. With multiple sources of income, almost all of the participants earned on average a little less than $2 a day (see Table 5). Thus irrespective of the difference in age, education, income, religion, and geographic location, all of the participants faced a common challenge of not being able to own a mobile phone.

[Insert Table 5 Here]

Table 5. Socio-Economic Characteristics of Participants

However, all of the participants had access to a mobile phone through their family members. For instance, at least one male family member (e.g., husband, children, father, brother, etc.) of all of the participants owned a mobile phone. As result, all of the participants were confident in operating mobile phones. They did not report any psychological barrier to owning a mobile phone.

In spite of having access to a mobile phone all of the participants had a strong desire to own a mobile phone. Participants could access mobile phones only when they were with the male family members who own them. Participants could not receive phone calls from others when the male family members were busy using their mobile phones. In some instances, the participant's access to mobile phones entirely depended on the male family members' willingness to share their mobile phones with the participants. Sometimes the amount of time the participants could use the mobile phones was also decided by the male owners. Due to uncertain access to mobile phones, participants could not use these phones anywhere anytime, which takes away the advantage of using a "mobile" technology. Also, accessing someone else's mobile phone does not provide the same level of social respect as it does by owning the ICT. Hence, the researcher argues that the *ownership* and not access to ICTs is a better indicator of gauging the gender digital divide in developing nations.

For a majority of the participants, owning a mobile phone was the only solution to overcome their restricted access to mobile phones. Despite being financially independent, they could not own a mobile phone. In terms of the purchase power parity, the personal average daily income of a majority of the participants was six times more than that of the

poverty line defined by the government of India, which would be more than sufficient to buy some of the most inexpensive mobile phone handsets worth $15 or so on 18 or 24 installments of less than $1 a month. Thus financial independence was not a sufficient condition for participants to own a mobile phone in the male-dominated society, which disproves the first assumption of this study.

4.1. Cultural Factors Creating Economic Barriers to Own a Mobile Phone

This sub-section illustrates the specific ways in which cultural factors create economic barriers for all of the participants. It is important to note that past studies rarely examine the phenomenon of gender digital divide in developing nations using a specific cultural lens.

4.1.1. Long Power Distance and Collectivism Force Women to Share Income and Savings to be Safe in the Male-dominated Culture

In general, women are vulnerable in male-dominated cultures with long power distances (Hafkin and Taggart, 2001), where power is unequally distributed between men and women. Women, who represent less powerful members of the male-dominated Indian society, often rely on and feel secured by the protection offered by men in their families (Hofstede, 1980). Depending on the degree to which women accept and expect that power is distributed unequally, men start controlling women's safety in the Indian society (Sharma and Gupta, 2013). Due to the increasing violence against women and worsening social conditions for women in India, it is not safe for women of any age to live by themselves in the country (Simister and Mehta, 2010). Hence, the support of husbands, in-laws, fathers, brothers, or their male children becomes necessary for women of all ages.

If it was safe for women to live by themselves, participants could have purchased a mobile phone using personal savings. However, participants have no choice but to sacrifice personal savings to be safe in the male-dominated Indian society. Raksha, a 40-year old hawker, sells vegetables to support her family of six. She hardly earns more than a dollar a day, but her husband does not earn at all. He is dependent on the property inherited from his father. He wastes all of his inherited money on various addictions rather than taking care of his family. In contrast, she invests her earnings back into the family but cannot even think about pursuing any kind of personal pleasure or need like owning a mobile phone. Despite being financially independent Raksha lives with her husband and uses all of her savings for the family because his presence makes her feel psychologically secure in the male-dominated society.

The male-dominated cultures with a long power distance are mainly collectivist (Hofstede, 1980) where women are tightly linked to their in-groups such as families that continue to protect women in exchange for unquestioning loyalty. Women are expected to demonstrate their loyalty by sacrificing their personal interests for their families. Aasha, a 35-year old 10^{th} grade educated unmarried woman, has a government contract for cooking lunch for school children in her village. Every day except weekends, she prepares lunch for 100 children. In addition, she also prepares traditional Indian snacks and sweets as per order. Despite earning little below two dollars a day, she could hardly save two dollars a month for old age. She contributes almost all of her savings to her brother's family of seven since she lives with them. She pays for festivals, clothes, and various other unexpected expenses with her meager earnings. Nothing is left for her mobile phone. She cannot live alone since she does not feel it is safe to live by herself.

The inability of Aasha and Raksha, representatives of the financially independent women who cannot afford to own a mobile phone in male-dominated societies, suggests that although collectivism helps women to be safe with their families the unequal distribution of power forces them to sacrifice their personal savings to be safe in the male-dominated society, which creates economic barriers to owning a mobile phone even for financial independent women. Past studies rarely find this adverse effect of a combination of collectivism and long power distance on women's financial ability to own ICTs, which is one of the unique contributions of this study to the literature on the gender digital divide.

4.1.2. Long Power Distance Empowers Men to Control Women's Sources of Income

In rural India, it is considered the duty of married women to obey and please their husbands and in-laws (Gangoli and Rew, 2011). Parents typically domesticate their young daughters to follow the orders of husbands and elder in-laws (Sharma and Gupta, 2013). As a result, women easily accept the power inequality in the male-dominated Indian society. In addition, traditionally, girls are considered to be "asset" of their in-laws; hence, parents do not easily invest in their girl's education (Gangoli and Rew, 2011). Due to lack of education or family pressure, some participants are forced to engage in multiple part-time low-skilled jobs or to be part of family businesses, which do not fetch them enough returns to buy a mobile phone.

Daughters are required to help parents in their business and most of the times do not earn income in any other way. Being desirous of greater earnings could also be perceived as a threat to the male-dominated economic hierarchy in the family structure (Chib and Chen, 2011). Puja (all names are changed to retain anonymity of participants), a 22-year old 8th grade-educated woman who was married for more than two years,

complained that her in-laws forced her to be part of their traditional flower business. She earns over a dollar a day in the business since her elders do not allow her to earn in any other way. She said: “We live in a rental home. We don’t earn much. Whatever we earn gets turned over on the same day. Daily earnings are just enough for that day. We have medical expenses and many more other endless expenses.” Several participants complained about their husbands, who selectively pass information about earning daily wages to the participants, resulting in low fluctuating personal daily wages for the participants.

In addition, men at work dominate and control participants’ sources of income and financial decisions. Participants shared their grief with regards to their male supervisors offering low salaries and low raise in salaries to the participants compared to the male colleagues performing the same set of duties at work. As a result, women earn less than what they deserve and lack freedom to make financial choices, which leads to fluctuating low personal income and overall low household income.

The above facts are in congruence with the past research on the gender digital divide (Mijumbi, 2002), which shows that male dominance prohibits women from owning ICTs in Africa, and confirm the second assumption regarding the role of a long power distance in obstructing women’s ownership of a mobile phone.

4.1.3. Gender Roles Defined for Women Force them to Adopt Collectivistic Practices like Sharing Income and Savings

In masculine cultures, there is a strong sex-role differentiation where women are supposed to assume emotional roles and cater to the needs of family members (Hofstede, 1980). This study shows that gender roles defined for women cost participants their

earnings and savings. For instance, women end up taking financial responsibility for dependent family members since they care for their loved ones. Jayashree, a 74-year old woman who drops off children to school for a living, said, “I receive a very small pension. I take care of my grandson using the pension. I earn by dropping off children at their schools. My son is useless and my daughter-in-law is dead. My low income is not sufficient enough for us to buy a mobile phone.” Parvati, a 30-year old illiterate woman married for more than ten years, serves as a maid at several houses but cannot earn more than two dollars a day. With tears in her eyes she said, “My husband has been disabled for several years now. I take care of my sister-in-law, her daughter, plus the expenses of my son's hostel don’t allow us to buy a mobile phone.”

Women’s motherhood and the gender roles defined by Indian society force them to spend a majority of their earnings on their families. Nazmin, a 30-year old woman who has been married for more than ten years, has financial responsibility for seven family members. Nazmin shared her grief when a local assistant filled in the survey for her, “My husband is addicted to alcohol. He does not share any expenses. The whole burden is on me. I cannot spend anything for me; hence, I do not have a mobile phone.” Her response represents a majority of female participants who assume the financial burden of their entire family.

Women are also forced to assume the financial burden of families in the absence of financial support from husbands. Although women seem to hate their husbands for not assuming any financial responsibility, they end up living with such husbands forever. Shehnaz, a 40-year old woman who has been married for more than 20 years, sometimes

earns more than four dollars a day by selling bangles and ladies' ornaments on a cart, and takes care of three more members in her family. She complained:

> "Women may die working for their families, but it is still not enough for men...The government is responsible for our state. Men are very lazy...if one man does not work other men think why should we work then? Let the women take the entire financial burden of the family…"

When asked about the reasons to continue staying with an irresponsible husband for over two decades, Shehnaz confessed that after having children she did not have any other option but to be with her husband so that the children could have a father in their lives. In return, she sacrificed a number of her desires in life, including the ownership of a mobile phone.

Indian society expects "ideal wives" to share their savings with in-laws. Ujjwala, a young married woman, earns less than a dollar a day and shares half the financial responsibility for her family of four by tutoring students and working as a maid-servant. She wrote in her survey: "I share all my earnings with the family, so I don't have enough money to buy a mobile phone. I could hardly save any money after contributing to the family." Shanti, a 60-year old illiterate woman has financial commitments in her hometown, which hold her back from saving any earnings. She remits a specific amount to her in-laws every month, which is one of the main reasons she has not been able to buy a mobile phone.

The above findings suggest that gender roles defined for women in the male-dominated Indian society force participants to be an emotional support, and ultimately, a

financial support for their families, costing them their income and savings. Thus the combination of gender roles and collectivism preclude participants from owning a mobile phone. Past studies rarely find this adverse effect of the combination of collectivism and gender roles on women's ability to own a mobile phone, which is one of the unique contributions of this study to the literature on the gender digital divide.

4.1.4. Minority of Participants Avoid Financial Uncertainty, Refraining from Investing in Mobile Phones

Uncertainty avoidance, one of the dimensions of Hofstede's cultural lens, represents people's tolerance for uncertainty and ambiguity. It indicates the extent to which someone feels uncomfortable or comfortable in novel, unknown, surprising, or different from usual situations (Hofstede, 2014). A small number of participants (n = 23) in this study, who had a strong desire to own a mobile phone, thought that it would be a financially risky proposition to do so, and hence, avoided owning one. For instance, Meena, a 50-year old lady who holds a graduate degree in business, lost her mobile phone when it fell down in a puddle. Her mobile phone was damaged and she could not use it anymore. Since then she uses her husband's mobile phone. She sighed, "A mobile phone is an expensive affair. I don't want to lose it again. It is better that I use my husband's mobile phone which I can access anytime I wish." Snehalata, a 52-year old married woman, earns less than 25 cents a day by preparing traditional Indian snacks. She said: "Mobile phones are too expensive. I don't have enough money for a mobile phone. I cannot afford to recharge a mobile phone or use a prepaid one." Two of her friends, Sunita and Vaishali, who also earn by preparing traditional snacks, decided to stay away from mobile phones due to their unaffordable prices. They see buying a mobile

phone as a risky venture, especially if for some reason they are unable to afford prepaid cards or fail to pay postpaid mobile phone charges.

A few participants experience financial uncertainty due to sudden financial losses in business, low fluctuating seasonal daily wages, and inflation-led burgeoning household expenses, which prohibit them from taking the risk of investing their meager earnings in a mobile phone. They see the act of purchasing a mobile phone as a long-term financial commitment to keep the phone active; due to financial uncertainty, they were not willing to make this commitment.

These findings disprove the third assumption, i.e. realizing financial gains from the ownership of a mobile phone was not sufficient for participants to invest their savings in owning a mobile phone.

Past studies show that people who always avoid uncertainty are less likely to get influenced by others when purchasing cutting-edge ICTs (Thong et al., 1996). In contrast, participants reported being comfortable relying on the opinions and decisions made by their husbands, fathers, sons, or brothers despite purchasing a mobile phone on their own.

4.1.5. Women as Victims of Collectivism

Legal, emotional, economic, and social interdependence of family members is the characteristic feature of families in collectivistic cultures like India. For instance, husband and wife, parents and unmarried daughters, and parents and sons irrespective of their marital status, are held legally responsible for each other's debts in India. A number of participants unwillingly end up repaying debts created by their fathers, husbands, and

brothers due to their alcohol addiction and gambling habits. Mumtaj, a 45-year old widow, said that her husband spent all their savings on his alcohol addiction and finally died leaving a huge debt behind. She is now legally bound to repay the debt. It is rare for any woman to be addicted to alcoholism or gambling in the male-dominated Indian society, or to create debt for their families. In fact, male-dominated cultural norms, beliefs, and practices do not allow most of the women to consume alcohol or gamble at any time in their lifetime. As a result, men rarely experience any legal or financial burden of collectivism.

In collectivistic cultures like India, elder siblings help parents in protecting and taking care of family members (Hofstede, 2014). Poonam, a tenth-grade teenager who works as a compounder in a medical dispensary, shares half the financial burden of her family of six. She almost screamed in despair: “We are poor! Our family has been poor for generations, we do not have sufficient earnings! We are in debt. I don't have a father. My mother works and pays all the bills.” She helps her parents assume the financial responsibility of younger siblings by compromising her personal interest of owning a mobile phone.

Past studies show that collectivistic cultures are more likely to invest in cutting-edge ICTs compared to individualistic cultures (Thong et al., 1996) since ICTs are perceived as instrumental in creating benefits for all. This study finds that participants were interested in owning a mobile phone predominantly to derive personal benefits followed by socio-economic benefits for their families.

4.2. Key Incentives for Owning a Mobile Phone

Participants perceive gaining more freedom in making free choices, earning social respect, increasing confidence levels, and deriving socioeconomic benefits for all in their families as some of the key benefits of owning a mobile phone. For instance, a majority of participants are not free to make financial decisions in spite of being financially independent. Lakshmi, a 69-year old illiterate widow, earns by massaging new born babies and new mothers. In her area, she is known as an expert *malish amma* which literally translates to *masseur mother* in English. Despite being financially independent, she does not have the freedom to make choices in her life. She complained:

> "After my husband's death, I have had to live with my son and his wife. I suppress my wishes. There is no other way. I am living as per their commands and orders. I don't have any freedom. I need a mobile phone to live and plan my life as I wish."

Ownership of a mobile phone seems to be a status symbol among the female slum-dwellers. One hundred percent of the participants report that their social status would improve if they owned a mobile phone. Neighbors, family members, relatives, and friends would start treating the participants more respectfully in the hope of benefiting from the participants in the future. This finding is in line with some of the past studies where women often expect greater community respect after having access to mobile phones (Duncombe et al., 2005).

One hundred percent of the participants believe that their confidence level would be significantly higher if they owned a mobile phone. They would be able to communicate with anybody at any time. They would not need to depend on other mobile phone owners. Some of them believe that their ability to operate a mobile phone with English as a

medium of instruction would improve their perceived self-image, which in return, would boost their confidence.

A number of studies report a wide range of socioeconomic benefits enjoyed by women after gaining access to mobile phones (Chib and Chen, 2011; Mijumbi, 2002). Participants also think that mobile phones would help them earn better. Ratnaprabha, a 33-year old mother of two children helps her husband in his screen-printing business. In addition, she takes in sewing orders. She also makes rubber stamps as a part-time business. Despite drawing income from three businesses, her family cannot earn more than two dollars a day. She said in agony:

> "We have very low earnings. The profit margin for all of our businesses is very small. There is hardly any money that we earn after subtracting the material cost and travel cost from our revenue. It is a hopeless situation! But a mobile phone can change everything."

Women's use of mobile phones for maintaining social relationships is one of the most frequently reported applications of mobile phones by past studies (Gajjala, 2002). Social networking with family, relatives, friends, and neighbors emerged as the most important incentive for mobile phone ownership in this study. For instance, Surekha, a recently married participant, said:

> "I miss my parents so much. My owner (she calls her husband *owner* out of love) is very loving but when he goes out to work I feel like talking with him. Hence, I need a mobile to be able to reach him

anytime I wish. Also, I will be able to contact my relatives who live far away…"

5. Conclusion

Past research on the gender digital divide frequently finds that economic barriers, especially the cost of owning ICTs, are the most significant barriers preventing women from owning mobile phones in developing nations (GSMA, 2015). However, this study shows that it is the cumulative effect of a number of cultural factors, including long power distance, gender roles defined for women, women's tendency to avoid uncertainty, and collectivism, which makes some of the least expensive mobile handsets in the world unaffordable to participants.

In addition, this study shows specific ways in which a number of cultural factors create different types of economic barriers preventing participants from owning a mobile phone in the male-dominated Indian society. For instance, men at home and at work dominate and control participants' sources of income and financial decisions. As a result, they earn less than what they deserve and their economic progress slows down. Due to male dominance in both personal and professional life, participants also lack the freedom to make financial choices and end up earning fluctuating low personal incomes as part of low household incomes. Had financially independent participants been living alone in a safe society they could have easily bought a mobile phone, but the male-dominated Indian society makes it almost impossible for women to live by themselves. Hence, financially independent women aspiring to enjoy a number of benefits of mobile phone ownership end up sharing their savings with their relatives with whom they live and ultimately cannot afford the device on their own.

Based on the study findings, the researcher concludes that in the male-dominated Indian society, irrespective of age, education, religion, and geographic location, women are required to overcome more economic barriers to owning a mobile phone than men living in the same economic conditions.

Studies rarely apply Hofstede's conceptual lens to study the gender digital divide in developing nations. Study findings, especially those that do not confirm the researcher's assumptions and were not predicted by the researchers, confirm the utility of Hofstede's conceptual lens in advancing research on the gender digital divide.

5.1. Limitations

This study relies entirely on the data collected from two local assistants. The researcher did not interact with participants directly; as a result, he could not seek clarification from some participants when receiving confusing responses. For instance, a few participants who wished to avoid buying a mobile phone were not sure if they formed their opinion due to the cost of mobile phones, their nature of avoiding risk, or both.

5.2. Future Research

To generalize the study findings, it would be important to verify, in the future, if the specific ways in which cultural factors create economic barriers hold true for women in other parts of India as well. For instance, do women always end up having low personal savings when they feel unsafe in the male-dominated Indian society? Are such women always unable to own a mobile phone? Or does their feeling of insecurity trigger their desire to own a mobile phone at any cost to secure personal safety? If yes, how?

During the data collection phase of this study, two local assistants observed that female neighbors of some of the participants, who experienced the same cultural and

economic constraints as that of the participants, were able to own a mobile phone. Women who had less than three children, those who were not living with their in-laws, those who refused to give dowry during their daughter's wedding, or those who continued working and earning against the wishes of their in-laws, were able to own a mobile phone. These observations suggest that women capable of addressing the barriers created by cultural factors are able to own a mobile phone in India. In the future, the researchers plans to study the factors that enable women to overcome the adverse effects of culture for owning mobile phones in the male-dominated Indian society.

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Table 1. Hofstede's Cultural Dimensions

#	Cultural Dimension	Key Attribute of the Dimension	Comparing Key Characteristics of the Two Extremes of the Dimension		Key Examples
1	Power Distance (Long vs. Short)	Reflects the attitude to the fact that power is unequally distributed in different social institutions in a society	In the cultures with a long power distance, power is considered to be the basis of society; the cultures with a long power distance are mainly collectivist	In the cultures with a short power distance, power is used only when it is legitimate and based on the rule of law – the cultures with a short power distance are mostly individualist	Paternalistic dominance Men offering psychological security to women
2	Gender Roles (Masculinity vs. Femininity)	Reflects the degree of social differentiation between the sexes	In masculine cultures, achievement, competition, and material success are highly valued, and there is a strong sex-role differentiation in such societies	In feminine cultures, preference is given to harmonious relationships, modesty, and caring for weak	Gender roles Assertive pole versus caring pole
3	Uncertainty Avoidance	Reflects attitude to the situations that are hardly predictable	Certain cultures are comfortable with and fascinated by uncertainty	Certain cultures value social institutions providing certainty and conformity	Tolerance for uncertainty and ambiguity

4	Individualism vs. Collectivism	Describes relationship between an individual and a group	In individualist cultures, individuals are loosely integrated in a social group and pursue personal interests rather than the social ones.	In collectivist cultures, individuals are tightly linked to their in-groups, which continue to protect them in exchange for unquestioning loyalty; personal interests are often sacrificed for the group ones.	Degree of interdependence Women depending on men Women in the need of family structure

(Source: Hofstede, 1980)

Table 2. Sample Summary Sheet*

Participant's Name	Pooja
Address	Gopalnagar, Gaikwad Buliding, Patharli Road
Age	16 yrs. (She was shy in revealing her age. May be next time you should ask study participants about their age bracket.)
Marital status	Unmarried (She was eager to get married)
Education	10th (She wanted to continue her education but due to family problems she could not. Her father passed away few years back.)
Income source	Compounder in a local dispensary
Average daily (personal) income last year	Less than 25 cents
Family size	6 people (She has four siblings and a mother living with her.)
Average daily income of the respondent's family last year	More than 50 cents but less than 75 cents
Electronic devices owned by the respondent's family	Television (It was purchased on monthly installments about 10 yrs. Back.)
Ownership of a mobile phone	She does not own a mobile phone (I have cross checked this fact with three of her neighbors.)
Reasons for not owning a mobile phone	I am poor so I cannot afford a mobile phone. My family is in debt. I don't have a father. My mother helps me in earning meager income for our family of six. (She was sad.)
Losses incurred due to lack of a mobile phone	Several. I do not get messages from friends, doctors, and relatives on time. I cannot communicate anytime anywhere I want.
Interested in buying a mobile phone?	Yes, very much.
Would family members cooperate to use a mobile phone? If yes, why would your family members help you?	Yes! (She smiled at me.) My brothers are tech savvy. They would certainly help me since they would also benefit from my phone. They are open-minded people unlike some of my friends' families who don't want their daughters to use any mobile phone.
Does anybody else living with you own a mobile phone in your family? (Enter the following details: your	My brother owns a mobile phone for the last 2 yrs. Sporadically I get to use his mobile phone, especially when my friends call me on his mobile phone. Sometimes I use his mobile phone to impress my friends. It all depends on my

relationship with that person, how long do they own a mobile phone, how many times did you use their mobile phone last month, and the reasons for which you used their mobile phone)	brother's mood. If he is not happy with us, he would not let us touch his mobile phone. He does not allow me to use his mobile phone outside of our house. I don't get enough privacy when I use his mobile phone. (She was very upset and felt helpless when talking about her inability to use her brother's mobile phone.)
Did it ever happen that you did not get to use a mobile phone of your family member when you needed it the most? If yes, how frequently?	At least three to four times I did not get my brother's mobile phone when I wanted to call my employer. They also cannot reach me on his mobile phone in emergency. It is time for me to have a mobile phone.
Who would benefit the most from your mobile phone?	I would use it for personal and professional reasons. Everybody in the family would benefit from my mobile phone.
How would others benefit from your mobile phone? Enter the following details (relation with you, and expected benefit)	Mother: My mother always relies on me. She would use it for her work – to earn income. Sister: Unlike my brother I will allow her to use my phone even outside of our house. Whenever she goes outside she would be able to carry my mobile phone along with her. Brother (with mobile phone): If he loses his mobile phone or if his mobile phone is damaged, he would be able to use my mobile phone. Brothers (without mobile phone): They could play games, use my phone as a calculator, or call their friends.
Level of confidence to use your mobile phone (1 is the lowest level of confidence and 10 is the highest level of confidence)	Nine out of 10 (She seems to be very confident.)
Would you seek help from anybody to use your mobile phone? If yes, how?	My brothers! They are tech savvy. They would teach me. They can solve all technical problems. They repair our TV at home whenever it stops working.
Would anybody resist you for owning a mobile phone? If yes, why?	No! Nobody would resist me. May be my uncles would not like it but they don't live with us so it won't be a problem.

In the future, would your status be elevated in your home after start using your mobile phone?	Nope! My brother already has a mobile phone.
In the future, would you be able to achieve personal development after start using your mobile phone? If yes, how?	Yes! (There was a spark in her eyes. She was very excited with the idea of owning a mobile phone and subsequent independence.) I will be more confident. I will be free to make decisions. I love helping others. Once I get my own phone, I would help others by going out of the way.
How do you expect to use your mobile phone in the future? (Incentives for owning a mobile phone)	Actually, in a number of ways. I cannot think of all possible ways right now but I would like to use it for several personal and professional reasons. I would use it for every possible task in my life. For my family it would be a boon. We will be able to connect with everyone in the family and neighbors. Doctors could call me whenever needed. Patients often seek my guidance after meeting doctors in the dispensary I work at. It would be very convenient for them to reach me at any time.
Can you estimate monthly expenses for using a mobile phone in the future?	Around 2-3 dollars per month.
Would you seek anybody's help in making phone payments? If yes, whose help?	Yes, I would need help from my mother. If they use my mobile phone, there is nothing wrong in seeking their financial help.
Would you use pre-paid or post-paid mobile phone?	Pre-paid. It is always better that way. (She replied almost immediately.)

*: In addition to survey responses, summary sheets of interactions with all of the 245 participants were prepared by two local assistants.

Table 3. Reasons for Not Owning a Mobile Phone**

Can You Describe Three Main Reasons for not Owning a Mobile Phone?	Type of Barrier to Owning a Mobile Phone
My husband and I were not employed for the whole last week. It was terrible. We did not have enough food to eat.	Low household income
My children and I sell plastic bangles, toys, and ornaments at a nearby bus station. Sometimes nobody buys anything from us. There is always uncertainty like this in our business. Plus there is so much competition. We hardly earn any profit.	
We live in a rental home. We don't earn much. Whatever we earn gets turned over on the same day. We cannot fight against inflation. Everything is so expensive. Daily earnings are just enough for that day.	
My husband and I are retired. I don't get any pension but my husband does. We hardly manage using his meager pension.	
We don't earn anything in rainy season. Sometimes we starve. Relatives don't help you in bad time.	
Business is always unpredictable. Sometimes I catch a lot of fish sometimes I get nothing even after spending hours at nearby lakes. I wish I had advanced tools to catch and sell fish every day.	Fluctuating low personal income
I hardly get any raise in my salary. My boss sucks my blood. Men are paid more than women. Sometimes my boss does not inform me about available work. He only asks men to work for him. But what can women do? I don't think we work less than men.	
The profit margin for all of my businesses is very small. There is hardly any money I earn after subtracting the material cost and travel cost from my revenue. It is a hopeless situation!	
My husband is worthless. He only comes to eat at home. We have three children but he does not give me a single rupee (Indian currency) to run this home. He gambles a lot. He does not listen to anybody.	Lack of financial support from husbands
My husband sleeps around and spends all his money on women friends. If we had not had children together I would have left him long time back.	
My husband is crippled by an accident at work. He fell down from height at a construction site but his supervisor did not even pay for hospitalizing my husband.	

My husband is addicted to alcohol. He does not share any expenses. The whole burden is on me.	
Women may die working for their families, but it is still not enough for men. Men are very lazy. If one man does not work other men think why should we work then? Let the women take the entire financial burden of the family.	
I earn enough for myself but cannot save all that money. I am a widow. I cannot live alone so I stay with my brother's family. I spend my savings on my brother's children – their clothes, medical expenses, etc. sometimes I like spending for festivals but most of the times I feel like saving for my old age.	Low personal savings
I live with my son and his family. I earn more than my son does but I cannot spend my own money at will. He should be taking care of me. Instead I take care of his family.	
I am a widow. I spent all of my savings to get my daughter married.	
Men are useless. My husband wasted his money on alcohol. One day he drank so much that we found his body in a nearby gutter. Since then all his friends are after me for the money they lent him for alcohol.	Debts created by men and subsequent poverty
My husband took loan from a local moneylender. But unfortunately after the loss in agriculture my husband committed suicide. Now that moneylender wants me to repay the loan. You tell me why should I give him my hard-earned earnings?	
I know someone who got extraordinary amount of phone bill. She did not even use her mobile phone that much. I don't want to have that kind of risk.	High cost of owning and maintaining a mobile phone
A mobile phone is an expensive affair. I don't want to lose it again. It is better that I use my husband's mobile phone which I can access anytime I wish.	
Mobile phones are too expensive. I don't have enough money for a mobile phone. I cannot afford to recharge a mobile phone or use a prepaid one.	
Who has that kind of money to own a mobile phone? It costs INR 750 (around 12 dollars) to buy a phone. No way! It is expensive.	
I passed the 12th grade exam and my parents forced me to get married. I can hardly make use of my education. My in-laws don't understand. They don't allow their daughters and daughter-in-laws to work outside.	Lack of financial independence
My husband says why do you want to go outside and work? He asks me to stay at home and take care of our son. I like spending time with my son but we could have a better life if I also earn. But my husband is very stubborn. He does not understand.	

My parents did not let me go to school. I can never get a good job. They force me to work for their small business of selling vegetables on streets. But my dreams are big. I feel helpless.	
My in-laws don't understand me. My husband cannot oppose his parents. They all force me to work for our small family-run business. We don't earn enough but they don't let me work outside. Sometimes I feel stuck.	

**: This table is a snapshot of economic barriers reported by 245 participants.

Table 4. Cultural Factors Creating Economic Barriers to Owning Mobile Phones

#	Cultural Factors	Specific Ways in Which Cultural Factors Create Economic Barriers	Economic Barriers
1	Male-dominated culture with long power distance, where women feel unsafe to live by themselves	Women are forced to share their income and savings with their families	Low personal savings
2	Men at home and at work dominate and control women's sources of income and financial decisions	Women earn less than what they deserve Women's economic progress is slowed down Women lack freedom to make financial choices	Fluctuating low personal income Low household income Lack of financial independence
3	Gender roles defined for women	Women are forced to use their income and savings to take care of a majority of financial dependents in their families	Lack of financial support from husbands Low household income
4	Women avoid uncertainty	Despite realizing financial benefits women refrain from investing in mobile phones	High cost of owning and maintain a mobile phone
5	Collectivistic practices	Women forced to repay debts created by male members of family by engaging in gambling and/or alcoholism	Debts created by men and subsequent poverty Low personal savings

Table 5. Socio-Economic Characteristics of Participants

Age (% of Participants)							
Less than 18	*18-25*	*26-35*	*36-45*	*46-55*	*56-64*	*Above 64*	*Total*
2	20.4	30.2	31	9.8	5.4	1.2	100%
Personal Average Daily Income (% of Participants)							
1 – 50 cents	51 – 100 Cents	101 – 150 cents	151 – 200 Cents	201 – 300 cents	301 – 400 cents	Above 4 dollars	*Total*
13.4	14.2	36.4	34.8	0.8	0.4	0	100%
Education (% of Participants)							
Illiterate (Never attended any school)	*1st to 4th Grade Completed*	*5th to 9th Grade Completed*	*10th Grade Completed*	*11th Grade to Bachelor's Degree Holders*	*Double Bachelor's or Master's Degree Holders*	*Double Master's or PhD Holders*	*Total*
40.4	12.2	19.6	7.8	18.8	1.2	0	100%
Religion (% of Participants)							
Hindu			*Muslim*				*Total*
82.9			17.1				100%
Geographic Location (% of Participants)							
Rural Residents			*Urban Residents*				*Total*
53.1			46.9				100%