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A Call for Organizing: The Rise of the Garment and Mobile Phone Industries in Bangladesh

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Thousands of garment factories have opened in Bangladesh due to the combination of two factors: (1) the global restructuring of manufacturing processes and labor markets, and (2) the injection of foreign capital. The explosive growth of the garment industry has generated employment and economic development, leading to the exploitation of mostly female workers in sweatshop-style factories through contentious labor practices, including: low wages, hazardous working conditions, and threats of violence. Simultaneously, massive foreign investment has fueled an expansion of the telecommunications industry that places mobile phones within reach of even low-income Bangladeshis. The rapid development, widespread availability, and declining price of mobile phone technology in Bangladesh present a singular opportunity to combat worker rights violations in factories. By serving as a tool for labor organizing and enabling remote communication, mobile phones have the potential to overcome some of the power dynamics and structural obstacles that have plagued past factory worker movements.

Introduction

The increasing mobility of capital has brought both promise and peril to the developing world. Global capital flows have greased the wheels of development in Bangladesh through an incongruous mix of low and high technology: factories and cell phones. The influx of foreign investment has created new industries, both literally and figuratively, out of whole cloth. The cleavages exposed by the parallel development of the garment industry and mobile phone infrastructure hold the opportunity for collective action. Foreign investors and financial institutions have simultaneously created the means of labor exploitation through the sweatshop-style garment factory and labor practices that involve low wages, dangerous working conditions, and intimidation, yet also offer tools for subversion and organizing through emerging digital communications.

Since the 1960s, garment factories operating around the clock sprang up in Bangladesh's urban areas to produce high quality shirts for the American and European markets. The dramatic expansion of the garment sector now accounts for an astounding three-quarters of all exports (Lips et al. 2003; Joshi 2002). But the job growth and improvements in living standards resulting from the rise of factories are intimately linked with the threat of labor exploitation. Capitalist pressure to squeeze more profits out of the production process comes at a high cost as sewers and machinists endure hazardous working conditions, few benefits, little job security, and the threat of withheld wages. Further, the virtually all-female garment workforce is constantly negotiating changing boundaries between newfound economic and social empowerment on the one hand, and traditional cultural norms

about the role of women that fuel labor oppression.

Before garment factories altered the urban and economic landscape of Bangladesh, few women participated in the paid workforce due to low levels of education, traditional cultural norms, and religious beliefs, including Islamic principles regarding the physical separation of women and men (Dannecker 2000). In addition, the high concentration of men working in other industries restricts women's access to employment opportunities (Kabeer and Mahmud 2004b). Young, poorly educated women who were typically relegated to the home now engage in paid work in growing numbers. As new income earners, their rising social status in the home and local community clashes with conservative customs about the exclusive role of women as caregivers and homemakers. In the factory context, gender oppression easily translates into labor oppression.

Despite the threat of exploitation, massive underemployment drives Bangladeshis to search for work: "Bangladesh continues to have a labour-surplus economy where the problem is less one of open unemployment than of disguised unemployment, underemployment and low returns to labour. Returns to female labour continue to be even lower than those to male labour because women have lower levels of education and are 'crowded' into a far more limited range of productive opportunities" (Kabeer and Mahmud 2004b, 147). Estimates of underemployment rates range from 12% for men to 71% for women (Kabeer and Mahmud 2004b). The lure of jobs for unskilled and semi-skilled workers has accelerated existing rates of unsustainable migration from impoverished rural areas to the cities. In turn, this rural-to-urban migration has increased pressures

on public services, the growth of slums, and rising social and political tensions from income inequality.

Happening in concert with industrialization is the tremendous expansion of the mobile phone infrastructure. Foreign telecommunication firms enthusiastically view Bangladesh as a vast untapped market with almost limitless growth potential while the developed world quickly becomes oversaturated with cellular technology.¹ Mobile phones have helped structure the informal labor sector, increase business transaction efficiency, and facilitate mass migration to urban areas. Despite underdeveloped road systems and limited electrification in rural areas, both the Bangladesh government and citizens across the income spectrum have embraced mobile phones as a sign of social status and as a necessary tool for business. The government has helped negotiate contracts with foreign investors and service providers while even poor residents use loans to acquire mobile handsets as a practical, efficient alternative to unreliable land-line service.

The parallel processes of post-Fordist industrial restructuring² and digital network expansion have altered the economic and social landscape of Bangladesh. Much like post-Fordist restructuring processes elsewhere in the developing world, the changes brought about by the rise of the garment and mobile phone industries "have juxtaposed substantial aggregate economic growth and expanding concentrations of affluence against ... the re-emergence of industrial sweatshops reminiscent of the nineteenth century" (Soja, Morales, and Wolff 1983, 195). Foreign investors have stimulated the development of these two sectors, and as a result, industrialization has created huge concentrations of urban wealth in Bangladesh that sharply contrast with the poverty

in the rest of the country. Foreign luxury cars line the streets of Dhaka while hunger and malnutrition-related diseases remain persistent causes of death in the villages. Despite the potential for conspicuous consumption, cell phones serve egalitarian purposes by placing all users on the same network and enabling everyone to benefit from reliable communication. Likewise, the garment industry has not only generated rich profits for factory owners, it has also produced employment opportunities for an often overlooked segment of the labor force: unemployed and underemployed women. Economic development professionals and labor rights activists debate if workers are ultimately better off in garment factories when compared to the alternatives of joblessness, domestic service, or farm labor, but the existence of exploitative working conditions cannot be denied. As Soja, Morales, and Wolff write, “The composite effect of these changes is a reduction in the value of labor power or, more concretely, a reduction in the relative costs of labor. Its achievement can be interpreted as part of a comprehensive process of labor disciplining brought about by a deepening and widening of the social and spatial division of labor, for both increased labor control and restoring the bases for expanding profits” (Soja, Morales, and Wolff 1983, 204).

The paper is organized as follows: the next two sections separately describe the growth of the garment industry and mobile phone service based on the differing impacts on class divisions and the chronology of their introduction in Bangladesh. The third section links the parallel industrial and technological developments by exploring the potential application of cell phones to organizing garment factory workers, and is followed by a conclusion. This article explores the possible connections between mobile phone technology and labor

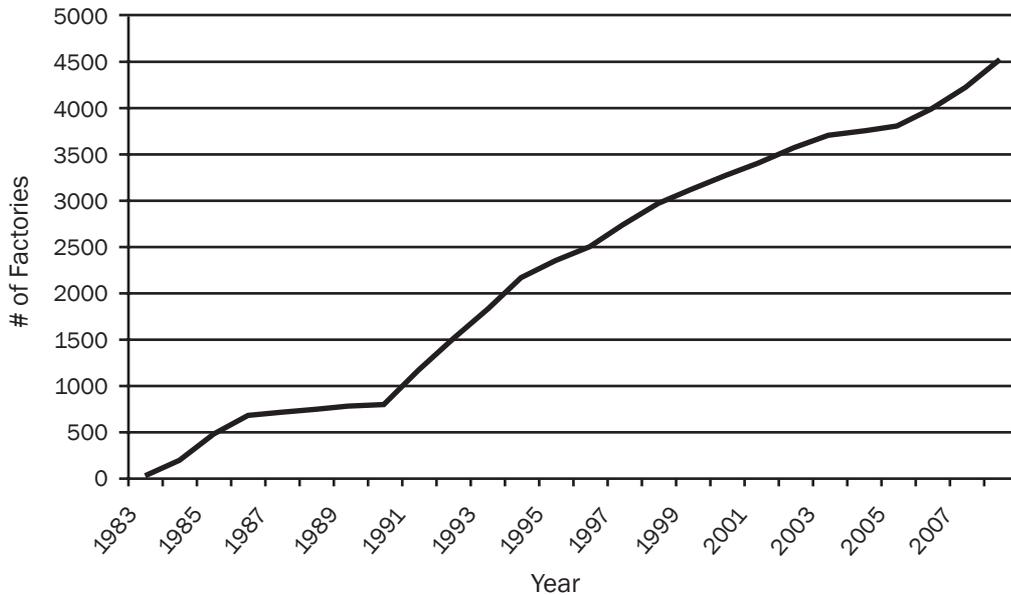
organizing in Bangladesh (and beyond); it is intended to frame and guide further research on this subject.

The Economic and Social Impacts of the Rise of the Garment Industry

As immigrants increasingly move to the developed world in search of economic opportunity and steady employment, factories migrate to the developing world in search of cheap, pliable labor and weak government regulations. This “core-periphery structure of production” model features a small number of high-skilled workers (e.g., in finance, research and development, etc.) concentrated at the headquarters office while production occurs elsewhere dispersed in multiple locations (Rahman 2004, 76; Cox and Schechter 2002). The “global deconcentration of industrial production [is] linked to the selective industrialization of the periphery. Cheap labor supplies, weak labor organization, and strong managerial states supplying subsidies, infrastructure, and tight political control have increasingly attracted global capital....” (Soja, Morales, and Wolff 1983, 201). Similar to other manufacturing sectors (e.g., automobile and electronics assembly), the garment industry has engaged in a continuous process of relocation. Like water in its constant journey toward the lowest point, factory owners have moved through a succession of countries in search of ever cheaper labor.

Rahman (2004) provides a brief history of recent garment industry relocations: in the 1950s and 1960s, garment manufacturers moved operations from North America and western Europe to Japan during the first wave of global relocations. In the following

Garment Factory Growth



Sources: Khundker 2002, Export Promotion Bureau, *The Bangladesh Today* 2008. Note: Some data is based on author's estimates

decade, investors sought lower costs in South Korea, Taiwan, Hong Kong, and Singapore. In the 1980s, as economic development in these countries led to rising wages and unionization, garment factory industrialists shifted to the Philippines, Malaysia, Thailand, Indonesia, and China during the third wave of relocations. The latest move has landed garment factories in Sri Lanka, Pakistan, Vietnam, and Bangladesh. Wage differentials provide a clear explanation for factory migration: hourly labor costs (including benefits) in the garment industry range from \$10-16 in the United States, compared to \$0.15-0.16

in Bangladesh (Rahman 2004; Khundker 2002).

The Growth of Garment Factories

The most visible example of the recent wave of industrialization in Bangladesh is the garment factory. Employees form long lines outside of factory walls as they report for work in the morning and fluorescent lights glow through the night over the hum of sewing machines in the warehouse-style buildings. The first garment factory was likely established in

the 1960s, and by 1970 there were a total of five factories in operation, primarily in the capital city of Dhaka (Mensch 2005). It took more than ten years for the number to reach fifty, as export-oriented factories took root in the country during the late 1970s. Over just a two-year period from 1983 to 1985, the number of garment manufacturing businesses increased tenfold to nearly five hundred units (Khundker 2002). In 1990, the Bangladesh Garments Manufacturers and Exporters Association registered 834 members (Export Promotion Bureau 2008). Less than ten years later, membership had exploded to almost 3,000 for an average annual growth rate of nearly 20% (Khundker 2002).

Much of this growth can be traced to international agreements, namely: (1) the quotas established by the Multi-Fibre Arrangement (1974-2005), also known as the Agreement on Textiles and Clothing, which limited the amount of textiles and apparel that could be exported from other Asian nations (e.g., China, India, Pakistan, Sri Lanka, and Thailand) to the United States and the European Union; and (2) the European Union's Generalized System of Preferences created in 1971 (World Trade Organization; Khundker 2002; Rahman 2004). As a result, investors sought a way around these restrictions and moved operations through "the enterprising practice of 'quota hopping'" (Kabeer and Mahmud 2004b, 135). Businessmen from places such as South Korea and Hong Kong established new factories in Bangladesh, an expansion that the government encouraged by forming export processing zones³ and providing incentives, including permitting duty-free access to inputs, providing letters of credit, and offering bonded warehouse facilities (Khundker 2002). Fears that the expiration of the Multi-Fibre

Arrangement would dissolve the garment industry in Bangladesh appear to be overblown. Although factory expansion has slowed, existing businesses continue to produce clothing for the export market. Shirts and other garments made in Bangladesh are still sold by large-scale retailers such as Macy's, Gap, Target, Wal-Mart, Sears, and J.C. Penney. Recent estimates put the number of operational garment factories at approximately 4,500 (*The Bangladesh Today* 2008).

As the number of factories grew, the garment industry accounted for an increasingly larger share of the national economy. From 1980 to 2000, garments exploded from less than 1% to more than 75% of the country's total exports (Lips et al. 2003; Joshi 2002). By the late 1990s, the value of ready-made garment exports exceeded \$4 billion, and as of mid 2008, exported woven garments and knitwear were valued at more than \$5 billion (Export Promotion Bureau 2008). The garment sector alone accounts for approximately 5% of Bangladesh's gross domestic product (Export Promotion Bureau 2008).

Employment and Women in the Garment Industry

The impact of the garment industry can be measured not only in terms of aggregate export figures, but also by its effects on employment. In the year 2000, 1.5 million workers were employed in garment factories in Bangladesh, out of a labor force of 70 million (Joshi 2002; World Bank 2001). More recent estimates put the number of jobs at between 2 and 3 million with direct and indirect beneficiaries totaling 20 million people (Begum 2001; Faiz 2006).

Job opportunities are a major "pull" factor

contributing to migration as factories are concentrated in the nation's two largest cities. According to some observers, rural-to-urban migrants make up approximately 80% of the garment factory labor force (Paul-Majumder and Begum 2000). Other studies find this proportion exceeds 90%, with the vast majority coming from landless families (Afsar 2000). Typically, villagers move to the capital city of Dhaka, where nearly three-quarters of all factories are located, or to the port city of Chittagong, where most of the remaining factories are found.

Dhaka—already home to over 12 million residents—receives a steady stream of new arrivals everyday and some 300,000 to 400,000 temporary and permanent migrants each year (World Bank 2007). With an annual growth rate of 3.2%, the population is projected to reach nearly 18 million by 2015 and 22 million in 2025, which will push this megacity into the top five most populous cities in the world (United Nations 2007).⁴ Despite the swelling urban population, over 70% of the country's 158 million residents live in rural areas. In developing nations like Bangladesh, rural underemployment arises from an agriculture sector that relies on manual labor. According to the two-sector model theorized by W.A. Lewis (1954), through seasonal and long-term migration, this underutilized workforce will continuously feed the need for labor in the manufacturing sector generated by industrialization in urban areas.

The lack of cheap, available housing means rural-to-urban migrants often move to slums, where the population has more than doubled in just ten years from 1.5 million in 1996 to 3.4 million in 2006 (Islam et al. 2006).⁵ During the same period, the number of slum settlements grew from

approximately 3,000 to nearly 5,000, with the population density reaching almost 900 persons per acre, or about ten times the average population density in other urban areas (Islam et al. 2006). The large number and high concentration of slum dwellers provide a ready reserve army of surplus labor.

Of those employed in garment factories, 80 to 90% are women, most of whom (83% according to one survey) are rural-to-urban migrants (Faiz 2006; Joshi 2002; Paul-Majumder and Begum 2000). To understand how this demographic trend is transforming the structure and composition of the workforce, consider the following statistics from the United Nations (2005). Only one-third of all people employed in Bangladesh are female and less than 10% of all women receive wages for their work. Further, over three-fourths of women participating in the workforce are engaged in the agriculture sector. In urban areas, women comprise only one-quarter of employed persons. The “feminization” of the urban labor force in the export-oriented garment industry stands in sharp contrast to other forms of formal employment (Kabeer and Mahmud 2004b).

Paul-Majumder and Begum (2000) observe the following characteristics about women garment workers in Bangladesh. Almost two-thirds of female garment laborers are unmarried. Although most have some schooling, educational attainment is typically six years or less; thus, most female garment workers are considered uneducated. They have very little work experience—for more than 90% of women in the garment industry, this is their first job. They are also quite young: the majority of female garment workers are teenagers. For many women, the garment industry has opened up an entirely new world

of experiences and empowerment. “Factory work imparts adult skills, such as how to manage income, save money, and budget for expenses, even if young women may not have complete control over their earnings. It exposes adolescent girls to new information, social networks, and lifestyles and raises the opportunity costs of their time” (Mensch 2005, 440).

Labor rights activists and scholars, however, attribute the high female employment rate in the garment industry to gender and power dynamics. These dynamics have the potential for abuse because factory owners dominate labor practices, owing to a supply of labor that far exceeds demand. Specifically, the reason managers hire a large proportion of women is “to exploit the comparative advantages of their disadvantages, like the low price of their labor, their lower bargaining power, and their docility” (Paul-Majumder and Begum 2000, 1). Capital, in the form of the garment industry, serves as a force to divide the labor market along gender lines in order to subjugate the working class and stir resentment between male and female factory workers. Traditional gender hierarchies are reinforced as women are steered toward the lowest-paid helper positions, while men fill higher-paid, more skilled jobs as machine operators. On average, women working in the garment industry earn less than two-thirds of the wages paid to men. Although this is mainly due to men occupying higher-level positions (e.g., supervisor and quality controller), the gap remains even when controlling for skill level (Paul-Majumder and Begum 2000).

Working Conditions

Hazardous conditions for factory workers are an

enduring characteristic of industrialized sectors—the garment industry in Bangladesh is no exception. To supplement anecdotal reports and newspaper accounts, some research studies have collected data on these conditions (for example, see Zohir and Paul-Majumder 1996). Overcrowded conditions and inadequate lighting are commonly cited, as is the lack of clean drinking water and sufficient bathroom facilities (Paul-Majumder and Begum 2000). In a survey of garment factories, Paul-Majumder and Begum (2000) find there is one latrine for every thirty-one men and sixty-one women. Poor ventilation exposes workers to toxic chemicals and unhealthy levels of dust, which affects women the most because they occupy the lowest-skilled, most dangerous jobs (Paul-Majumder and Begum 2000). First aid kits and safety protections to prevent injury from operating sewing equipment are often missing (Rahman 2004). Threatened and actual physical abuse often goes unreported for fear of repercussions (Kabeer and Mahmud 2004b). Additionally, most garment factories do not have fire exits or fire alarms (Paul-Majumder and Begum 2000). Managers reportedly lock exit doors to check theft and prevent workers from leaving before production targets are met, which entails life-threatening conditions in the event of fire. Locked gates led to more than ninety deaths during a February 2006 factory fire, which forced some workers to jump from windows four stories high (*The Daily Star* 2008). Dozens more have been trampled to death and thousands injured in other fires where factory doors were locked or blocked. More than three hundred and fifty workers have died in garment factory fires since 1990, with hundreds more deaths from collapsed buildings attributed to poor construction (*The Daily Star* 2008).

Owners pursue “a strategy of ‘primitive accumulation’

with regard to their workers, a strategy which requires them to maximize returns from the key factor of production under their control at the minimum possible cost” (Kabeer and Malmud 2004, 145). There are no formal contracts or written agreements—most employment decisions are made verbally. Further, factory workers generally do not receive fringe benefits like healthcare or allowances for housing and transportation. By comparison, over half of employees in non-export industries receive housing, transportation, and medical subsidies (Paul-Majumder and Begum 2000). A typical shift is twelve hours but laborers are often forced to work fourteen to sixteen hours per day, compared to eight-hour days in non-export industries (Paul-Majumder and Begum 2000, Rahman 2004). Additionally, overtime is expected given that garment export contracts demand tight production deadlines to ensure timely shipment and production targets often exceed the amount of work that can be feasibly accomplished during regular hours (Paul-Majumder and Begum 2000).

In contrast, export processing zones in Bangladesh, which are typically found in industrial parks ten to thirty kilometers away from the city center, are governed by strict regulations and constant monitoring of worker rights. According to the Export Promotion Bureau in the Ministry of Commerce, labor laws limit factory work to forty-eight hours per week and no more than ten hours per day. Workers are entitled to ten days of “casual leave” and seventeen days of annual leave. Factories operating in these areas are also required to provide subsidies for transportation, housing, and medical care. However, less than 10% of garment factories are located in the major export processing zones outside of Dhaka and Chittagong, accounting for only 12%

of garment industry employment (Paul-Majumder and Begum 2000; Kabeer and Mahmud 2004a).

The lowest-skilled workers, who are known as “helpers,” earn the equivalent of \$0.16 per hour, while “operators” might make double that amount (Amin et al. 1998). In export processing zones, the minimum wage for “unskilled” workers such as helpers is set at \$38 per month, or approximately \$0.20 to 0.24 per hour (Export Promotion Bureau 2008). One explanation for factories moving in from neighboring countries can be found by simply comparing average labor costs for comparable positions elsewhere: \$0.45 per hour in Sri Lanka and \$0.35 per hour in China and India (Khundker 2002; Kabeer and Mahmud 2004b).

The production process has been organized such that garment workers add little value to the products of their labor.

Men’s and boys outwear...has always been a more standardized product [than women’s wear], particularly at the cheaper readymade end, and lent itself quite early on to a greater subdivision of operations, particularly in the machining stage. This led to a form of production in which each machinist only made one section of a garment (‘section work’) instead of making the whole garment (‘make through’)... The process of global restructuring has gone furthest in the production of standardized clothing such as men’s shirts and, in recent years, casual outwear, items which lent themselves to assembly-line production (Kabeer and Mahmud 2004b, 135).

Post-Fordist industrial restructuring, which divides up the process of production among manufacturers and producers located in different sites around the world, reduces the role of the garment worker to that of a mere assembler, “fragmenting [her] knowledge of the whole

production process” and her ability to secure a greater percentage of profits (Soja, Morales, and Wolff 1983, 204). Both the limited value added by workers and their limited knowledge are used by owners to justify low wages. Ultimately, this segmented organization of the labor process hampers worker productivity and opportunities for occupational growth. Additionally, fabric and materials are imported, thereby foreclosing on the possibility of backward linkages to local textile mills and further economic development.

The Development and Expansion of Mobile Phone Infrastructure

The sharp growth of the garment industry in Bangladesh has coincided with the development of digital infrastructure, but not physical infrastructure. Open sewers line the streets in urban areas while unpaved village roads are impassible during the rainy season. According to the World Bank, less than one-third of all roads are paved and although 80% of urban households have electricity, the figure is just 31% for the country as a whole. In addition, residents can expect an average of more than one hundred power outages per month. But the country appears to have ignored the intermediate stages of economic development that involve the provision of reliable roads and widespread electrification. Instead, it has jumped directly into the 21st century—long plagued by poor land-line telephone service, Bangladeshis have embraced the mobile phone.

The Growth of Mobile Phone Subscribers

As of February 2009, there were over 45 million active mobile phone subscriptions in Bangladesh, which would place it near the top twenty countries in the world in terms of the total number of subscriptions (Bangladesh Telecommunication Regulatory Commission 2009; CIA 2008). Despite this large total number, the per capita figure is quite low, trailing behind more than one hundred and fifty other nations (CIA 2008). Only one-quarter of the population has a mobile phone—an outcome in part of service only being available since 1997. Yet, the sector shows robust signs of growth. In just one year, the number of subscriptions more than doubled from 11 million in 2006 to over 23 million in 2007 (Asian Development Bank n.d.). The country added an average of one million new subscribers per month during the summer of 2008 for a total of 10 million new users that year (Bangladesh Telecommunication Regulatory Commission 2009). Market studies predict that the number of mobile phone users will reach 70 million by the year 2012 (Reuters 2008a). By comparison, the World Bank estimates that only 1.25 million households own land-line phones.⁶ One study reports that the wait time for a land-line connection exceeds ten years (Cohen 2001). Accurate figures on services are not available, but it appears that most mobile phone subscribers use their handsets for voice calls and text messaging.

The mobile phone industry in Bangladesh directly employs over 15,000 people and is estimated to result indirectly in work for anywhere from 240,000 to 650,000 others (Reuters 2008a; Asian Development Bank n.d.). Cell phones are estimated to add approximately \$650 million annually to the gross

domestic product thanks to foreign investors who have poured more than \$3.4 billion into Bangladesh's mobile phone market (Lane et al. 2006; Reuters 2008a). Enormous outside investment in mobile telecommunications infrastructure has greatly expanded network coverage in Bangladesh. According to recent reports, 97% of the population can access mobile phone service, while service coverage includes more than 85% of the geographic land area (Asian Development Bank n.d.; Lane et al. 2006). The impact of foreign investment is further demonstrated by the fact that five of the six registered telecom companies in Bangladesh are backed by companies based in other countries. The largest provider is Grameen Phone, majority-owned by Telenor of Norway. Egypt's Orascom operates Banglalink; Telekom Malaysia International has a majority stake in Aktel; Warid Telecom International is based in the United Arab Emirates; and City Cell is a joint-venture between Pacific Bangladesh Telecom and Singapore Telecommunication. State-owned Teletalk is the smallest company with approximately 1 million users.

Economic Opportunities

Constant improvements in telecommunications infrastructure have extended mobile phone service to once-remote areas. The availability of reliable service combined with the accessibility of increasingly cheap phones has also created new opportunities for business. The Grameen Bank is credited with pioneering the introduction of mobile phones in villages. According to one account, "rural telephones [a]re the digital equivalent of the cows they [the Grameen Bank] had been financing—profitable, secure investments that offered real value to rural

villagers" (Cohen 2001, 4). On its website, the for-profit telecommunications arm of the Bank, known as Grameenphone, boasts 270,000 village phone operators in 50,000 villages (Grameenphone n.d.).

By encouraging borrowers to use loans of approximately \$400 to acquire phones, the Bank has given birth to a new class of entrepreneurs that meets previously unmet needs. "Phone ladies" sell phone service by the call to neighbors wanting to connect with friends and relatives in other villages or even other countries. With an average of seventy customers per month using each phone, these independent businesswomen can make up to \$1000 per year, which is more than double the average annual income, and more than enough to repay the loan principal and interest (*BBC News* 2002; Cohen 2001). Since villages have few reliable sources of communication, mobile phones and their owners become increasingly important, thereby improving both the social and economic status of women in their homes and communities. This changed status often leads to increased participation in family decisions and the investment of profits into additional business ventures like small shops or food stalls (Cohen 2001).⁷

Case studies have shown that mobile phones reduce information asymmetries in markets and increase efficiency (Bhavnani et al. 2008). For example, mobile phones allow fishermen to determine prices at distant markets, which enables them to respond quickly to changing demand, choose the most profitable place to take their catch, and avoid long, time-consuming journeys to markets with low prices (Abraham 2007). Merchants and shippers also benefit from increased information through mobile communication as they can rapidly identify and accommodate areas

with increasing demand (Abraham 2007). Improved planning and efficiency also reduce losses due to the spoilage of perishable items (Cohen 2001).

Mobile Phones and the Potential for Collective Action

In addition to stimulating economic opportunities, mobile phones have been deployed for social movements in a variety of contexts, including global health, humanitarian assistance, and political organizing.⁸ Mobile phones are used to deliver care to HIV/AIDS patients in South Africa, connect health clinics and remote health workers in Uganda, and provide access to public health data in Kenya and Zambia (Kinkade and Verclas 2008). Wireless phone technology has also facilitated the delivery of food aid to Iraqi refugees in Syria and supported communications during emergencies in Peru and Indonesia (Kinkade and Verclas 2008).

Perhaps the most well-known use of mobile phones for activism and organizing comes from the political realm. Wireless communication has been instrumental in political mobilization around the world, from the 2001 removal of President Estrada in the Philippines, to the 2004 defeat of the Partido Popular in Spain, to the 2002 election of President Roh Moo-Hyun in South Korea (Castells et al. 2007). Based on these diverse examples of the successful use of wireless communication to engage in social activism and political mobilization, it is useful to explore how mobile phones can be used as an organizing tool for labor movements.⁹ Mobile phones are particularly well suited to reaching and coordinating individual

workers, given that “wireless communication provides a powerful platform for political autonomy on the basis of independent channels of autonomous communication from person to person” (Castells et al. 2007, 200).

In Bangladesh, some laborers already use mobile phones to improve their bargaining power. For example, non-resident or daily domestic workers who clean homes, wash clothes, and prepare meals now call potential employers to determine in advance if their services are needed.¹⁰ Before the widespread use of mobile phones, day servants had to travel from house to house in search of work, a time-consuming process that prevented them from controlling their own schedules. This subtle power shift from employer to laborer allows domestic workers to determine when and where they will work, better plan for childcare and make transportation arrangements, and negotiate over wages. Mobile phones help empower domestic workers to take charge of their own human capital and deploy it more efficiently.

Mobile phones might enable labor organizing and empowerment in Bangladesh for several reasons, including: its unique experience with labor strikes, the rapid growth and widespread adoption of mobile phone technology in the country, and the low cost of mobile phones in Bangladesh relative to other countries. Worker strikes, or *hartaal*, occur with alarming frequency in Bangladesh: an average of forty-seven full working days were lost to strikes each year during the 1990s (World Bank 2001). Not limited to a single firm or even one industry, these strikes are often nationwide events initiated by rival political parties.¹¹ Although the threat of violence results in some instances of forced participation, the deserted streets and shuttered businesses also provide evidence of an

underlying culture of solidarity among workers.¹²

Cell phone subscriptions in Bangladesh have increased exponentially, due in part to the inadequate alternative of unreliable land-line service, but also due to large amounts of foreign investment. Mobile phone service is already available to nearly the entire population and covers the vast majority of the land mass (Asian Development Bank n.d.; Lane et al. 2006). According to their websites, foreign companies plan to continue expanding the network in Bangladesh and to sign up millions more subscribers. The Grameen Bank's Village Phone program shows that even the poorest borrowers can afford a handset. The symbolic importance of this access should not be overlooked. The image of the "phone lady" has entered and established itself in the national culture; it is an accepted norm that even poor women will carry a mobile phone.

Even without loans, mobile phones are affordable to an increasingly large segment of the population. Declining handset prices, lower duties, and reduced connection fees enable low-income groups to enter the mobile phone market (Reuters 2008a). According to a recent study, Bangladesh has the cheapest average monthly mobile phone costs for both prepaid and regular calling plans, not just in South Asia, but in comparison to other regions as well (Lirneasia 2008).

Continued foreign investment, increased competition, and ongoing development of telecommunications infrastructure should drive down prices further.

Labor organizers have consistently tried to reach Bangladeshi garment workers through meetings, flyers, and other traditional means of communication, but they have seen mixed success (Dannecker 2000).

Comparison of Monthly Costs of a Prepaid Low-use Phone Customer in South Asia and Latin America

South Asia			Latin America		
Country	US\$	US\$ PPP	Country	US\$	US\$ PPP
Bangladesh	2.64	11.66	Argentina	15.28	45.53
Pakistan	3.34	10.57	Chile	16.42	23.98
India	3.72	15.04	Mexico	20.02	27.97
Sri Lanka	3.83	13.39	Colombia	20.12	56.82
Nepal	5.25	21.55	Peru	29.07	58.02
Bhutan	5.46	17.25	Brazil	29.99	47.60
Maldives	5.48	17.05			
Afghanistan	8.33	32.93			

Figures are comparable for medium- and high-use phone customers. PPP = Purchasing Power Parity (a reflection of affordability). Source: Lirneasia.

This is partly due to the threat of violence. Protests over garment industry working conditions and pay in May 2006 lasted two weeks and left two workers dead, hundreds injured, more than two hundred factories burned, and numerous arrests (*BBC News* 2006). In addition to the risk of violence, other reasons for limited union¹³ enrollment are unsurprising. Factory owners' desires to maintain profits and cut costs have strengthened their resistance to labor organizing. This often takes the form of hiring strongmen to intimidate both organizers and workers. Locked factory gates also serve to deter access. Additionally, women tend to avoid participation in many existing unions because they are perceived to exclusively benefit men; usually, men are higher paid workers so they command more power in unions and have a stranglehold on leadership positions (Dannecker 2000). According to Dannecker's observations,

Typically, the representatives of the unions—all men—sat behind a table, while the female workers who attended the meetings sat in front of them on the floor.... [W]omen's own knowledge and experience of labour relations was not acknowledged by the federation officials, who acted in a very authoritarian way. In fact, the way the federation representatives treated the women workers was very similar to the authoritarian and patriarchal treatment they experience from male supervisors in the factories (Dannecker 2000, 34-35).

Finally, long working hours, childcare responsibilities, and household duties leave little room for union meetings or organizing outreach.

Mobile phones can address many of these organizing problems. Organizing via mobile phone can circumvent the threat of violence associated with large gatherings because users do not need to meet in

order to communicate. Eventually, labor movements often lead to protests and the associated dangers of appearing in public. Although mobile phones cannot eliminate these risks, the examples of political protests suggest that mobile communication facilitates increased participation, which can confer strength—and safety—in numbers. In addition, phone access overcomes the hurdle of locked gates and subverts the physical confinement of workers behind factory walls.

Personal phones empower women to plan, participate, and mobilize on their own terms, without the fear of indignity or humiliation that might come in typically male-dominated union meetings. In addition, cellular phones enable women to participate in organizing movements according to their own schedules, avoiding the logistical problems of arranging common meeting times and locations. Verbal communication allows organizers to expand their base by reaching all garment workers, including those with low levels of literacy. Mobile phones also allow for instant communication between workers and organizers. Unlike in the US, short message service (SMS) communication is free in Bangladesh, which enables laborers to communicate surreptitiously and without incurring exorbitant costs. Although text messages might exclude illiterate workers, the space and size constraints of SMS communication limit the complexity of messages so that even poorly educated laborers might be able to understand them. Further, these constraints could force organizers to clarify and simplify their calls to action, thereby improving the delivery of messages. In the age of mobile phones, text messages are the equivalent of digital pamphlets exhorting laborers to organize. Even a well-timed ringing of a phone could serve as a signal to initiate a labor action. More than a symbol of empowerment, mobile phones can

function as an important tool for labor organizing.

The improved communications afforded by mobile phone technology can also facilitate organizing on the trade or industry level rather than on just the individual shop level. Meetings, demands, work slowdowns, and labor stoppages can all be instantly coordinated across factories and even cities.¹⁴ Further, mobile organizing could enhance and build on the large-scale worker demonstrations coordinated by political parties in Bangladesh.

Although unions are barred from export processing zones, the vast majority of factories are located outside of these zones. However, there are barriers to labor organizing created by the nature of the industry itself. Surveys indicate that women expect to work in garment factories for approximately four years (Paul-Majumder 1998). The high turnover is attributed to adverse working conditions, occupational dangers, marriage, and childbirth. Additionally, many garment workers report leaving one factory to search for a higher paying position elsewhere. The short tenure in the garment industry contributes to the difficulty of concerted labor actions, but mobile phones may alleviate these problems through instant communication and more efficient organizing.

Despite the unstable nature of garment factory work, many female laborers have no other realistic options given the perils of unemployment. Although they would prefer improved working conditions, garment workers may feel they cannot risk their precarious economic situations by organizing (Kabeer 2004). Further, the use of trade sanctions to ensure labor standards are met may lead to unemployment (Kabeer 2004). Under these circumstances, mobile phone

technology can at least provide a choice. "Mobile communication ... enhance[s] the autonomy of individuals, enabling them to set up their own connections..." (Castells et al. 2007, 16). Phones can extend the reach of unions so that members and potential members are well informed. By providing and expanding communication about union activities, phones can empower isolated workers by allowing them to decide whether to participate in collective action on the basis of real-time information.

Conclusion

The parallel processes of post-Fordist industrial restructuring, resulting in the garment factory boom, and technological transformations in communication, resulting in widespread mobile phone use, have altered the economic and social fabric of Bangladesh. Capital infusion from foreign investment in both sectors has precipitated social and labor restructuring. Despite the economic growth spurred by the twin engines of the garment industry and the mobile phone sector, income inequality persists. The Gini coefficient rose from 0.36 in the early 1980s to 0.43 a decade later (Khundker 2002). From 2000 to 2005, the coefficient again rose from 0.45 to 0.47, with the bottom half of the population earning only 20% of total income (*Bangladesh News* 2006). Income growth has been accompanied by rising inequality.

The yawning gap between rich and poor is exemplified by the incongruous juxtaposition of sweatshop-style conditions and the latest cellular technology. Despite appearing to come from different centuries, garment factories and mobile phones present an opportunity

to address an age-old problem. The “globalization thesis suggests that capital mobility, especially in the garment industry where production can be easily moved, has undermined the possibilities of cross-border labor organizing and that workers and labor unions have no capacity for agency or resistance” (Armbruster 1998, 22). But the harsh working conditions endured by laborers as owners attempt to squeeze out more profit call for collective action.

Mobile phones present a transformative opportunity for labor by creating a new space for organizing. They offer the benefits of mobility, individual contact, and multimodality, which enhance organizers’ ability to reach people more than traditional forms of communication such as flyers or meetings (Castells et al. 2007). Harnessing the technology of mobile phones to communicate with workers, coordinate work actions, and link labor movements together could help return control over surplus back to its source—the hand of the worker.

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Lead Photograph

Banglalink desh mobile phone plan advertisement, Dhaka, March 2009. Source: © Wonderlane, <http://www.flickr.com/photos/wonderlane/3321332537/>.

Notes

¹ Thirty countries have more cell phones than people. The cell phone penetration rates in Sweden, Italy, and the United Kingdom have exceeded 110%. See http://www.telecom-magazine.com/newsglobe/article.asp?HH_ID=AR_2148 and http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=84703.

² Post-Fordist industrial restructuring is characterized by increased flexibility in production processes, labor organization, and patterns of accumulation to respond quickly to changes in global demand. For example, employers maintain a flexible workforce that can be hired and fired on an “as-needed” basis without the contracts, pensions, and benefits associated with unionized employment.

³ In Bangladesh, an export processing zone (EPZ) is “a territorial or economic enclave in which goods may be imported and manufactured and reshipped with a reduction in duties and/or minimal intervention by custom officials.” EPZs are located near Dhaka, Uttara, Adamjee, Chittagong, Comilla, Ishwardi, Karnaphuli, and Mongla. See http://www.epzbangladesh.org.bd/bepza.php?id=about_bepza and <http://www.epzbangladesh.org.bd/index.php>.

⁴ The United Nations projects that the five largest cities (in decreasing order of size) in 2025 will be: Tokyo, Mumbai, Delhi, Dhaka, and São Paulo.

⁵ In this study, a slum is defined as an area with at least ten families experiencing poor quality housing, densely populated dwellings, inadequate water and sanitation facilities, impoverished neighbors, and insecure tenure.

⁶ This figure likely understates the number of users given that many households rent land-line phones.

⁷ See the Grameen Bank website for more information. <http://www.grameen-info.org/>.

⁸ A course at MIT is exploring the use of mobile communications in social activism. Also, the UC Berkeley Human Rights Center has invited submissions exploring how

mobile phones can advance human rights. See <http://cfa.media.mit.edu/> and <http://www.netsquared.org/hrc-ucb>.

⁹ Anecdotal reports indicate labor organizers in the US are using mobile phones to advance their missions. For example, see <http://mobileactive.org/low-cost-low-barriers>.

¹⁰ Based on observations of middle-income and upper-income households from January through February 2008.

¹¹ For example, see *BBC News*, “More Clashes in Bangladesh Strike,” January 31, 2005, http://news.bbc.co.uk/2/hi/south_asia/4222991.stm.

¹² Based on observations and conversations in Bangladesh in 2006 and 2008.

¹³ By 2000, only eight of sixty-five officially recognized industrial federations in Bangladesh engaged garment factory workers, although informal unions exist (Dannecker 2000).

¹⁴ Mobile phones could also facilitate “cross-border labor organizing,” which has previously demonstrated promise in garment industry worker movements such as with Phillips Van-Heusen workers in Guatemala (See Armbruster 1998).

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