

INDONESIA'S URBAN FOOD VENDORS

Importance, Issues, and ICT Potentials

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Introduction

It is estimated that Indonesia in 2007 had 47,702,310 microenterprises that provided jobs for 77,061,669 people, which represents 81.7% of all employed workers at that time in the country (BPS, 2008). Despite this scale, microenterprise based livelihoods have distinct forms of vulnerability, such as: inadequate or deeply uneven income streams, low productivity, and difficult working conditions (ILO, 2010). In this project we specifically focus on mobile food vendors, one of many types of microentrepreneur in Indonesia.

This focus is motivated by four basic considerations (1) mobile food vendors are very common in Indonesia and can be seen along major streets, residential areas, schools, and office complexes offering various types of food and snacks; (2) most of these vendors resort to this line of work because of necessity where they do not have any other means to generate income for

themselves and their family (Duncombe, 2002: 74; Roy, 2006: 452-464); (3) operating a mobile food vending business is a physically demanding activity and their ability to conduct business is heavily dependent on the vendor's health, the day's weather condition, geographic constraints related to legal and social norms (on where they can and cannot sell), and the mobile nature of the work. Last and (4) despite the hard work the vendor's do, their generated incomes are relatively small, vulnerable, and highly variable from day to day (BPS, 2008; Fonchingong, 2005: 243-253); Little, 2002: 61-95; Tinker, 1997).

Those four considerations create uneven and fragile income streams limiting the sustainability of the enterprise in the sector for the vendor; here we believe that ICT (Information and Communication Technology) in general can play an important role in meeting these needs and alleviating these problems. The general objective of this project is to investigate into new ways for ICT and new roles that ICT can play in addressing the above identified problems. In the initial part of the project we conducted a user-and-functionality-discovery phase where interviews and observations were conducted to uncover issues and patterns in mobile food vending, especially in Indonesia.

Findings from this phase points to mobile food vending to be providing three main economic and social functions for Indonesia's urban community: supplying affordable and quality foods for middle and lower income communities, acting as a fallback occupation in time of economic downfalls, and providing additional income to further support the household. Moreover, findings from this phase also identified several obstacles that mobile food vendors generally face in running and growing their business: a small customer base, limited ability to reach a larger audience, and the inability to effectively promote their trade.

This paper is based on interviews and observations of mobile food vendors in Surabaya during the summer of 2011. These interviews and observations were part of a user-and-functionality-discovery phase for an ongoing project that attempts to design and develop new ways for ICT (Information and Communication Technologies) to support mobile microentrepreneurs in developing countries. Results from this phase are intended to inform the design and development of a system to achieve our overall study's objective, which is to support the business efforts of mobile microentrepreneurs.

All three authors participated in this study where we interviewed both mobile food vendors and their customers. We selected vendors who were selling in several populated residential areas, schools districts, and office complexes. Vendors were selected on their willingness and consent to be recorded during our interviews, be observed while they were working, and be photographed while they were selling. While customers were selected using the same criteria but from vendors that we previously have interviewed. All interviews were later transcribed into written form and coded it using RQDA. All codes were later merged together and differences were resolved by discussing and compromising on them to come up with a unified and agreeable code. Analysis and themes were later identified from these codes that became the basis for our findings and the writing of this paper.

Step Into My Shoes: The Life of a Mobile Food Vendor

This section describes a typical mobile food vendor observed in our study together with the vendor's typical daily work schedule. In place of choosing one representative subject from our study and portraying it here we will instead use one persona that we developed to describe a typical mobile food vendor we observed in our study and one scenario that illustrates a typical vendor's daily work schedule. Personas (Adlin, 2008: 991-1016; Cooper, 2007) are fictitious characters that are a collage of attributes and characters from a system intended users that were uncovered during the system's users-and-functionalities-discovery phase; whereas scenarios (Carroll in Gelerand et al., 1997: 383-406; Rosson and Carroll in Sears and Jacko, 2008: 1041-1060) are fictitious series of events that the developed personas conduct in his/her fictitious life.

Both personas and scenarios are widely used in the field of Human Computer Interaction (HCI) to aid designers and developers to ground their efforts in contriving and building a relevant system for the system's targeted user-base; where having posters illustrating personas of the intended users and scenarios describing tasks these personas are trying to do is much simpler to realize than getting a real user to be physically be with the team during the entire design and development phase (Adlin, 2008; Carroll in Sears and Jacko, 2008; Cooper, 2007; Rosson, 2006) which might take months to complete.

We chose to use personas and scenarios instead of the typical approach of selecting a representative subject from our study is because our findings were so rich and diverse there were no one subject, in our study, that can encompass all aspects that we wanted to convey in this paper.

Persona: Azam a *Mi Ayam* Seller

Azam is a 32 years old man born in Lamongan who have been selling *Mi Ayam* in Surabaya for the last nine years. Azam has been married for 8 years now and has a 6 years old son who will be starting elementary school this year. Currently Azam is renting a two room cottage in a small and narrow alley near Puncang's traditional market. This is Azam's third rental since he decided to move and work in Surabaya, in early 2000. Azam moved from his first rental because it was too far away from his daily selling route and moved from his second rental because of rent increase.

Azam has always been working as a migrant ever since he completed his Junior High School education in his home village. Because of his family economic condition, upon completing his Junior High school, Azam decided to find work and earn a living for himself instead of continuing his schooling and relying on his parents. Because Azam could not find any work in his village and his parents were farm laborers thus do not own any land that he can farm on, Azam decided to join his older brother in Lombok who was already a *Bakso* seller there. Initially Azam helped out in his brother business while at the same time learned the ins-and-outs of selling *Bakso*: ingredients, preparations, and how to sell the food. After six months of this work, Azam decided to start selling *Bakso* by himself but in conjunction with his brother where Azam's brother bought a cart to sell from and prepare the food to be sold while Azam would take a 30% commission from the day's gross income for his efforts.

After more than four years selling *Bakso* in Lombok, Azam had saved a considerable amount, decided he is ready to be on his own, and wanted to leave Lombok to try his luck in Jakarta. During his time in Jakarta, Azam leveraged the skill and experience he learned while in Lombok and also started selling *Bakso*. But even though Jakarta was more populated there were also more competition in selling *Bakso* compared to in Lombok. After two years

alone in Jakarta, Azam decided this city did not suit him and started to find a place that is much closer to his home village, which was later decided to be Surabaya. Once Azam finally decided to move to Surabaya, he contacted a village friend he knew there who was selling *Mi Ayam* to help Azam in finding a place and setting up his new business. Once this was arranged, Azam sold all of his equipments in Jakarta and moved to Surabaya.

In Surabaya Azam again started selling *Bakso* but, as with Jakarta, the competition in selling *Bakso* was also relatively high. After three months and several discussions with his friend (that helped him moved to Surabaya) as well as observing the selling conditions in his vending area, Azam decided to stop selling *Bakso* and switch to selling *Mi Ayam*. Since Azam already knew how to prepare noodles for *Bakso* it was not that difficult for him to make noodles needed for *Mi Ayam*, which his village friend also taught him how to do.

Moreover, Azam already own a cart to sell from and has identified a route to start selling at, his old *Bakso* route. But once he started selling *Mi Ayam*, Azam noticed that *Mi Ayam* had a different set of customers than *Bakso*'s customers making his old route and customer-base to be insufficient. Working from his old *Bakso* route, Azam then started exploring alternate adjacent routes that might have potential customers, noting crowded areas, paying special attention on where to be at specific times of day and avoiding routes that already had a *Mi Ayam* seller. After six months of exploration, Azam finally identified a profitable route for his new *Mi Ayam* business but this route was a considerable distance from his current residence thus decided to move his residence to somewhere close to his selling route.

Scenario: Azam's Monday

Azam immediately rose from his sleep upon hearing the call for prayers from his nearby mosque. After conducting his morning prayer, Azam made a quick note of supplies he needs for the day business, check his wallet to see if it has around 150 thousand Rupiah the typical amount needed for his shopping, and then walk to the nearby traditional Puncang market to do his daily morning shopping. Upon returning back from the market, Azam goes to the kitchen and started separating items that his wife has asked him to buy last night with items

that he needed for his business. Azam's then started to make noodles needed for his *Mi Ayam* trade while his wife prepares the *Mi Ayam* amenities, such as vegetables and chickens, while at the same time preparing the family's breakfast. Everything is ready and set by around 9am when Azam would go to his cart to prepare it for the day's trade. After preparing his cart, Azam would rest for an hour before starting on his selling route.

Azam started pushing his cart a little after 10am and immediately headed toward the nearby high school where he had to be there by 11am because students in that school would buy from him during the school's recess time. Along the way to the school, there were two customers who hailed Azam to purchase his *Mi Ayam*: one was a new male buyer, which most likely was just an incidental customer, and another he recognize as an infrequent buyer who work as a personal driver waiting for his employer to finish his/her business inside the bank, which Azam would pass during his journey to the high school.

After staying at the high school for around an hour and having around 15 students buying from him, Azam started to again push his cart back to the bank that he passed earlier to catch the lunch crowd, which would start around 12.30pm, and who mere mostly employees of the bank. Azam went against staying in the high school till their lunch hour, where there would be more students buying, because he knew that there were another *Mi Ayam* seller who sells there during that time and has been selling there long before he found the high school.

On his way back to the bank, Azam was again hailed by three university students who were looking for something to eat while waiting for a book they were copying from a local photocopier. While waiting on these buyers to finish their meal, Azam received a call from one of his frequent customers who worked as a security officer at the bank and was waiting for Azam's to get her lunch. The customers asked for Azam's location and estimation of how much longer before he arrives at the bank. Azam's replied around another 15 minutes. The customer then requested, that when Azam arrives, to deliver a plate of her regular order to her post because she couldn't wait outside that long. Azam's acknowledge her request and both of them ended their phone conversation.

Upon his arrival at the bank, Azam noticed that he had just missed the peak of the lunch crowd but there were still several buyers considering what to

have for lunch. While taking orders from customers, Azam prepared the previous order he received from the bank's security guard and delivered it inside the bank to the guard. Around 2.30pm, after getting around 20 orders and noticing there were not that many more customers after the bank stopped its deposit hour, Azam decided to move on to the next leg of his selling route, which is circling a housing complex that is located around 2 blocks from the bank.

On his way to the housing complex, Azam stopped by a mosque to pray and to take a short rest before continuing on his selling route. While resting in the mosque, Azam took time to change the water he uses to wash and clean his plates as well as serving around another five customers around the mosque. Azam finally arrived at the housing complex around 3.30pm and immediately started on his regular selling route inside the complex. Typically Azam would have sold all of his food by around 5pm but today seems to be a slow day and he still has several more portions to sell. So Azam keeps on selling past his normal selling hours until either all of his food were sold out, he was too tired to continue, or it was too late to sell anymore, which is when he would directly head home.

Upon arriving home, around 7pm, Azam would park his cart in front of his small cottage and go in to shower and rest. He takes a look at his money box, counts his income for the day, and noted that he made a little over 220 thousands Rupiah, which was the lower end of his average daily income that ranges from 200 – 300 thousands Rupiah per day. He takes 20 thousands rupiah and set it aside into his savings, which he will typically bring back when he visits his village, and puts the remaining money in his wallet for tomorrow's shopping. Azam then watch a little TV and would go to sleep at around 10 or 11pm.

Economic and Social Functions of Mobile Food Vending

The above persona and scenario hinted on several important economic and social functions that mobile food vending provides not only to the seller but also to its consumer and family members. In this paper we elaborate on three functions that repeatedly emerge in our interviews and observations. The first economic and social function we observed is that, beside as a main source of

income, mobile food vending can act as fallback for the vendor when there are no other options for them to find a decent living back in their village or hometown.

A female *Nasi Campur*¹ seller in Surabaya stated that her reason for selling this food was “... *because of economic factors, [back] at home there was no work and [my] husband also did not work.*”. But this seller knew how to cook and her younger brother suggested that she should try selling her cooking in his workplace (a large mall for computer and electronic products in Surabaya) because at that time there were no food sellers selling there and this service will be a large convenience for workers working in the mall where they could have their lunch without having to leave their work place, “... *rather than being unemployed at home I was directed*² *[by my younger brother] to sell in his work place.*”

A male *Gado-gado*³ seller who vends around Surabaya’s mayor office stated that back home he did not have a permanent occupation and was working at odd-jobs then decided to help his father-in-law business that was eventually handed over to him to run “*Before moving to Surabaya I was at home [in my village] working at anything that I could find ... my father-in-law was already selling gado-gado and then I took over the business.*”

Notice here the important role of the vendor’s social network in suggesting an occupation, pointing out locations to sell from, and even training the vendor in selling. Almost all mobile vendors tend to be migrants thus do not have any knowledge about the city as well as what occupation they can do in the city. The vendor’s social network provides this information that helps the vendor decide whether to choose this line of work and even at times help the vendor to startup their business.

The female *Nasi Campur* seller, quoted above, was not only directed by her younger brother on where to sell but her brother also provided the initial capital needed to start her business “... *[to start the business] my younger brother gave me a loan around 250 [thousand rupiahs] ...*”. This important role of social network is in line with findings from other places that also showed reliance of migrant workers on their social network to decide whether to migrate

¹ *Nasi campur* is rice mixed with vegetables and some type main course (e.g. chicken, egg, fish, or meat) that is wrapped in a paper bag.

² The terminology used here is: *dikasih jalan*.

³ *Gado-gado* is a type of salad that uses crushed nuts as dressing.

and to help in finding a means for leaving once they have migrated (Banerjee, 1983; Banerjee, 1984; Cinar, 1994; Iversen, 2009).

The second economic and social function we observed is that mobile food vendors caters to middle-and-lower-income communities and supply them with high quality food within a reasonable price range. Looking at routes that the vendor take we noticed that these routes are mostly passing through schools and middle-and-lower-income residential areas, where buyers have limited purchasing power or would buy food from the vendor out of convenience. School children purchasing ability are constraint by the allowance their parents provided for them while residences of middle-and-lower-income community buy because they do not have time to prepare a meal for themselves or their family. A female buyer who frequents a local *Mi Ayam* seller stated that “... *it's more as a necessity, for me and my children, where what we need is something to eat for lunch ... we don't want to go out and in fact if we go out we might not even get the same quality food for this cheap of a price.*”

Interestingly we noticed that, vendors rarely pass through high income neighborhoods and if they do they will most likely stick to paths that are near big roads and rarely would venture deep into this high income neighborhood. We suspect this tendency to avoid high income neighborhood is for two reasons.

First, these neighborhoods will have fairly large houses and since vendors are physically moving they have a limited range thus by passing through this neighborhood with large houses it will reduce the number of houses they can pass and reduce the number of potential customers they can meet or find.

Second, since vendors announce their arrival by shouting or by hitting some object (e.g. bells, wok, or bamboo pole) this sound mostly will not be heard by residences of large houses because it cannot penetrate deep inside the house especially if the residence is resting or has their entertainment systems turned on. While for office complexes, vendors tend to sell permanently from their carts. We believe this is because an office complex host a large number of employees and potential customers not requiring the vendor to search out for more customers.

Third, economic and social function function we observed is that mobile vending provides an important additional source-of-income for the family, this is especially true when the vendor is female.

A female seller of traditional delicacies stated that she started selling when her family's harvest failed in three consequent seasons and vending food is a way she helps to supplement her household's income: "... I [my family] farmed three times and none of them succeeded ... [I started selling] to support various household needs." The husband of the above female *Nasi Campur* seller is also working as a part-time driver and her business provides additional income for times when her husband cannot find work: "... [My husband] work as a part-time driver ... but often falls sick and has to stop working ...".

In this respect, prior studies (Banerjee, 2007; Cinar, 1994; Collins, 2009; Gulyani, 2010) have also shown that informal businesses, such as mobile food vending, provides important additional income for the household but here we expand on this and point that it is not only the vendor's household that take advantage of this income but also member of the larger immediate family. Vendors often go back to their hometown and when they go back they will bring with them their savings that are typically distribute in some way to their larger family members in the village, as stated by the above male *Mi Ayam* seller "... after one and a month I would go home, because my parents are still living [back in the village] and I visit them ... it doesn't feel right if I go home without bringing something."

Obstacles in Growing and Sustaining a Mobile Food Business

Running a mobile food vending business is unquestionably a physically demanding activity with long hours but providing only marginal and unpredictable income streams for the vendor. Most mobile food vending businesses, as with other microentrepreneur ventures (Grosh and Somolekae, 1996) start small and stay small. Specifically for mobile food vendor, we identify three major reasons why the business cannot expand beyond its current size.

The first reason is that mobile food vendors cater to a limited number of customers. This limited customers base is not caused by people reluctance in buying food from the vendor but more as a consequence on the nature of the business itself where vendors are physically moving from one place to another

peddling their food. This physical activity put a limit on the geographical range a vendor can go in a day that also limits the number of customers that the vendor's encounter and the number of customers purchasing from the vendor on that day. We discovered that the typical distance traveled by vendors range from 3km – 10km a day. Rarely was there a vendor that would travel farther than 10km. The exception here is when the vendor is just starting out and still looking for a route or when there are not enough customers and there were still food not sold yet.

Moreover, customers want variation in their meals where a buyer today might not want to be eating the same meal tomorrow and will buy something else. This later customer's behavior will result in the number of daily customer to be unpredictable and varies from day to day, which ultimately produces small and varied daily incomes. A male *gado-gado* seller noted that “... buyers can get bored eating the same food every day and will buy something else tomorrow.”

The second reason is that mobile food vendors have a limited ability to reach a larger customer-base. This limitation is also a direct consequence of the physical nature of their business where the geographical reach of the vendor is limited to his/her physical prowess and time of day. One possible way to increase a vendor's reach is through using a more mobile mode of transportation, i.e. upgrading from walking to riding a bicycle or upgrading from riding a bicycle to using a motorcycle. We noticed this willingness to upgrade their mode of transportation when vendors replied to our question on “what would you do if I gave you a lump-sum of money” and the second most frequented answer was to upgrade their mode of transportation (the most frequented answer was to rent a place so they can sell from a permanent location).

Another way to increase a vendor's reach is to hire additional sellers to peddle their food and pay these sellers some fix rate or commission based on their daily sales. We found this approach in two instances: one male *Bakwan*⁴ seller who already have four other sellers working for him and paying them a 30% commission on their gross sells and a male seller of *Pentol*⁵ who was working for another vendor and selling that vendor's food also for a 30%

⁴ *Bakwan* is a type of soup with a mixture of meatballs, tofu, and other items.

⁵ *Pentol* is a type of traditional meatball.

commission on his gross sell. An important to point out here is that for these two methods to be viable will require new investments that the vendor might not have funds for and must resort to either using their savings, which will take time to gather, or rely on some sort of external financing, which can be from families or microfinance institutions.

The last and the third reason is that the mobile food vendor's inability to effectively promote their trade. The main mechanism that mobile food vendors currently use to promote their food is by generating a distinctive noise or sound to signal their arrivals. For example in Surabaya a sate seller will shout in a heavy Madura accent "*Sate Sate Sate*", a *Tahu Tek*⁶ seller will knock on his/her wok "*Tek Tek Tek*", or a fried rice seller will hit a large bamboo poll "*Dug Dug Dug*".

Another mechanism is for their customers to recommend a vendor's to the their friends or neighbors but the limitation of this method is that the vendor must pass through the area where the person that has been recommended is residing at. A frequent female buyer of a *Mi Ayam* started buying from her current seller because her neighbor recommended this seller "*... I started buying because I saw my next door neighbor frequently buying from this vendor and she stated that the food was delicious.*" A new promotion mechanism that we started to observe is that, at times when there are not that many buyers, vendors will actively promote their trade by texting or calling a customer they are close with but the large caveat here is that the vendor will have to be very close to the customer for him to even consider this approach. All of these three methods have limitations on the number of customers it can produce and its effectiveness thus constraining any potential large growth of the business or at least only allows it to grow over long periods of time.

Future Research Direction and the Potential Role of ICT

Based on the above uncovered attributes, characteristics, and constrains of the mobile food vending business we are designing and developing a mobile-phone-based system that can address or at least tries to alleviate some of the above identified problems [11]. The latest World Bank data (World Bank, 2011)

⁶ *Tahu tek* is a dish of mostly fried tofu and potatoes using a special sauce.

shows that Indonesia in 2009 already had 69.2 mobile subscribers per 100 people and a mobile network coverage reaching 90% of the population. In addition, almost all vendors that participated in our study had access to a mobile phone either directly or indirectly (i.e. through their wife/husband or children).

Those two facts point to mobile phones as a viable device to develop and deliver the system that we are planning and constructing. Our envisioned system is plan to have functionalities that can provide customer relation management (CRM) functionalities to retain current customers, location awareness features to easily locate and identify vendors, and recommendation capabilities enabling loyal customers to easily recommend their favorite vendors.

Bibliography

- Acho-Chi, C. 2002. "The Mobile Street Food Service Practice in the Urban Economy of Kumba, Cameroon." *Singapore Journal of Tropical Geography* 23, 2, 131-148.
- Adlin, T. and Pruitt, J. 2008. "Putting Personas to Work: Using Data Driven Personas to Focus Product Planning, Design, and Development" in A. Sears and J.A. Jacko (eds.) *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications*. New York: CRC Press.
- Banerjee, A.V. and Duflo, E. 2007. "The Economic Lives of the Poor." *The Journal of Economic Perspectives* 21, 1, 141-167.
- Banerjee, B. 1983. "Social Networks in the Migration Process: Empirical Evidence on Chain Migration in India." *The Journal of Developing Areas* 17, 2, 185-196.
- Banerjee, B. 1984. Information Flow, Expectations and Job Search: Rural to Urban Migration Process in India. *Journal of Development Economics* 15, 1-3, 239-257.
- BPS (Badan Pusat Statistik). 2008. *Perkembangan Indikator Makro UKM Tahun 2008*. Jakarta: Badan Pusat Statistik.
- Carroll, J.M. Scenario-Based Design. 1997. In M.G. Helander, T.K. Landauer and P.V. Prabhu (eds.). *Handbook of Human-Computer Interaction*. North Holland, Amsterdam. The Netherlands.
- Cinar, E.M. 1994. "Unskilled Urban Migrant Women and Disguised Employment: Home-Working Women in Istanbul, Turkey." *World Development* 22, 3, 369-380.
- Collins, D., Morduch, J., 2009. Rutherford, S., and Ruthven, O. *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton: Princeton University Press.

- Cooper, A., Reimann, R., and Cronin, D. 2007. *About Face 3: The Essential of Interaction Design*. Indianapolis: Wiley Publishing.
- Dawood, R., Yew, J., and Jackson, S.J. 2010. "Location aware applications to support mobile food vendors in the developing world." *Proceedings extended abstracts of the 28th International Conference on Human factors in Computing Systems (CHI 2010)*, ACM, 3385-3390.
- Duncombe, R. and Heeks, R. Enterprise Across the Digital Divide: Information Systems and Rural Microenterprise in Botswana. 2002. *Journal of International Development* 14, 1, 61-74.
- Fonchingong, C.C. 2005. "Negotiating Livelihoods beyond Beijing: the Burden of Women Food Vendors in the Informal Economy of Limbe Cameroon." *International Social Science Journal* 57, 2, 243-253.
- Grosh, B. and Somolekae, G. 1996. "Mighty Oaks from Little Corns: Can Microenterprise Serve as the Seedbed of Industrialization?" *World Development* 24, 12, 1879-1890.
- Gulyani, S. and Talukdar, D. 2010. "Inside Informality: The Links between Poverty, Microenterprises, and Living Conditions in Nairobi's Slums." *World Development* 38, 12, 1710-1726.
- International Labour Office. 2010. *Global Employment Trends, January 2010*. Geneva: International Labour Organization (ILO) Geneva, Switzerland.
- Iversen, V., Sen, K., Verschoor, A., and Dubey, A. 2009. "Job Recruitment Networks and Migration to Cities in India." *Journal of Development Studies* 45, 4, 522-543.
- Liedholm, C. and Mead, D. 1987. *Small Scale Industries in Developing Countries: Empirical Evidence and Policy Implications*. Michigan: Department of Agricultural Economics, Michigan State University.
- Little, W.E. 2002. "Selling Strategies and Social Relations Among Mobile Maya Handicrafts Vendors." *Social Dimensions in the Economic Process* 21, 61-95.
- Mead, D.C. and Liedholm, C. 1998. "The Dynamics of Micro and Small Enterprises in Developing Countries." *World Development* 26, 1, 61-74.
- Mengistae, T. 2006. "Competition and Entrepreneurs' Human Capital in Small Business Longevity and Growth." *Journal of Development Studies* 42, 5, 812 - 836.
- Rosson, M.B. and Carroll, J.M. Scenario Based Design. In A. Sears and J.A. Jacko (Eds.). 2008. *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications*. New York: CRC Press.
- Roy, M.-A. and Wheeler, D. 2006. A Survey of Micro-Enterprise in Urban West Africa: Drivers Shaping the Sector. *Development in Practice* 16, 5, 452-464.
- Tinker, I. 1997. *Street Foods: Urban Food and Employment in Developing Countries*. New York: Oxford University Press.
- World Bank. 2011. *The Little Data Book on Information and Communication Technology 2011*. Washington D.C.: The World Bank.