

HOMEWORKERS ONLINE: UTILIZATION OF ICT FOR HOME-BASED WORK IN MALAYSIA

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ABSTRACT

This paper addresses key gender-specific issues affecting poor urban women homeworkers' utilization of information and communication technologies (ICTs) in three sites in Malaysia - Penang, Ipoh and Klang Valley. A total of 90 urban impoverished women homeworkers and 40 sectoral stakeholders were interviewed. They are from different races, ages and types of home-based work and included the chronically ill or those with physically and mentally challenged dependents. Focus group discussions, oral histories and case studies/observations offer insights of gender issues and glimpses into their otherwise invisible lives.

Most homeworkers were initially 'greened' as 'unskilled' workers or cheap secondary labour in the mushrooming industries. They subsequently withdrew and entered home-based work after marriage and childbirth. Many were spatially confined by their religious and traditional sense of duty and their responsibility to their family, especially disabled children. Others were restricted by their immobility in a disable unfriendly environment. Homeworking enables them to be economically productive and empowers them. However, due to their isolation, atomization, lack of recognition as 'workers' and inadequate safeguards to protect their welfare, many homeworkers, subcontracting from factories or selling through middlepersons, suffer from exploitation.

Many assistance schemes of the Malaysian Government for vulnerable groups do not target homeworkers. Its heavy investment in ICT infrastructure has yet to narrow the digital divide. While all homeworkers have access to some form of ICT tools, many do not personally own the tools. Fewer have access to computer and Internet. Although they are aware of the potential of ICT for work, few explore its full potential because of their limited education, lack of literacy or their inability to demystify technology.

Those supported by organisations have better access to training and utilize ICT tools in varying degrees for their work. They increase their clientele and widen their markets. With greater gender justice, these homeworkers will be able to transform gender relations and technology issues to be empowered to gain knowledge and use ICTs to access wider markets, skills and opportunities and uplift their lives and that of their families.

Keywords: Women, E-commerce, Homeworkers, Malaysia

1. INTRODUCTION

Malaysia's rapid industrialization and thrust towards k-economy has resulted in near full employment. However, the rate of women's participation in the labour force in the last ten years remains low, averaging 44%. One reason for this low rate is the non-recognition of the

informal sector and the contribution of this sector remain unaccounted. Among the informal sector workers are poor, vulnerable women who work from home who contribute significantly to the wellbeing of their households as primary or supplementary earners.

The Asian Financial Crisis of 1996-97 saw many garment and electronics multinationals shift to other countries, including China, Cambodia and Vietnam, in search of lower-cost labour. After the crisis, local entrepreneurs, having learnt from the multi-national corporations, expanded their operations to meet increasing global demand. They encouraged more experienced and skilled workers to be their home-based subcontractors allowing the industry to stay competitive and flexible because they were able to externalise costs and casualize labour.

This study gives visibility to their work and contribution. It examines the challenges and gender-specific issues related to their access to technology principally, Information and Communication Technology (ICT). It explores the enabling/disabling environment in enhancing their material welfare and the access, control and deployment of ICT for work. It discusses the interrelation of gender and technology issues primarily the marginalisation of women in the labour market (Standing, 1989), and the low visibility of women's work that results in their not being regarded as significant users of technology which hinders women from gaining access to knowledge on the utilization of technology (Wajcman, 1991).

The findings are based on the fieldwork carried between May and Oct 2005 involving interviews with 90 homeworkers and 40 stakeholders in three sites, Klang Valley, Penang and Ipoh as well as focus group discussions, records of oral history and observations which provide depth to gender specific issues on the deployment of ICT for home-based work.

2. THE SAMPLE

Of the 90 homeworkers interviewed, 38% are Malays; 33% Chinese; 18% Indians; 4% Asli; and 7% other races, reflecting the approximate composition of Malaysia's population. As there was no registration of homeworkers to form the population for sampling, those initially interviewed were selected from homeworkers from previous studies. These interviewees and employers then introduced other homeworkers.

The homeworkers in this study were have characteristics typical of homeworkers (Loh-Ludher, 2002). They are married, have children or elderly to care for. The majority in this study were 30-39 (29%) and 40-49 (32%). The rest were 19 years or less (1%); 20-29 (9%); 50-59 (16%); and 60 years or more (13%). The majority were married (65%) with only 6% unmarried; 17% divorced/ separated and 12% widowed/abandoned. Half of the Muslim women in this study were separated or divorced with little or no alimony or financial assistance from their husbands. All of the 15 single mothers (12 Muslims and 3 others) live close to the poverty line. A third of the sample is primary earners of their households. Almost all have dependents and bear the main responsibilities for the physical care of elderly parents or young children. Thirteen of them have disabled children who need a great deal of care and attention, particularly those who have to be taken for daily physiotherapy. Almost 10% of the homeworkers interviewed have disabilities or are chronically ill.

3. PROFILE OF HOMEWORKERS

The homeworkers are involved in a wide range of products and services, including the traditional handicrafts and food processing cottage industries, labour intensive work subcontracted from factories as well as knowledge-based services. They are not registered as

a separate category of workers in the labour force but are generally grouped together with other own account workers or as unpaid family labour. Waged homeworkers and home-based subcontractors are also not regarded as workers and are not accorded the legal benefits of a worker such as medical and maternity benefits, paid leave or social security and provident fund contributions. As these women work from home, they are sometimes harassed by local authority officials who assert that residential premises cannot be used for production or that they are operating without a licence or registration. Consequently, the homeworkers become invisible and their production and services are not perceived as work by principals, factories or the government. The value of their work is not costed and their contribution to the economy goes unrecorded.

The majority of the homeworkers have worked in labour intensive factories but entered into home-based work after childbirth when confronted by a gender insensitive environment unsupportive of mothers with small or disabled children and aged parents. This confirms the earlier research finding by Loh-Ludher (2002) that home-based work offers women an opportunity to be gainfully employed when they are either unable to participate or have to withdraw from the formal labour force after childbirth.

The invisibility of their work is also due to the fact that homeworkers intersperse their productive work with domestic duties in a flexible manner. In homes where gender division of labour is strong, homeworkers bear primary responsibilities for care and maintenance of the home. The domestic tasks take central role and the home-based work fills the spare time and space. As a result, these women are perceived as 'housewives' rather than 'workers' by themselves, their family members and the community.

The majority of homeworkers work on an individual basis. Some 65% of homeworkers work alone supplying products or services directly to wholesalers, retailers or clients. Another 17% are subcontractors. These are the women who are mainly involved in packaging, garment sewing and electronic assembly work that are contracted from manufacturers. The others (18%) work in partnership mainly with relatives, neighbours or friends. These partnerships are not always formal or permanent.

As the homeworkers negotiate individually with principals or factories, they remain isolated and atomized even in a neighbourhood like Menglembu, Ipoh, where the numerous home-based subcontractors from shoe factories live on the same street. Though they are aware of each other's home-based work, they do not discuss or reveal the payment or conditions of their subcontracting. This reluctance to share information is compounded by their perception that since they lack registration and local authority officials sometimes harass them for conducting business in residential areas, their home-based work is illegal. Consequently, they do not form work groups or organise themselves to strengthen their bargaining power. Homeworkers are paid 4 to 5 US cents for sticking a pair of soles or 8 to 10 US cents for sewing a pair of shoes, which is only 10-15% of retail price for two significant component of production. Factories take advantage of this to externalize costs and exploit subcontractors.

Due to their informal nature and isolation, most homeworkers have little access to assistance and training programmes. As a result, the handicrafts and foodstuffs which they produce are normally of low quality and thus restricted to the local market. Other products which are exported, such as garments, shoes, gloves and electronics are produced by subcontractors for factories. Generally most homeworkers neither see the final product nor are aware of the destination for these goods. They are generally unfamiliar with fair trade as most of the homeworkers have little or no access to either information or organisations promoting fair trade.

Most of the homeworkers live in low cost housing areas or villages. All including the Asli village on the fringes of Ipoh and Pulau Aman, off Penang, have access to electricity and piped water. Through the urban development efforts of the Government to provide proper housing with amenities for the poor, 25% have been relocated from the squatter houses to low cost flats.

The majority (55%) of the homeworkers belong to nuclear family households. The average size of a family is six. One third of the homeworkers have more than four dependents. The other 45% live in extended families or share their residence with other families. Sixty percent have relatives occasionally living with them. About 20% have other tenants sharing their homes. A few live in rented rooms.

Work is done in any available part of the house, with the dining or living room being most frequently used. Naturally, the kitchen is used by those with a food processing enterprise. The bedrooms become the workplace for those living in rented rooms. Few have the luxury of a special place set aside for their work. Thus, generally there is no spatial segregation of productive work.

Almost all homeworkers bear the physical and psychological responsibility for domestic work. If she is unable to carry out her household chores, the person most likely to assist her is another female. Male members, even sons, are less likely to help unless it involves 'manly' tasks or heavy work. The gender division of labour within the home is obvious with the majority of the husbands bearing little or no responsibility and avoiding domestic work. They accept their role to "xian fu jiao zi" (care for her husband and teach her son) and regard their husbands as 'yi jia zi zhu' (a family's lord), even in absentia. Most homeworkers defer to their husbands in decision making. In the absence of husbands, many refer to male relatives, often brothers, uncles or grown-up sons, for guidance and advice.

Thirty-six percent, however, cannot rely on support from in-laws, siblings or parents for babysitting or even occasional child-care due to distance, estrangement, unwillingness or inability to help. The general lack of facilities and support infrastructure for the physically disabled and the elderly add a heavy burden on these women.

Based on the available opportunities or the pressure of financial needs, most homeworkers assert that the decision to enter into home-based work was primarily theirs. Initially, since home-based work is mainly undertaken during the time their husbands are not home, most of the husbands are unaware of the work, and, often take no interest in the home-based work as long as domestic duties are not neglected. The homeworkers have to manage their time and resource strategically and creatively to ensure that they are able to attend to their domestic responsibility.

Based on homeworkers' estimates, 33% earn below US\$50 per month 29% between US\$51 and US\$150 per month and 40% of the homeworkers earn between US\$151 and US\$250. Almost a third earn less than US\$134 per month, the national poverty line. One third of the homeworkers interviewed are sole earners. Another 17% are primary earners with other household members contributing small amounts towards household expenses. Half are supplementary earners, although in some cases, the amount contributed is significant. It is apparent that the personal earnings of the majority of the homeworkers are substantial additions to the household income and significantly uplift families out of poverty.

4. SKILLS AND TRAINING

The largest numbers of homeworkers are engaged in tailoring and embroidery (30%), followed by those in food processing (20%) and handicraft making (14%). Other activities include the beauty and health business (10%) such as massage, bridal makeup and hairdressing; packaging/assembly of industrial products/components (9%); babysitting (8%); secretarial and accounting including translation and data-entry (4%); private tuition (3%) and others such as multi-level marketing (2%). There is no concentration of one particular type of industry in a village or housing area. Almost all the homeworkers started home-based work utilising their own skills or previous work experience and using whatever materials or resources available at home.

<i>Level</i>	<i>Number</i>
No formal education	9
Elementary 1-6 years	43
Secondary 7-10 years	35
Post-Secondary >10 yrs	3

Table 1: Education Level of Homeworkers Interviewed

There was a consensus among the majority of homeworkers regarding the failure of schools to prepare them for employment. Almost all of the homeworkers have less than 10 years of education with 48% having less than 6 years of formal schooling (see Table 1). The main medium of instruction in government schools is Malay. Most of the Chinese and Indian respondents studied in vernacular schools with Mandarin and Tamil respectively as the medium of instruction while English and Malay were studied as two separate subjects. Their command of English and Malay is, thus, weak, resulting in difficulties in using either a computer or the Internet.

5. THE COMMUNITY ICT STRUCTURE

Since 2001, the government of Malaysia has allocated RM 28.3 million to 235 agencies for 577 capacity-building programmes for low-income families, with some emphasis on single mothers. These programmes have included ICT training, and ICT literacy and skills (Federal Treasury, 2003-04). The Government has invested heavily in providing ICT infrastructure, and in encouraging private sector investment. Initiatives include the Multimedia Super Corridor linking Kuala Lumpur to Cyberjaya and Putrajaya, and recommendations to every major city to adopt an 'e-city' policy. City and Municipal councils acquire ICT infrastructure to facilitate bill payment and license applications, and in providing hotspots for the free use of the Internet. The professional services sector, including ICT, have also witnessed a sizeable growth (15%) between 1997 and 2004. The pervasiveness of ICT tools and their diminishing cost has contributed to their greater accessibility for women homeworkers, but the playing field is far from level.

All the homeworkers interviewed have radio and television. However, these two tools are more commonly used for entertainment than for work. There are both public and private stations licensed to broadcast. Although there is no community radio educational and community service messages are announced daily over both the radio and the television. However, few of these announcements are related or beneficial to the work of homeworkers.

The policy of relocating squatters to multi-storey low cost flats enables homeworkers to have electricity and telephone access even in the Asli village on the outskirts of Ipoh and the island of Pulau Aman off Penang. Fixed line telephone density is about 190 per 1,000

persons (Ng 2001). In the same year, the number of mobile phone users was 11.12 million with eight providers. Ninety percent of the homeworkers use the phone daily even though it may not be for their work. More than half of the homeworkers (55%) personally own mobile phones and another 30% have access to mobile phones owned by other members of the household. It is the most widely used ICT tool for work.

By 2003, the number of personal computers per 1,000 persons was 166, (Economic Planning Unit 2005). About one third of homeworkers had access to computers at home. Because of its costs (above \$350 per unit), computers are usually shared by the members of the household. Internet hosts per 10,000 persons is two, and the number of Internet users was 2.89 million (Economic Planning Unit 2005). Dial-up access is available in all three sites but, although broadband penetration is expanding, it is still limited. The average cost for a dial-up connection is about US\$5 per month and broadband is about US\$15 per month. Public Libraries and community centres provide free use of computers and Internet services. Cybercafés and Internet cafés are easily accessible as they are located in most commercial centres in the vicinity of residential areas. They provide services at a low cost of 50 cents per hour.

The use of computers and the Internet is taught in school and thus children of homeworkers are often able to use them. Homeworkers however, especially those with little education, are not always able to use them. While the educated are able to utilize these facilities for their work, the less educated and the poor require assistance to acquire and learn how to use this higher end equipment.

Twenty-seven of the homeworkers especially the knowledge workers, use computers and the Internet daily. Key informants, from companies that subcontract work in publication, translation and ICT-related work to homeworkers, point out that such companies do not have any provisions to train or provide hardware for ICT work. Companies are also cautious to subcontract data entry jobs to homeworkers as companies fear leakage or theft of information if data entry is conducted from home.

6. CHALLENGES FACING WOMEN HOMEWORKERS

Most waged homeworkers and home-based subcontractors suffer the inequality of power relations with middlemen or contracting agencies. There are no provisions for medical benefits, paid maternity leave, social security or employee provident fund contributions. It is a case of 'no work, no pay'. There is also no occupational health and safety provided for the worker and her family. The presence of sewing machines, pins and needles, packaging materials like large plastic bags, glue and soldering irons pose potential danger to both infants and children. Accidents do happen and while the homeworkers are keenly aware and concerned of such danger there is no compensation for such injuries to the woman or her family.

Factories externalize their own costs by subcontracting to homeworkers. The shoe making and garment manufacturing factories place machines in homes of home-based subcontractors, rent-free and thus reduce their own requirements for space and rent. Subcontractors also pay for utilities, especially electricity, and sometimes other supplies like thread, glue or packing material. Often these are not included in the payment to subcontractors.

The oral history of earnings of subcontractors conveys tales of exploitation. Piece-rate for sewing shirt collars can be as low as US\$0.48 per dozen or 4 cents per collar or an average of US\$0.80 per dozen for more complicated designs. Subcontractors are often paid a

fraction, about 10-20%, of the wholesale price. The marked up retail price maybe 100% or more of the wholesale price depending on the outlet-boutiques being at the top end and night markets at the lower with department stores somewhere in between. The more up-market and high fashion the product, the greater the disparity between the piece rate paid and the retail price.

Isolated homeworkers in food processing like those in Pulau Aman also endure the imbalance of power when dealing with middlemen. These women unable to take their own boats to the mainland, depend on the men who own boats to buy materials and take their goods to the mainland for sale. After deducting the cost of the ingredients, cooking gas and other variables, they earn little or no profit. Due to the seasonal and irregular nature of the work, homeworkers have to take on other jobs, like selling newspapers, to supplement income when it would otherwise be inadequate. Much of this exploitative nature of subcontracting is softened by previous working relationships as many homeworkers are ex-workers of the factories and in many cases have a close inter-personal relationship with the factory owners. This is especially the case in small or micro enterprises. Often subcontractors address these owners as 'brother' or 'sister' and turn to them for advice and assistance beyond that of a working relationship on such matters as their children's studies or applications for documentation including passport and legal matters. Occasionally, owners give them gifts from their travel or during festive seasons, extending their relationship into a family-like nature.

7. ACTION TOWARDS ICT-ENABLED HOME-BASED WORK

Networks and organisations are better able to provide capacity building and training programmes for homeworkers to utilize ICT for their work. Forty percent of homeworkers received training in using computers for work. They are able to utilize ICT to increase their access to information on opportunities and strategies to expand their business.

Homeworkers cite 'lack of capital' and 'lack of skills' as the main problems concerning the use of the higher end ICT tools such as computers. Although the Malaysian government allocated MYR28.3 million to 235 agencies for 577 women and family capacity building programmes including ICT training, ICT literacy and skills, only 49% of the homeworkers have benefited. Only eHomemakers, a network of 13,000 homeworkers, through its Salaam Wanita programme, focussed on vulnerable women working from home. This programme started in 2003 with Nestle donating second hand computers to disabled women. It has since evolved into a small business entity to help equip vulnerable women with ICT knowledge and skills for income generation.

Ten percent of the homeworkers interviewed have access to community computers or Internet centres operated by a NGO or a community association. Internet cafes are not popular among homeworkers as they are perceived to be patronized by the young for games. Another obstacle is the officers and volunteers of community centers make little effort to encourage homeworkers to use these facilities or educate them on the potential for using these ICT tools for enhancing their business. In Petaling Utama, YSS in collaboration with the Petaling Jaya Municipal Council established the 'e-UPCOM' computer centre. However, it remained closed for months because of no telephone connection. The other major barrier for homeworkers using these ICT tools is related to literacy. Although these homeworkers can read and write Malay, Tamil or Chinese, their level of fluency and comprehension is low. As a result they encounter problems in acquiring knowledge or accessing information from the Internet.

They use the tools mainly for building personal relationships and business such as contacting customers or receiving orders. Few use it to advertise and promote sales because their clientele are non-users of Internet. A few surf the Internet for information to upgrade quality and skills, while others may use it to search for teaching materials for tuition classes.

The lack of usage of ICT for work is not always a question of affordability as many subscribe to cable TV at \$20 a month. Often it is submission to family preference for entertainment most likely determined by their husbands and children. Similarly, ICT tools helpful to homeworkers are placed at the disposal of other members of the family giving them preference over the homeworkers' own ICT needs. As in the case of Lina Lee, the computer which is essential for her work, is kept in the room of her son, giving him more access to play games with friends. She indulges him, sacrificing her needs and wants because she feels guilty that he is without a father and also as he will be her support for old age.

8. UNDERSTANDING THE POTENTIAL FOR ICT-EMPOWERED WOMEN HOMEWORKERS

Access to knowledge and information increases the opportunities to improve the quality of their products and increase their marketability. Some organizations enable home workers to experience the benefits of learning and using skills to earn. Further they promote individual capacity building through acquiring the capability to use ICT for work with the potential of becoming a home entrepreneur. This helps to narrow the disparity of earnings between the different types of homeworkers as currently knowledge workers, using ICT, working less hours earn twice as much as subcontractors working a full 30 or more hours a week.

Home entrepreneurs like the Salaam Wanita have opportunities to upgrade skills and learn new designs suitable for higher end markets. This contrasts with those who are isolated such as those in Pulau Aman with poor quality handicrafts. With enhanced quality, the products can reach higher paying clients and a wider market.

8.1 Preventing Marginalization of Women in the Labour Force

The association of home-based work to handicrafts, food processing and tailoring causes it to be perceived as traditionally 'female'. The informal nature of this work, carried out at home alongside domestic work, enhances its perception that home-based work is an extension of women's hobbies and only requires simple, basic skills common among women. Relegating home-based work to low skill jobs (and thus low pay) is another cause of the marginalisation of homeworkers. The level of skill required varies with the nature of home-based work. While some types of home-based work need only basic skills, others need high skills and knowledge. Teaching Indian classical dance, basket-weaving, food catering or stitching collars or zips are not simple jobs or low skilled. Knowledge-based economy opens a whole vista of opportunities beyond teleworking and telemarketing for those who choose to work from home. It can offer great savings to the economy in reducing the need for infrastructure to serve commuting workers, provision of premises for offices and housing rural to urban migrants.

Home-based work is a viable alternative for those who either by force or choice accord priority to their domestic responsibilities to meaningfully use their time and skills to earn an income. As they do not go out to work, they are regarded as 'housewives' rather than 'workers' and their work is not valued by their families, community, nor the private and public sectors. Often this results in the homeworkers, themselves, having low self-esteem and dismissing the significance of their own work. Businesses and industries engaging home-based subcontractors and waged homeworkers take advantage of this weakness of the homeworkers and exploit them. Little is then done to create awareness of the important

contributions of these homeworkers and introduce registration or legislation to incorporate these homeworkers into the labour force and accord them the necessary work benefits and protection.

In some areas efforts by the government and other agencies perpetuate the marginalisation of this vulnerable group instead of providing much needed assistance. Agencies, like KUNITA (Association of Fishermen's Wives) in Pulau Aman for example, involve homeworkers through one-off activities rather than comprehensive programmes. Instead of sustained efforts to help these women become fisherwomen, better at food processing or own fishing cages to improve earnings, the organization usually utilizes their financial provisions for one-off events such as feasts and celebrations which are catered for by homeworkers in rotation. The women are regarded as 'wives of fishermen' and are thus marginalized rather than assisted to enter the fishing industry. With only one primary school on the island, the children have to continue their secondary education on the mainland. Having experienced shopping complexes and cinemas, it becomes difficult for this generation to return to their island home. Those who do, have few job opportunities besides agro-tourism and fishing.

Homeworking offering substantive earnings help homeworkers' households to emerge from the margins of poverty, improve the quality of life and the nutritional intake of the family. They also financially contribute to help their children, especially daughters, to improve their access to better education. This sacrifice by the homeworkers will help prevent their daughters from future marginalization in the labour market.

8.2 Making Women Visible in the Economy

Key informants from government agencies, NGOs and private sector organizations show that little has been done to encourage and facilitate home-based work. The Ministry of Human Resources and Social Security do not classify homeworkers as 'workers.' Some, though not clear what type of home-based work and the number involved, are counted as 'self-employed' or 'contract workers' which are included in the labour force and given certain provisions under the Labour Law. This compounds the problem of ascertaining the true number of homeworkers. The research confirms how the fear and avoidance of authority and the cost of informality keep homeworkers on the periphery of the informal sector. Poor working conditions, the lack of protection for homeworkers due to the instability of jobs and income, long working hours, substandard working environments, and little or no social and welfare protection (unlike a normal worker who receives social security, sick or maternity leave) also characterize the experiences of homeworkers.

NGOs working with the chronically ill, including those with HIV-AIDS, the blind, deaf and disabled are focussed more on the social and emotional needs rather than on encouraging home-based work. Similarly, trade organizations of industries that rely heavily on homeworkers have almost no systematic assistance programme to facilitate homeworkers to use ICT. These have been central issues for women homeworkers' -- invisibility and vulnerability to exploitation due to marginalization.

Traditional arts and crafts are losing visibility in the modern mass production, manufacturing world. By networking and organizing these skilled homeworkers are enabled to exhibit the products for others to see. Besides training, organizing them will give these women more visibility in the economy and have their contributions recognized and accounted. The Salaam Wanita members, for example, are proud of their high quality crafts which even carry a 'brand'. They are also free to train others and make private sales, thus giving them more freedom than franchise holders and subcontractors.

eHomemakers as the leading advocates for homeworkers, has done much to increase the visibility of this contribution and highlighted the significance of home-based work. Through its website and newsletters it is able to link and recruit more members as well as provide encouragement to homeworkers. By networking, the homeworkers attain solidarity and are empowered to break the cycle of exploitation experienced by many isolated homeworkers especially the subcontractors.

The ability to earn as a primary or supplementary provider is definitely empowering for these women. The exhilaration of receiving their first wage is fresh in the minds of most homeworkers. Earning sometimes more than their fathers or husbands tests the social and power relationships. Often this money is not kept for them but is used to substantially uplift the life of the family as a whole. Due to the lack of the homeworkers' mobility, their husbands, in some instances, assist by delivering products and collecting payment. The consequence of which is that the woman has unwittingly surrendered control over the money she has earned to her husband.

Homeworkers who have substantial earnings are better able to transgress their domestic confines and overcome their insecurity arising from their husband's infidelity. Islam has provisions to legally allow the man to have four wives and there is often an inner fear and a sense of insecurity on the part of many Muslim women that their husbands may take another wife. Jamilah, for example, uses part of her earning to beautify herself and dresses up for her husband. Even though their contributions are substantive, most husbands still perceive their earnings are just 'gincu' (lipstick) money – the icing not the cake. With this extra income, Jia Li supplements the nutritional intake of the family with both better quality food and vitamins for the family members and fees for the son's self-defence classes. Some like Ho Ming, who sews clothes for her customers, (solo entrepreneur) sometimes earn more than their husbands. Her extra makes it possible for the family to pay the mortgage of their single storey link-house.

When homeworkers contribute to household income, they are better able to summon the support of husbands and children to assist in the housework. Their purchasing power also helps them acquire labour saving home appliances like washing machines to reduce the burden of housework. These machines can be purchased through hire purchase agreements at a relatively small percentage outlay from their earnings. In a few cases, the homeworker is able to employ the services of relatives or other women for household maintenance. In most cases, husbands are more willing to assist in productive work than domestic chores. Thus, it is evident that the gender division of labour remains unchanged and husbands/male members of the household's domestic role and responsibility are largely unaffected.

The homeworkers often use their skills to train others, including relatives or neighbours, to help them meet the demands of high seasons. Jamilah for example trains her neighbours and mother to weave baskets when she cannot cope with the pre-festive season orders. A few more enterprising ones organize workgroups of two to three to take on greater volumes of work, thus improving their power of negotiation.

While 49% of the homeworkers have access to some form of assistance for capacity building, few can easily access loans due to financial agencies, insensitive to the situation of homeworkers, imposing standard requirements of formality and procedures. Thus, it is only those homeworkers who receive support and financial assistance from siblings, relatives or friends who are able to gain further knowledge or own machines/equipment; that manage to breakthrough this vicious circle of poverty to become knowledge workers.

The majority of homeworkers, including the knowledge-based ones, keep poor accounts of their income and expenditure or cost their profits. Organisations like eHomemakers, Asia Community Service and Yayasan Strategik Social (Strategic Social Foundation) offer courses and mentorship in business management and accounting help homeworkers to keep records. More important than the actual record-keeping is that it is a step towards formality of business practice, building their capabilities towards entrepreneurship, while opening a new vista for their home-based work. Such value-added knowledge and capacity building enables them to surmount the barriers leading towards entrepreneurship.

8.3 Transformation of Meanings Attached to Gender and Technology

All homeworkers have access to an ICT tool, including radio, television or fixed line telephone. Three quarters of those interviewed have access to some form of ICT besides radio, television and fixed-line telephone. More than half of the homeworkers own personal ICT tools, mainly mobile phones, with a significant number jointly owning the mobile phones with their family. It substitutes for a land line and stays at home. Normally, it is the man of the house who owns and pays for the maintenance of the phone. As it is often a pre-paid card, the expenses can be limited or controlled to some extent. The husband is therefore also the most likely person to take the phone out or determine how else it can be used.

With the fast changing technology, even those with donated phones have fairly new models which are less than four years old. Affordability and simplicity of function are the main selection criteria for purchase.

All the homeworkers in the study use ICT tools especially telephones and mobiles for their personal needs but few know how to use it extensively for their work. Less than half are aware of the possibilities these tools present to enhance their work. Some believe that since their clients are from the neighbourhood, with the majority not using ICT, it is not essential to use ICT for work and that a signboard at their gate advertising their products or services is more effective.

The majority of participants in FGD, however, are aware of their bosses or husbands using ICT for productive work but lack confidence to overcome the myths associated with technology. ICT tools are presented as sophisticated complex equipment that requires a high level of skill or education above and beyond that of most of the homeworkers. They believe that using these ICT tools for work will require extensive training as well as financial support to own and pay subsequent maintenance costs. While family members may extensively utilize the higher end ICT tools, like a computer and the Internet, few who understand the potential and power of ICT teach these homeworkers the advantages that may be gained from using ICT for work.

Training and capacity building stand out as the key activities for promotion of gender equality and empowerment. Organizations hold seminars and training courses to enable homeworkers to learn new skills in their trade as well as ICT related work. Courses related to computer programmes like Lotus and Microsoft Office and sometimes non-proprietary software, legalities of setting up home-based businesses, basic e-commerce and health maintenance courses are all very empowering for homeworkers. The organizations also help advertise the skills of its members on web pages and secure contracts for homeworkers.

The utilization of ICT for work helps alleviate the isolated nature of home-based work. All of the homeworkers have access to public, land line or mobile telephones. Many were previously too poor to acquire their own mobile phones. Now they own donated second-hand phones. Owning such a tool is seen as empowering as it uplifts their status to that of a

'modern' techno savvy person. This is especially liberating when their knowledgeable family members have not found the time or shown interest in teaching them how to use one. The phone also links them to their friends. Conversing with fellow homeworkers or friends, sending them short messages and connecting with them through emails, chat rooms etc., enhance the social aspects as well as the learning components of the homeworkers' lives. Some said it gives them confidence to venture out knowing that help or support is just a phone call away.

ICT allows homeworkers to read newspapers, books and gain information through other media. Some benefit from educational programmes broadcast on radio and TV as well as on home computers through the Internet without leaving their homes. Disabled homemaker, Lina Lee who specializes in stitching cheongsam, a traditional figure hugging attire with a high collar which demands a high level of skill. She surfs websites for 'cheongsam' designs and emails the design to her clients. They send her the material or authorize her to purchase one of her own choice. Once agreed, she stitches the dress and courier the final article to her client upon completion. She prefers payments to be banked into her account instead of a mailed cheque as it saves her the inconvenience of going to the bank. Unfortunately not all her clients are ICT savvy. ICT will enable her to reach a wider market beyond the confines of her lack of mobility. Aware of the possibilities, she aspires one day to offer her own tailoring course online. Some, like Marilyn, learn to earn extra cash using ICT. They regularly visit websites offering jobs like data entry, market surveys and telemarketing. Jackie uses Google to help with her translation. Salaam Wanita members receive specifications of orders for their baskets via SMS using the web to phone application 'Distributed Work Management Application' (DWMA). They can confirm orders, set up dates and times for delivery of goods using text messaging which is much cheaper than phone calls.

Some online services like e-banking or phone banking, which can greatly assist homeworkers, are not perceived as tools to help vulnerable groups consequently homeworkers are not approached as desired target groups. Thus the use of online banking facilities from home, which could greatly assist homeworkers, is not promoted amongst women. When some of the homeworkers attempted to use online banking they found that the financial institutions were not sensitive to their difficulties. Disabled individuals find it inconvenient to go to the bank to collect personal identification numbers or other documentation each time login fails or similar technical errors occur.

Mobile phones for example will also greatly assist those who work with their hands. Unfortunately Bluetooth and wireless hands free technology are currently still too expensive for homeworkers and the use of cheaper ones from China, which are available in night markets for a tenth of the price, cause headaches as well as hurting the ears. Clearer and larger keys and screens will help those with impaired eyesight to better utilize mobile phones. Others may need voice activated devices. While this technology is all currently available, vulnerable groups are not the target of profit making companies and thus will continue to be marginalized unless more concerted efforts are made by the government, NGOs and individuals to empower homeworkers to access them.

With an increasing awareness, stimulated by capacity building and activities of organisations like eHomemakers and YSS of the possible utilization of ICT, comes the interest of the homeworkers to learn how to maximize the benefits of these tools to improve quality of products, access wider markets and save time and costs, especially those related to transportation. In this way, they improve their power to negotiate and by-pass the middleperson.

9. CONCLUSION

The advance of Malaysia in communication technology in 1990s and now in information technology has been phenomenal but the digital divide could be traced along the fault lines of geographical area, race, income, age, education and household type with the possibility of women being locked out. The identification of gender with specific jobs is still strong in Malaysia. Women are encouraged by their families to work more with their hands in 'female' jobs like craft and sewing, than with technology. Many of the homeworkers are still overwhelmed by technology. These women are convinced that they are incapable of understanding and controlling higher end technology like cars and computers. Even though they have access to them, they do not use them for fear of damaging them. Thus they remain dependent on their husband for information and transportation.

Women's organizations can help resolve the women in technology issues by being the creators, advocates and providers of services to various groups especially marginalized and vulnerable ones. While about 49% of homeworkers have gained from training programmes, incorporating some gender sensitivity will enhance its benefits. Currently where training programmes for these women are organized by NGOs or government agencies they engage professional trainers who are often male. This engenders hesitations and reluctance on the part of homeworkers to participate in these programmes because of the feeling of inadequacy. Peer to peer training by more experienced homeworkers or those manifesting the ordinariness similar to themselves will ease these concerns.

There is a need for the recognition of homeworkers and their contribution to the economy. Organisations like eHomemakers can play an advocacy role and lobby for policy changes to register homeworkers and provide government assistance to homeworkers. These organisations can also provide an internet trading platform to network homeworkers to improve their bargaining position for fairer trade.

The demystifying of ICT will greatly assist homeworkers to be unafraid of technology. Once they master one tool, such as a mobile phone, it will empower them to explore the use of others. ICT provides a passage into the world for the spatially confined whether by disability or domestic responsibility.

Each step towards resolving the technology question is an important advancement for these homeworkers. In their determination to overcome disability or immobility, some homeworkers focus on gaining information to overcome the barriers to their success.

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