



Enablers In Implementing Micro Sourcing For The Low Income Group In Malaysia

Noor Habibah Arshad¹, Syaripah Ruzaini Syed Aris¹, Siti Salwa Salleh¹, Norjansalika Janom¹, Nor'azam Mastuki²

Faculty of Computer and Mathematical Sciences¹, Faculty of Accountancy²,
Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia

habibah, ruzaini, ssalwa, norjan@tmsk.uitm.edu.my¹, noraz562@salam.uitm.edu.my²

ABSTRACT

Improved access to ICTs and related services through micro sourcing initiatives has created new opportunities for enterprises with direct involvement of the poor to access information and other input. Micro sourcing provides benefit around the strengthening of social and intellectual capital through enhancement of skills, increased self-confidence and empowerment. The positive impacts of micro sourcing on micro worker are crucial in sustaining the uplifting poor income household through the micro sourcing initiative. This paper will determine the enablers through SWOT and Gap analysis. The SWOT analysis is to evaluate many aspects and competitors for the enablers of micro sourcing, while Gap analysis is targeted towards the fine tuning of the process. A SWOT and GAP analysis workshop was held to gather information from stakeholders. The findings from the SWOT analysis will identify potential pitfalls and allow us to take action to avoid them. Meanwhile, the GAP analysis may allow us to define the source of the problem and targeted towards fine tuning the micro sourcing process.

Indexing terms/Keywords

Crowd sourcing; Impact sourcing; Outsourcing; SWOT analysis; Gap analysis.

Academic Discipline And Sub-Disciplines

Formal Sciences: Systems Science

SUBJECT CLASSIFICATION

Information System Classification

TYPE (METHOD/APPROACH)

A workshop was held to gather information from stakeholder. The information are then compiled using both SWOT and gap analysis.

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INTRODUCTION

The National IT Agenda (NITA) was launched in December 1996 by the National IT Council (NITC) [1]. The Agenda provides the foundation and framework – known as the National IT Framework (NITF) – for the utilisation of ICT to transform Malaysia into a developed nation in our own mould consistent with Vision 2020. NITA's vision is to utilise ICT to transform Malaysian society into an information society, followed by a knowledge society and finally to a values-based knowledge society. Due to its importance, Multimedia Development Corporation Sdn. Bhd (MDec) was appointed as the lead agency for Digital Malaysia on October 2011.

Details of Digital Malaysia were revealed on July 2012, followed by official announcement by the Honourable Prime Minister on October 2012. Digital Malaysia is a national program to advance the country towards a developed digital economy by 2020 [2]. Under Digital Malaysia, micro sourcing industry has been identified as one of the potential industry to uplift the income of the poor. This project focuses on generating income and offering digital access to all levels of society, especially to the low income group. Involvement the low income group in micro sourcing activities will allow them digital access and be paid for completing micro tasks.

Micro sourcing offers substantial benefits to the micro sourcing workers, the organisations that provide the tasks, as well as benefits to a country's economy. Companies also will be able to tap into a large pool of talents, allowing these talents to choose what works suit them best. Micro sourcing also known as crowd sourcing imitates outsourcing by utilizing external, often remote, workforces. Micro sourcing also allows companies to employ a large group of skilled people to handle projects within a specific time frame for a fixed price. Micro sourcing is an effective way to accomplish tedious tasks at a faster rate. Task can be done either online or offline. Normally, micro sourcing involves large projects that are broken down into micro tasks. These micro tasks are well-defined and then distributed to a group of workers. Typical micro tasks are translation, data validation, image tagging, research, writing, editing, categorisation and data entry. Some of existing micro sourcing platforms available globally supporting crowd-sourced micro tasks includes Microtask, Clickworker, Mechanical Turk and Lingotek.

Thus, an effective micro sourcing industry not only requires Job Providers, Micro Workers and Platforms, but also Enablers to the industry such as ICT Infrastructure and other Enablers. This paper is intended to look into the strength, weaknesses, opportunity and threats of the enablers and also look into the gaps from the identified enablers.

REVIEW ON MICRO SOURCING INDUSTRY

In this era of connectivity, Information Technology (IT) plays a very prominent role as from the user perspective up to the organization perspective. IT can be considered as one of the rapidly expanding industries in the developed countries [3]. By using IT, businesses are able to respond quickly to the environment changes to sustain their business profit. ICTs can strengthen internal information systems for those (predominantly growth-oriented) enterprises that own PCs and are able to make effective use of computer-based applications. There is further evidence that ICTs can provide other benefits involving the strengthening of social and human capital such as enhancement of skills, increased self-confidence, increased participations of women, empowerment, and security against income loss.

Since early 1990, outsourcing has been identified as an element to manage IT and systems portfolio in an organization [4], [5], [6], [7]. The evolution of IT outsourcing gives significant impact for the IT operation in an organization. If before this, an organization will outsource their IT project to a vendor, but now it can be done through a new mechanism known as micro sourcing. According to [8], [9] the outsourcing functions such as editing, custom programming and tutoring has moved towards from organization level into individual level and this mechanism is called micro sourcing. Workers in crowdsourced projects can be dispersed across the entire globe, relying on their own resources (an Internet connection) to complete their work [10]

In the global market, Impact Sourcing – a concept within the micro sourcing industry – has made a significant impression in providing job opportunities for poor and vulnerable people to earn additional income by performing micro tasks provided by the business process outsourcing (BPO) sector as shown in Figure 1. This concept, linking tasks from global companies with untapped pool in marginalised communities, has the potential to improve socioeconomic landscape across the globe. There has been growing numbers of Impact Sourcing platforms in recent years, indicating huge potentials in this market that have not been tapped yet.

A study by Avasant [12] as depicted in Table 2 shows employment for the poor people by providing access to job opportunities in the BPO sector. There is not much research in micro sourcing that has been conducted internationally and very few in Malaysia. Moreover, academic research regarding micro sourcing in Malaysia is limited. The focus so far is on the SWOT analysis, analysis of current business model and strategic framework [13,14,15]. However, with increasing micro sourcing activities in Malaysia, it is therefore necessary to identify the enablers that may help pave the way to increasing the micro sourcing implementation success in Malaysia.

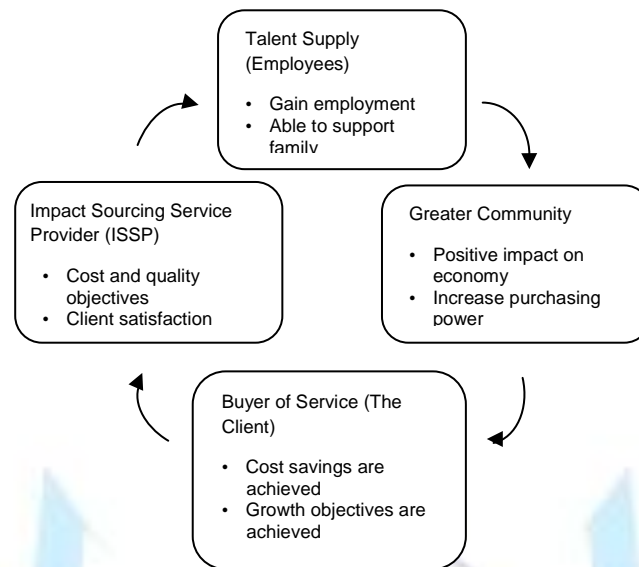


Fig 1: Micro sourcing ecosystem linkage [11]

Table 1: Impact Sourcing Employees [12]

Country	Employees	Details
South Africa	126,000	Per multiple industry checks, the total industry employs approximately 180,000 to 200,000 employees covering domestic and international BPO service providers as well as shared service centres. Approximately 70 % of these employees are not university graduates, thereby falling under the Impact Sourcing category (amounting to 126,000 employees as a conservative estimate).
Kenya	2,800	The total BPO industry in Kenya is estimated to be 7,000 employees, largely centred in Nairobi. According to industry estimates, 40 % of these employees do not have a university degree. Impact Sourcing employees estimated to be around 2,800.
Ghana	1,750	Ghana's BPO industry is estimated to be approximately 3,500 employees, out of which 50 % can be classified in the Impact Sourcing category.
India	251,000	The total BPO industry in India employs approximately 1.2 million people. Of the 835,000 employees in international operations, approximately 77,500 can be classified as Impact Sourcing sector workers. Domestic market operations employ nearly 50 % individuals who do not have a university degree (approximately 168,500). In addition, the direct rural BPO/ Impact Sourcing market is estimated to employ around 5,000 people.
Rest of the world	179,300	The BPO sector in the rest of the world employs approximately 4.6 million people, with approximately 4 % of such workers being classified as Impact Sourcing workers. There are approximately 1 million BPO workers in the United States alone, and approximately 3 % of them, or 30,000, can be classified as Impact Sourcing workers.
Total	560,850	An estimated total 560,850 people employed in the BPO sector can be classified as Impact Sourcing workers, which is approximately 10 % of the total global BPO workforce.

METHODOLOGY

Our first source of reference is literature reviews and documentation relating to micro sourcing and Digital Malaysia to understand the micro sourcing industry and the overall concept of Digital Malaysia. For the primary data collection, a workshop was held. The objective of the workshop was to gather information from stakeholders and to discuss on micro sourcing potentials, opportunities, potential growth and critical enablers from the perspectives of stakeholders. The stakeholders are from various non-governmental organisations (NGOs), government agencies, private organisations, universities and distinguished individuals. The information gathered from all these sources was then compiled and analysed using both SWOT analysis and GAP analysis.



MICRO SOURCING ENABLERS

To implement an effective micro sourcing industry, not only requires Job Providers, Micro Workers and Platforms but also the enablers. Analysis from both SWOT and Gap will be able to identify the micro sourcing enablers. Below describe the findings from both the SWOT and Gap analysis.

SWOT Analysis

SWOT stands for strengths, weaknesses, opportunities and threats. The strengths is the advantages Malaysia has over other countries, weaknesses is the areas that needs improvement compare to other countries, opportunities is the trends and market gaps to take advantage of and threats is the external factors that can threaten micro sourcing industry. Identifying these factors and considering all of them together make it easier to plan the future of micro sourcing activities in Malaysia.

The results for SWOT Analysis for critical enablers are:

i. Strengths

- Over 2,000 telecentres nationwide and better connectivity to rural areas.

There are 2,479 telecentres for different target groups mostly in the rural areas. Currently, these telecentres are used to reduce the digital divide between urban and rural areas.

- Existing local community champions (NGOs, associations and individuals).

There exist many NGOs, foundations and local personalities that have the capability to promote and coordinate micro sourcing activities.

- Government support and commitment.

The Government has established MSCC that has been given the mandate to oversee the program design and implementation.

- Various programs and incentives by the government.

There are various programs available that can help spur the micro sourcing implementation program such as Kampung Tanpa Wayar (KTW), Community Broadband Centre (CBC) and Pusat Jalur Lebar Komuniti (PJK). Existing incentives such as guidelines on homeworking can also be part of incentives to job providers

ii. Weaknesses

- Weak ICT Infrastructure Coordination.

Telecentres are handled by nine different agencies, which lead to redundancy and overlapping.

- Lack of dedicated body to oversee and spearhead micro sourcing industry development.

Governance structure needed to oversee entities that involve in micro sourcing activities to ensure the sustainability of micro sourcing ecosystem. Currently, there are no monitoring bodies that are responsible to monitor and oversees the overall structure of micro sourcing industry.

- Lack of understanding to the new micro sourcing concept.

Many potential Community Champions lack exposure to micro sourcing industry. Thus, training and exposures are needed to guide them to become Community Champions.

iii. Opportunities

- Pilot selected telecentres as 'Income Generation Centre.

Most telecentres are still underutilised and thus can be utilised as location for micro workers from the low income group. A business model is required to turn these telecentres into "income centres" for the community by pulling tasks from micro sourcing platforms.

- Integrate micro sourcing programs into existing government ICT programs.

Micro sourcing programs can be integrated into existing government ICT programs

iv. Threats

- Change management – readiness level and policy/ guidelines related.

Community Champions and Telecentres might operates for their own interests and thus, reduce the effectiveness of micro sourcing industry on the low income group.



Gap Analysis

Gap analysis reveals areas where Malaysia falls short, and through this analysis it will direct how assets allocation should be made. Therefore, this section will look at gaps in the Critical enablers.

i. ICT Infrastructure – Connectivity

- Broadband Penetration.

For the broadband penetration, the lowering of information and transaction cost brought about by the Internet has enabled the strong interdependence between social activities and economic values. The Broadband Internet access gives added advantage as the bigger pipe offered by broadband connection would be a fundamental enabler for innovation and future economic growth. However, broadband must be made more affordable to the people and be widely available (increased penetration) so that the economic values can be realized. Based on a study that has been commissioned by OECD [16], a 10% increase in penetration can result in an increase of GDP by 1.7%.

Therefore if we can achieve the targeted national penetration rate and thus compound the increase over 5 years to 2020, the end result would be a significant GDP contribution to the country. However, one of the main costs for providers to provide cheaper broadband Internet access to the people is the wholesale rate of IP Transit, one of the key services in the Internet value chain. IP Transit is a key to the global Internet as it enables Internet service providers to offer global accessibility or connectivity to Internet users without having to build a network or making a presence in destination countries.

Current household broadband penetration rate is more than 60%. Even though the percentage looks good, the access speed is still low (broadband is still defined by speed connectivity of 256kbps and above). The bandwidth available to individuals and organizations create enormous value to micro sourcing industry by giving easy access to an essentially pool of talent and capabilities and for the individuals, flexibility of doing work during any hours, locations and duration of their own choices.

- Broadband usage/rate,

Broadband will also mean better quality Internet access for the people. Bigger pipe will mean shorter download or upload time and thus increase in efficiency. Broadband will also allow users to access better online application otherwise inaccessible through narrowband Internet connectivity. Broadband will also spur the development of micro sourcing because of the cheaper cost to develop the software and distribute task.

In the same study commissioned by OECD [16] as above, it is stated that doubling of Internet usage increases GDP by 0.3%. However, service providers are not able to provide more bandwidth or offer bigger pipe to users because the cost to purchase bigger upstream IP Transit pipe is currently expensive. The average connection speed for Malaysia compared to other countries is as depicted in Figure2.

- Service Providers

Internet service providers (ISP) or Internet based service providers are the key players in the country's aim to become a fully interconnected nation. The ISPs are providing the distribution of the Internet to users. In fact most of ISPs' costs go into the distribution cost which includes the cost of (wholesale) IP Transit. This is not helped by the fact that most ISPs in Malaysia do not have their own network facilities in the country and have to lease from network facility providers.

Providing cheaper Internet access or bigger bandwidth to users is an on-going struggle for ISPs as they always have to purchase or lease IP Transit or network services in excess to cater for future requirement or demand growth. The cost for the excess is naturally passed on to users. Results from the workshop shows that the low income groups are willing to join the micro sourcing work force if the income is attractive and the cost of Internet access is free or minimum. Thus, there is policy effort to enhance affordable access to ICTs.

**Table 2 :Average Connection Speed by Asia Pacific Country/Region [14]**

Global Rank	Country/ Region	Q3 '12 Avg. Mbps	QoQ Change	YoY Change
1	South Korea	14.7	33.3%	-12%
2	Japan	10.5	-2.1%	18
3	Hong Kong	9.0	0.9	-14
32	Singapore	4.9	-3.5	12
39	Taiwan, Provice of China	4.4	16	7.1
40	Australia	4.3	-2.5	19
46	New Zealand	3.9	1.8	-1.7
58	Thailand	2.9	-6.3	-14
71	Malaysia	2.2	2.0	18
94	China	1.6	11	18
112	Philiphines	1.3	-21	-19
113	Vietnam	1.3	-21	-19
115	Indonesia	1.2	54	58
120	India	1.0	2.5	11

ii. Telecentres.

- Telecentres facilities.

In order to bridge the socio-economic disparities of previously under-served sections of society, a total of 2,477 public telecentres have been created in Malaysia under various Government initiatives. Most of these telecentres are equipped with computers and laptops with Internet connections and webcams, printers, fax machines and projectors. For example, KedaiKom which is under Malaysian Communications and Multimedia Commission (MCMC) is equipped with a minimum of five computers, a printer and other relevant peripherals [18]. The facilities at a KedaiKom include satellite access solutions that provide two payphone services and broadband Internet access with a dedicated 128 kilobytes per second (kps) for downloading and 64kps for uploading. Internet connection is supplied by an Internet Service Provider (ISP) and the monthly access fee of RM400 is paid by MCMC. The operation hours for these telecentres are from 8.00am to 6.00pm on weekdays and are extended to 10.00pm on weekends and public holidays. Each KedaiKom is managed by a minimum of two personnel; a manager and an assistant manager. There are 58 KedaiKom sites as of June 2005. However, some of the telecentres are not properly maintained.

- Lack of "Income Generation Program".

A study [19] reported that 50.1% of IT usages in these telecentres are for accessing information for individual needs and only about 15.6% are for business purposes. It can be concluded that existing telecentres are not fully by the targeted groups to generate income. The limitation on operating hours also could be a reason for the underutilisation and can be a major constraint to use telecentres as micro sourcing distribution centres.

iii. Community Champions

- Awareness of potential community champion.

There are many NGOs, foundations and local personalities that have close engagement with the low income group and have the potential to become Community Champions. However, they might have lack exposure to the micro sourcing industry and therefore need to be trained and guided before they are ready to become Community Champion.

- Awareness of platform providers.

There is a gap to link the platforms with the micro workers especially the low income group. There is a need to create awareness to platform providers on the suitable tasks for the low income group and also to promote and coordinate micro sourcing tasks among the low income group. Therefore, there is a need to groom "Community Champions" to fill in this gap.

- Creation of community champion.



Community Champions should be created within the micro sourcing ecosystem to engage participation of targeted micro workers from specific community. Platform owner should identify the Community Champion for a distribution centre and work together closely in engaging these micro workers.

iv. Governance mechanism

- Proper regulatory and monitoring framework.

The micro sourcing industry in Malaysia is still at its infancy stage. Therefore, lots of questions arise from potential role players from the four groups in the ecosystem – Job Providers, Micro Workers, Platforms Providers and Enablers – on the sustainability and security of the industry. Proper regulatory and monitoring frameworks to govern the industry will provide confidence to public and private sectors, organisations and individuals to participate in the industry. Proper regulatory and monitoring frameworks will also create a healthy ecosystem with proper marketing, enforcement, security and documented procedure.

- Governance structure

There is lack of governance structure to oversee entities that involve in micro sourcing activities. Currently, there are no monitoring bodies that are responsible to monitor and oversees the overall structure of micro sourcing industry.

A proper governance structure is essential to ensure the sustainability of local micro sourcing industry. Since this Project is targeted at low income group, a proper guideline and monitoring mechanism is important to ensure the stakeholders play their role effectively instead of fulfilling their own interests. This underlines the importance of policymakers to understand the specific situation and needs of the poor when designing strategies aimed at making micro sourcing work for poverty alleviation. Policy efforts to enhance affordable access to ICTs thus need to be complemented with broader strategies to foster the development of adequate content as well as raise the capabilities of users of the information.

The SWOT-analysis identified the strengths and weaknesses, opportunities and threats that have an impact to the micro sourcing industry. Strategies should be devised around strengths and opportunities where we could match the strength and the opportunities and convert weaknesses into strengths. Meanwhile, for every perceived threat the same change presents an opportunity for micro sourcing industry in Malaysia. A gap analysis is essentially a comparison between our current strengths and weaknesses and once we assessed which areas that may not need improvement and those that do it's time to plan what we intend to do to build on the micro sourcing implementation success.

CONCLUSION

Based on the analysis, Strategic Thrusts will be formulated for Micro Sourcing Industry Development in Malaysia. The strategic thrusts are to provide strategic direction at national level to all stakeholders; to highlight key areas that need to be addressed in order to grow a sustainable micro sourcing industry in the country; and to serve as a guideline in the implementation of programs and plans related to micro sourcing industry development.

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Author' biography with Photo



Noor Habibah Arshad is an Associate Professor in the Faculty of Computer and Mathematical Sciences at Universiti Teknologi MARA, Selangor, Malaysia. Noor Habibah Arshad received a BSc. in Computer Science from Western Michigan University, and an MSc in Management Information Systems from San Diego International University and a PhD in Systems and Management Malaysia. Her research interests are in IT Management, Project Management, Software Risk Management, and e-Commerce.