

Digital Divide and the Livelihood Strategy of Female Informal Sector Workers in Rural Areas

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ABSTRACT

This paper aims to analyze the livelihood strategies of female labors in the informal sector in rural areas amidst the digital disruption in the economy and the digital divide condition faced by women. We use a qualitative approach by using both primary and secondary data. The study generated primary data by distributing the questionnaires to fifty women in the rural areas of Gianyar Regency, Bali Province. Meanwhile, secondary data was obtained by observing several posts of rural women on social media such as Facebook that indicated economic activities of these women. The results show the presence of digital divide, i.e. a gap between those who have access to computers and the internet and those with limited or no access. The findings also suggest that women with minimal digital access and no internet access have a livelihood strategy by surviving in traditional markets. Women are motivated to engage in economic activities in traditional markets. Women who have digital access start to use their digital literacy to increase their participation in the economy by using their social media. Thus, this study suggests stakeholders increase the digital literacy of women, given its positive influence on women's empowerment in development not only by increasing the economic participation of rural women but also providing solutions to traditionally limited mobility.

Keywords— digital divide, livelihood strategy, female labor in the informal sector

1. INTRODUCTION

Advanced information technology disrupts economic actors. The efficiency from the pervasive use of the internet leads to not only the creation of new jobs but also the disappearance of other jobs. In this respect, female labors in the informal sector and are mostly under vulnerable conditions due to limited skills face increasingly difficult situations, especially for those who lack skills and internet access to empower themselves. Thus, advanced digital technology indirectly makes low skilled women more vulnerable. Women who do not have digital access survive by participating in traditional economic sectors that rely more on social networks, experience, and less on special skills. The presence of traditional markets, for example, is the evidence of women's existential struggle in Gianyar Regency, Bali, to survive amidst their limited skills and rapid progress to advanced digital technology.

As informal workers in traditional markets, Balinese women strive for assuming their roles in the markets as market laborers, producers or sellers, and both producers and sellers. From 50 respondents who engage in the economic sector, most of them (38%) are sellers, followed by market laborers (30%), producers (18%), and producers, and direct sellers (14%). Limited formal education and access to capital do not discourage women from participating in the labor market. Interactions in traditional markets even offer opportunities for women. Although traditional markets only cover limited

communities, they facilitate low skilled women to survive. From the age perspective, 14% of the respondents are less than 40 years old, 42% are between 40-50 years old, 24% are between 50-60 years old, 12% are between 60-70 years old, and the rest still actively participate in the economy although they are already above 70 years old.

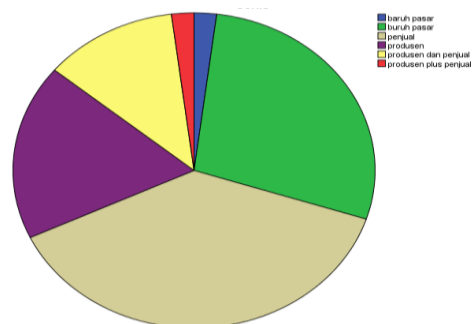


Figure 1. Women's Economic Participation in Traditional Markets

Source: Primary Data (2019)

Limited ability and capital necessitate the respondents to become informal workers in traditional markets as their daily activities. About 40% of the respondents participate in economic activities in traditional markets for less than ten years. Most respondents, or 60% of them, have participated in traditional markets for more than ten years. Even 6% of them

reveal that they have survived in traditional markets for more than 40 years. In general, various factors affect their survivability, including work motivation [1]. The work motivation of women in the informal sector can be classified into four types, namely informal trap, part-time, stepping stone, and survival.

The informal trap motivation belongs to women who survive in traditional markets due to their low skills. They are highly motivated to change their works, but unable to do so. They also earn so little and irregular. Women who are deliberately motivated to work in the informal sector choose part-time because it offers time flexibility to take care of their families and to observe their traditional obligations in villages. Thus, they consider their current incomes sufficient to support their families. Further, the stepping stone motivation is selected by women who participate in traditional markets to accumulate business capitals for better livelihood. Lastly, the survival motivation belongs to women who were temporarily laid off due to the economic crisis. Thus, they engage in their current occupations to survive. [2] defines that there is five livelihood capital to identify the economic activities of individuals in households to survive economically by using their five assets or capital.

2. RESULT AND DISCUSSION

The responses of 50 respondents qualitatively demonstrate the linkages between five capital in livelihood strategy with the motivation to participate in working in the informal sector.

1. The physical facility capital is indicated by women’s access to carry out mobility in their work participation. Figure 2 demonstrates that working women who do not have access to mobility are mostly motivated by informal trap (70%). Meanwhile, women who have access to mobility exhibit part-time motivation (45%). The data suggest that access to physical facilities, i.e., transportation devices, facilitates women to choose other jobs. The absence of digital access makes female labors in the informal sector stuck in routines without realizing the potentials of the technology to offer solutions to their physical facility problem (mobility).
2. Most Balinese women do not have the natural resource capital of land. The Balinese customary heritage law prohibits women from inheriting land. Similarly, only men can use village-owned land. Figures 3 demonstrates that women who do not have access to natural resources are mostly motivated by informal trap (60,5%), while those who have access to natural resources have part-time motivation (50,5%).

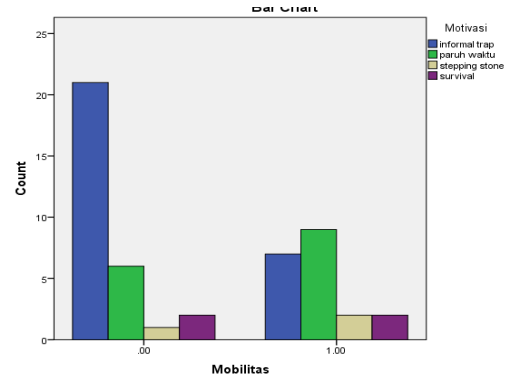


Figure 2. Physical facility capital and women motivation
Source: Primary Data (2019)

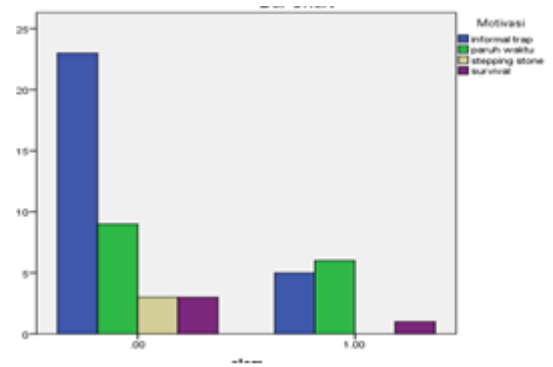


Figure 3. Natural resources capital and Motivation
Source: Primary Data (2019)

3. The human capital is indicated by their formal education (Figure 4). Women with low-quality formal education have the informal trap motivation to participate in economic activities in traditional markets (70,8%). Meanwhile, women with higher formal education mainly have part-time motivation to participate in the informal sector. Low formal education and lack of digital access create gaps that motivate women who work in the informal sector to survive.

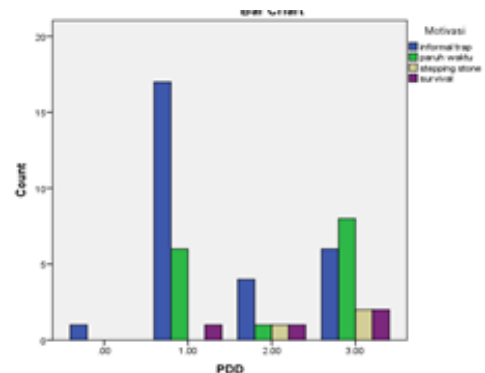


Figure 4. Human Capital and Motivation
Source: Primary Data (2019)

4. Social capital, such as membership in social institutions, does not necessarily expand working networks. In general,

women who have social capital networks continue to work in the informal sector because of the informal trap motivation (62,5%). The condition is affected by the fact that social institutions in which they participate are mostly customary villages that are based on sincerity and do not involve significant economic activities. Higher skills and digital access will likely enable working women in the informal sector to expand their social network capital and to have better economic opportunities.

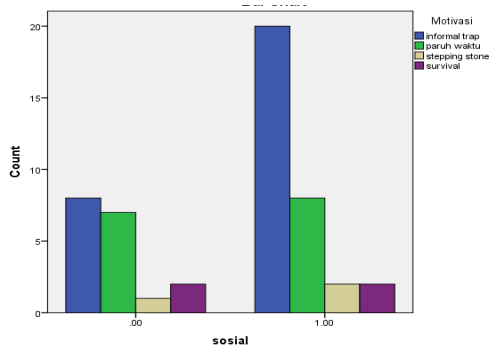


Figure 5. Social capital and Motivation
Source: Primary Data (2019)

5. The financial capital aspect is indicated by the husband's income as a component of non-labor income. Women who have non-labor income mostly have informal trap motivation (50,5%). The finding is in line with previous studies [3] that show that a strategy of poor households is adding family members to participate in economic activities.

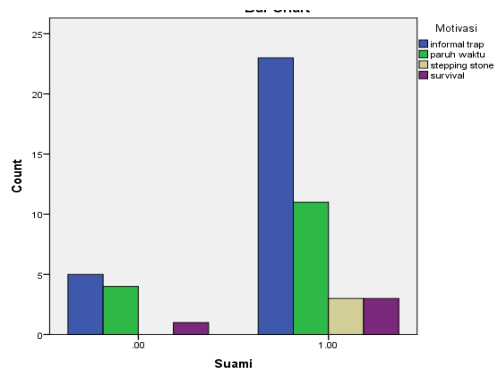


Figure 6. Financial Capital and Motivation
Source: Primary Data (2019)

The five-capital approach in the livelihood strategy indicates the vulnerabilities of female labors in the informal sector. Low digital access makes it difficult for women to improve the five capital that arguably increases economic activities.

Women's weaknesses in developing their digital skills lie in access to capital (low financial inclusion), gender bias (low technical skills in information technology), and cultural constraints such as concerns on neglected domestic activities due to the use of internet. Internet users in Indonesia in 2019

grow 10.12% to 171.17 million or 64,8% of the total Indonesian population, and they mostly use social capital (Figure 7).

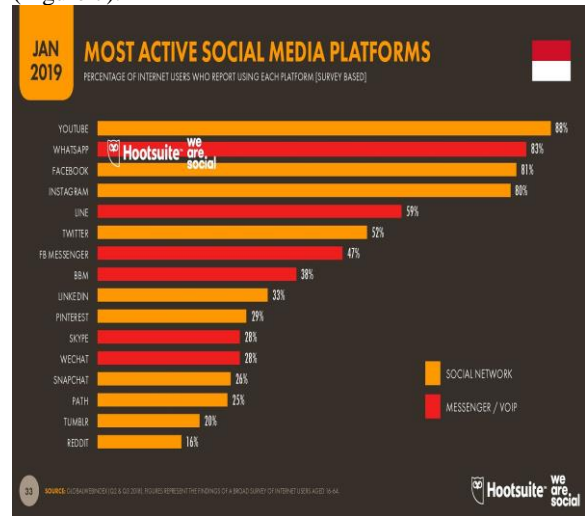


Figure 7. Most Active Social Media in Indonesia 2019
Source : APJII (2019)

The Ministry of Communication and Informatics or *Kominfo* (2017) shows that the composition of internet users is dominated by those between 19-34 years old (49.52%), and followed by those between 35-54 years old (29.55%), those between 13-18 years old (16,68%), and lastly those above 54 years old (4.24%). Further, based on the economic level, the upper class contributes only 1.98% of total internet users, while the lower class constitutes about 74.62% of total internet users. Next, the middle class constitute 16.02% of total internet users, and the bottom lower class contributes 7.39

Based on sex, women use the internet less than men. In particular, 48.57% of total internet users are female while 51.43% are male. Most internet usage is for chatting (89.35%), and only 7.39% of internet usage is directly related to banking activities. Most economy-related internet usage (45.14%) is to search for prices, although users also utilize the internet for other purposes, such as supporting their works, online trading, searching for jobs, and banking transactions.

Women use the internet largely on social media such as Snapchat. About 87% of the respondents who find advertisements in Snapchat are female, and only 8.9% are male. Women largely search for information about beauty, fashion, health, and entrepreneurship, such as the activities of Balinese female social media activists with their discussion group on business and *upakara*. In this respect, they potentially assume their role as digital entrepreneurs (either as creators or beneficiaries).

Some Balinese women who have skills in using the internet established several groups in social media to expand networks in economic activities. These groups generally help them fulfilling their duties in religious ceremonies. Some of these groups in Facebook are *Wanita Bali Mandiri* (46,795 members), *Swalayan Upakara Bali* (14,909 members), *Tetandingan Banten Bali* (7,500 member), *Belajar Membuat Banten Bali* (38,794 members), *Banten Hindu Bali* (5,754

members), *Mesari Yadnya* (1,058 member), *Bali Bhumi Banten* (2,552 members), and *Halo Pejati* (17,599 members). Women who joined these groups actively interact each other related to women's empowerment to improve their skills in preparing ceremonies. Several groups even technically teach how to prepare complete *sarana upakara* (offerings) in video displays. Several women in these groups even actively engage in economic transactions with other members. They can even offer ceremony packages that require a lot of time practically and quickly through 'online *upakara* market.' Several groups also discuss the philosophy of the offerings.

These Balinese women groups on Facebook directly show that sufficient digital access and digital literacy will improve female informal workers' job opportunities and their economic participation. Through interaction between group members, digital access also enhances women's skills in coping with their internal and external obstacles when entering the job market. Women who joined these social media groups indirectly manage to maximize their skills for improving work participation. They can overcome internal constraints such as difficulties in dividing time between working, domestic tasks, and social obligations by receiving solutions from several women-friendly digital applications.

It is then suggested a strategy to expand digital access and to improve digital literacy among women, especially for those in rural areas. The challenges of women's empowerment in work participation are not only related to domestic problems and multi roles, but also deal with novel gender discrimination on women, namely digital access. The digital literacy of women can be improved through socialization and approaches to civil institutions, such as *adat* village in Bali Province. In particular, the following are strategies to cope with the digital access gap for women, namely opening access as large as possible, expanding digital services to rural areas, and socializing digital literacy to women. Especially in Bali, the socialization of digital literacy should closely cooperate with *adat* villages to maximize the impacts of digital access for women and not only for social media use. Increased digital skills of rural women will create more female digital entrepreneurs in the long run.

Thus, we need a new economic paradigm, a hybrid economic model that combines both traditional and modern, small-scale and large-scale, informal, and formal sectors. We need an economic model that enables the smallest economic units and the weakest workers to cooperate with the largest and strongest economic actors. Such economic system facilitates household-based producers in the global value chains to negotiate with dominant players in the value chains to acquire their well-deserved added values. The women's movement in Bali with *upakara* groups in social media demonstrates that technology embraces traditional activities (*upakara*/ offerings) to create economic activities and at the same time to overcome cultural obstacles that constrain Balinese women's work participation.

3. CONCLUSION

The five-capital approach in the livelihood strategy indicates the vulnerabilities of female labors in the informal sector. Low digital access makes it difficult for women to improve the five capital that arguably increases economic activities. stakeholders should increase the digital literacy of women,

given its positive influence on women's empowerment in development not only by increasing the economic participation of rural women but also providing solutions to traditionally limited mobility. Especially in Bali, the socialization of digital literacy should closely cooperate with *adat* villages to maximize the impacts of digital access for women.

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