IMPLEMENTATION OF THE EMPOWERMENT MODEL OF FEMALE LABORERS ON ARABICA COFFEE PROCESSING INDUSTRY IN BANGLI REGENCY, BALI PROVINCE

Implementasi Model Pemberdayaan Tenaga Kerja Perempuan pada Industri Pengolahan Kopi Arabika di Kabupaten Bangli, Provinsi Bali

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ABSTRACT
The Analytic Network Process (ANP) model of empowerment of female laborers studies previously indicates that the main priority of the empowerment is through strengthening the competence of female laborers. The ANP model was developed in the internal business process condition of UPH Units in Kintamani Bangli not yet optimal. Based on the model, the purpose of this research is to increase the capability of female workers based on the search results of appreciative needs through the fulfillment of training needs and social innovation of female laborers, and infrastructure development needs in UPH.

In Kintamani Bangli, there are 30 UPHs listed in Geographical Indication (IG) Kintamani Arabica Coffee. Of the 30 UPHs selected 15 UPHs (50% of the total UPHs) were selected at random, with a note that the UPHs in the same village should not be selected. The respondents are 100 female laborers determined purposively. The amount of value added during coffee processing is calculated by Hayami Method. The search for women’s empowerment needs using the method of appreciative inquiry, through (a) rapid research, commensurate with the RRA (Rapid Rural Appraisal) method that involves multidisciplinary teams in collecting and analyzing data logically-causally in a short time; (b) in-depth interviews and direct observation; (c) participatory workshops, commensurate with applied of the Sigma-5-based of IM (Interactive Management) method (i.e. facilitators, demosophia/situation room, computers, consensus methodology, and participant groups) and the results of IM are well-documented; (d) peer review conducted twice, during quick research and workshop discussions. Strengthening of business and strategic partnership is realized at business meeting session between UPHs business actor and partners with participatory learning and action approach.

The results achieved from the implementation of female laborers empowerment model in Arabica coffee processing industry at UPHs in Kintamani Bangli is as follows: (1) identified the potential of female laborers that need to be developed in UPHs Kintamani Bangli based on the vision and capital owned by female laborers (strength based solving approach). Female laborers learn about the coffee value chain from farmers to consumers and choose the skills needed to improve the capability and in turn their income; (2) organized training of female laborers (training modules are provided): production and process management, marketing functions and service for the development of market networks, and entrepreneurship; (3) UPH management, ie (i) institutional development of UPH oriented towards collective business community; (ii) the accounting system (accounting principles, recording, and recapitulation of transactions, financial statements, business statistics, and key performance indicators); (4) identified the need for infrastructure development in UPHs, mainly updating equipment and coffee processing machines and ICT infrastructure for online transactions at UPHs; (d) strengthening business through benchmarking to more advanced UPHs and strategic partnerships (production inputs, financial, and trade) in the context of strengthening the performance of the community-based Arabica supply chain; (d) the social innovation of female laborers in the form of being involved in the making of (a) UPHs development the roadmap, (b) machinery utilization SOPs (pulper, huller, roaster, and powders) and value-added SOPs as well as (c) regulations of the strategic partnership.

The female laborers of Arabica coffee processing industry at UPHs Kintamani Bangli area should be oriented to produce specialty quality processed Arabica Coffee in line with IG certification, supported by a distinctive product design innovation to support business independence and partnership contract sustainability.

Keywords: implementation of female laborers empowerment model, Kintamani Arabica coffee processing industry.
INTISARI
Model Analytic Network Process (ANP) pemberdayaan tenaga kerja perempuan yang dikaji sebelumnya menunjukkan bahwa prioritas utama pemberdayaan tenaga kerja perempuan adalah melalui penguatan kompetensi tenaga kerja perempuan. Model ANP tersebut dikembangkan dalam kondisi proses bisnis internal Unit Pengolahan Hasil (UPH) di kawasan Kintamani Bangli belum optimal. Berdasarkan model tersebut, tujuan penelitian ini adalah meningkatkan kapabilitas tenaga kerja perempuan mengacu pada hasil penelusuran kebutuhan apresiatif, melalui pemanfaatan kebutuhan pelatihan dan inovasi sosial tenaga kerja perempuan, serta kebutuhan pengembangan infrastruktur di UPH.

Di Kintamani Bangli terdapat 30 UPH yang terdaftar dalam Indikasi Geografis (IG) Kopi Arabika Kintamani. Dari 30 UPH tersebut diambil 15 UPH (50% dari total UPH) yang dipilih secara random, dengan catatan bahwa UPH yang berada pada desa yang sama tidak boleh dipilih. Responden tenaga kerja perempuan adalah 100 orang yang ditetapkan secara purposif. Besarnya nilai tambah (value added) pengolahan kopi dihitung dengan Metode Hayami. Penelusuran kebutuhan pemberdayaan perempuan menggunakan metode appreciative inquiry, melalui: (a) riset cepat, sepadan dengan metode RRA (Rapid Rural Appraisal) yang melibatkan tim multidisiplin dalam mengumpulkan dan menganalisis data secara kausalitas-logis dalam waktu singkat; (b) wawancara mendalam dan observasi langsung; (c) lokakarya partisipatif, sepadan dengan IM (Interactive Management) berbasis Sigma-5 (facilitator, demosophia/situation room, komputer, metodologi konsensus, dan kelompok partisipan); dan hasilnya terdokumentasi baik; (d) diskusi sejawat (peer review) yang dilakukan dua kali, yaitu saat pembahasan riset cepat dan lokakarya. Penguatan bisnis dan kemitraan strategis diwujudkan pada sesi temu usaha antar pelaku bisnis UPH dan pihak mitra kerja dengan pendekatan participatory learning and action.

Hasil yang dicapai dari implementasi model pemberdayaan perempuan pada industri pengolahan kopi Arabika pada UPH di Kintamani Bangli adalah sebagai berikut: (1) teridentifikasi potensi tenaga kerja perempuan yang perlu dikembangkan di UPH Kintamani Bangli berlandaskan visi dan modal yang dimiliki tenaga kerja perempuan (pendekatan strength based solving). Tenaga kerja perempuan belajar tentang rintangan nilai kopi dari petani ke konsumen dan memilih kecakapan yang dibutuhkan untuk meningkatkan kapabilitas dan pada gilirannya pendapatannya mereka; (2) terselenggara pelatihan (disediakan modul pelatihan) pengelolaan produksi dan prosesing, fungsi pemasaran dan layanan untuk pengembangan jejaring pasar, dan kewirausahaan; (3) pengelolaan UPH, yakni (i) pengembangan kelembagaan UPH berorientasi pada bisnis kolektif komunitas, (ii) sistem akuntansi (prinsip akuntansi, pencatatan dan rekapitulasi transaksi, laporan keuangan, statistik usaha, dan indikator kinerja kunci); (4) teridentifikasi kebutuhan pengembangan infrastruktur di UPH, utamanya pemutakhiran peralatan dan mesin pengolahan kopi serta infrastruktur ICT untuk transaksi online di UPH; (d) penguatan bisnis melalui benchmarking ke UPH yang lebih maju dan kemitraan strategis (sarana produksi, finansial, dan perdagangan) dalam konteks penguatan kinerja rantai pasok kopi Arabika berbasis masyarakat; (d) inovasi sosial tenaga kerja perempuan berupa terlibat dalam pembuatan: (a) roadmap pengembangan UPH, (b) SOP pendayagunaan mesin (pulper, huller, sangrai, dan pembubuk) dan SOP peningkatan nilai tambah; dan (c) PTT kemitraan strategis.

Kelompok tenaga kerja perempuan industri pengolahan kopi Arabika di UPH kawasan Kintamani Bangli seyogyanya berorientasi menghasilkan Kopi Arabika olahan berkualitas specialty sejalan dengan sertifikasi IG, ditopang inovasi disain produk yang khas untuk menunjang kemandirian bisnis dan keberlanjutan kontrak kemitraan.

Kata kunci: implementasi model pemberdayaan tenaga kerja perempuan, industri pengolahan Kopi Arabika Kintamani.
INTRODUCTION

Coffee is one of the superior export commodities in Indonesia. Currently, Indonesia ranks third as the largest coffee exporter in the world after Brazil and Vietnam. Coffee plants in Indonesia consist of several types, including Arabica Coffee, Robusta Coffee, and Liberia Coffee. The islands of Sumatra, Java, Flores, and Bali are the main regions of coffee producers in Indonesia (Arnawa et al., 2010; Salamah, 2014). In the province of Bali, coffee is a strategic commodity superior commodity. Superior commodities with high productive efficiency and high competitiveness, in turn, contribute positively to local revenues and as a source of community livelihood (Udayana et al., 2014; Darmawan, 2016). The most widely cultivated types of coffee in Bali are Robusta Coffee and Arabica Coffee. Arabica coffee has more advantages compared to Robusta Coffee so much in demand in the world market. Arabica coffee grows well and spread in three districts in Bali which have altitude above 900 m above sea level, namely: Buleleng Regency, Badung Regency, and Bangli Regency. Geographically these three districts are bordered by one another and have similar agroecological and suitable for Arabica Coffee plant. Natural factors, human factors, or a combination of these two factors provide special features and qualities that need to be legally protected in the form of Geographical Indication (IG). In the context of development, the Bali Provincial Government in coordination with the Dinas in charge of plantations in each district has conducted guidance in Processing Unit of Result (UPH) to improve the export quality of coffee commodity of Bali.

One of the plantation commodities in the famous Bangli Regency is Arabica Kintamani Coffee and has received international recognition by awarding a certificate of Geographical Indication. Geographical Indication is an indication that can clearly explain that a product originates from a certain region or region of a State, has good quality, reputation and other characteristics that are fundamentally closely related to its geographical origin (Arnawa, 2010; Udayana et al. 2012). The people of Kintamani are the people who still adhere to the customary principle in the agricultural activities of Arabica Kintamani Coffee, such as Subak Abian institution, in its daily activities based on the principle of Subak Abian 'Tri Hita Karana', which are three causes to achieve happiness that focuses on the human. Consisting of Parahyangan (harmonious relationship of man with god), Pawongan (harmonious relationship among human beings), Palemahan (a harmonious relationship between man and the environment) (Widhyasari, 2012). Kintamani Arabica Coffee Products belong to specialty coffee products, which have distinctive flavor and aroma caused by weather factor, humidity level, planting location, and processing of coffee beans (Arnawa et al., 2010; Salamah, 2014) which is dominated female laborer produces coffee with a distinctive taste.

Previous research findings revealed that the female laborer’s participation rate in the dominant processing agro-industry sub-sector reached 91.7%. Female wages as measured in the unit of analysis of production processing activities of 5 tonnes/ha of red logic Arabica coffee to 760 kg of rice coffee (Ose) of Rp 14,450,000 of total cost Rp 31,600.700. In other words, the wages enjoyed by female laborers amount to 45% in coffee processing activities, ranging from picking, mining, fermentation, and drying, sorting green beans to rice coffee (Ose). The average income of female laborers is Rp 750,000-Rp 800,000/person/harvest season.

In recent decades, standard economics has very little to say about gender and says that economics consists of rational, genderless interactions between organizations and individualis. However, today economists must take gender roles more carefully. Economists of this school argue that the general view of rational economic man should not discriminate and ignore the role of women in various sectors of the productive economy. It appears that macroeconomic policy still treats men and women differently. How to measure the economy does not take into account the contribution of the female. the female in the household does a lot of household chores, ranging from caring for and providing nutritious food to children and old/sick household members, cooking, cleaning, and so on. Generally, the domestic work of these women is not paid as it does in formal economic transactions, it is not taken into account in National Income. Gross Domestic Product is only a partial measure of economic progress because the welfare of mankind depends on many.
factors, including the position of women in the household. Reductions in total household income, often more adversely affecting women than men, are due to the enormous responsibilities of women in the household, particularly in terms of the health of household members and the education of children. What's more, the facts show that women's income ratio is always below men. The role of gender in the household economy has become mainstream in formulating economic strategies and policies (Astiti, 2013). Certainly, can be remembered the events of the monetary crisis that hit the world in 1997/1998 when many workers and employees were laid off due to economic conditions of many countries in the world that reached the nadir. However, at that time the country of Indonesia is not a failed state. There are still safety valves, namely the existence of micro and small enterprises into the creator of new jobs. In addition, many have been instrumental in increasing the income of many people spread, especially in the plantation sector in the area of Kintamani Bangli.

The research on the implementation of female laborers' empowerment model based on Arabica Kintamani coffee processing industry is a follow up of the previous research result, namely the formation of Analytic Network Process (ANP) model of female laborers’ empowerment. An ANP model of empowering female laborers revealed that the main priority of empowerment is through strengthening the competence of female laborers. The ANP model developed under UPH internal business process conditions in Kintamani Bangli area is not optimal yet. Therefore the implementation of this empowerment model becomes important to do.

Based on the model, the purpose of this research is to increase the capability of female laborers based on the search results of appreciative needs, through the fulfillment of training needs and social innovation of female laborers, and the need for infrastructure development in UPH.

METHODS

In Kintamani Bangli there are 30 UPHs listed in Geographical Indication (IG) Kintamani Arabica Coffee. Of the 30 UPHs selected 15 UPHs (50% of the total UPHs) were chosen at random, noting that the UPHs in the same village should not be selected. Female laborers respondents are 100 people determined purposively. The amount of value added during coffee processing is calculated by Hayami Method. According to this method, the added value in the process of product processing is the difference between the value of the product with the value of raw materials and other inputs, but excluding labor (Hayami et al., 1987).

The search for female laborers' empowerment needs using the method of appreciative inquiry (Whittington and Tammy, 2003; Peele, 2005; Robert, 2015), through (a) rapid research, commensurate with the RRA (Rapid Rural Appraisal) method involving multidisciplinary teams in collecting and analyzing data logical causality in a short time; (b) in-depth interviews and direct observation; (c) participatory workshops, commensurate with the Sigma-5-based IM (Interactive Management) (facilitator, demosophilia/situation room, computer, consensus methodology, and participant groups) and the well-documented root-cause process (Warfield and Cardenas, 1994; Warfield, 2006; Darmawan, 2017). Participants involved are provincial and district level agricultural/agricultural offices, financial institutions/banks, heads of farmer groups, heads of the Indicative Geographical Communities Protection Farming Cooperatives (MPIG), partner companies/exporters, universities NGOs/PMT (Penyelia Mitra Tani) field management unit, Subak Abian leader, UPHs manager, and female laborers in UPHs; (d) peer review conducted twice, during quick research and workshop discussions. Strengthening of business and strategic partnership is realized at business meeting session between UPHs business actor and partner with participatory learning and action approach.

RESULTS AND DISCUSSION

The role of the Arabica Kintamani coffee processing industry and the participation of female laborers

Agricultural development is an important and strategic thing as a bearer of the economy of Bali Province. In addition to its role as a supporter of the tourism sector, the agricultural sector acts as an employer absorber which currently has not been able to be absorbed optimally by the tourism sector. Bali's economic
dependence on the tourism sector that is entirely free from risks and uncertainties is a shadow of Bali's economic growth. Therefore, it is required to search for new economic resources to achieve progressive, inclusive, resilient, and sustainable economic growth. The potential of Arabica coffee processing industry that developed in Kintamani area, Bangli regency is very realistically developed further as Balinese economic development strategy that 'Mandara' (advanced, peaceful, peace and prosperous) in the future. The findings of previous research revealed that the dominance of female labor participation in the sub-sector of processing agro-industry reached 91.7%, covering the following activities: harvest (100% women), mining (95% female and 5% male) 90% female and 10% male), fermented coffee beans (95% female and 5% male), drying process (100% female), and sorting of green bean (HS) and coffee of rice (Ose) all usage female laborers. Female wages as measured in the unit of analysis of production processing activities of 5,000 kg/ha of red logic Arabic coffee (GM) to 760 kg of rice coffee (Ose) amounted to Rp 14,450,000 of total cost Rp 31,600,700. This shows that the wages enjoyed by female laborers are 45%, starting from the activity of picking, mining, fermentation of seeds and drying, sorting green bean to become rice coffee (Ose). With an average female worker wage of Rp 60,000 per day, the average female laborers' income reaches Rp 750,000-Rp 800,000/person/harvest season.

**Processing and quality control of Kintamani Arabica Coffee**

In the last five years, the increasing trend of Arabica coffee demand from Japan and European countries for the type of coffee of HS is 41%, while for coffee Ose (coffee of rice) 6 fold increase from the coffee of HS. Referring to the data, the prospect of Arabica Coffee development as an export commodity is quite big. Therefore, quality control becomes important to maintain and seize the world market opportunity. The growing market demand for coffee supplies, the FMU in Kintamani need to increase the quality of production and quality control to meet the market demand. Currently, Farmers Cooperative Farmers Geographical Indication Protection (MPIG) Kopi Kintamani Bali has exporting partners (Korea, Japan, and Australia) and in cooperation with Kemenkop UKM.

Processing Arabica coffee if wet in UPH Kintamani through the following stages: sorting by mining, peeling the skin using pulper machine, fermentation for 36 hours, drying for 14 days (12% moisture content), skinner using huller machine, then packed using gunny sack. The process of making ground coffee through the process of roasting, cooling, smoothing using a grinder machine and packed using aluminum foil paper through the vacuum press process. To maintain the quality of Arabica Coffee according to IG product certification standard (IDIG000000001, 05 December 2008) consistent quality control in FMU, starting from ingredients, quality control of rice coffee and coffee powder processing, and quality control on the final product. Expanding its share by designing new target markets and online marketing systems can be a choice of business development strategy (Bachelor, 2007), given the large production capacity at UPH.

**Utilization of machines and added value**

Value added is formed when there is a change in shape from the original production. This form of value added is important to be done by the female laborer in UPH to increase their income. The process of forming added value in Arabica Coffee, ranging from the processing of coffee into coffee HS, coffee Ose, and coffee powder. Utilization of technology (in this context coffee processing machines) and value-added Arabica coffee can help the female laborer dominating Arabica Coffee processing activities in UPH Kintamani increase wages and in turn their income.

The utilization rate of the machine at UPH Arabica Coffee in Kintamani is low, ie 6.8% pulper machine, 6.2% huller machine, 0.6% roasting machine, and 0.7% pouring machine so no additional processing machines are needed. In line with the opinion of Darmawan (2016), UPH needs to focus on improving the productive efficiency of Arabic coffee in red logs. UPH activity located in Kintamani Bangli area in red coffee processing into HS coffee has resulted in added value of Rp 9,918/kg with value-added ratio of 58% of product value, processing of HS coffee into Ose coffee produces added value of Rp 40,749 /
kg with added value ratio of 85%, and for processing of coffee Ose into coffee powder obtain value-added Rp 118.057/kg with added value ratio of 92%.

Model of female laborers’ empowerment in Arabica coffee processing industry

ANP developed by Thomas L. Saaty provides a means of incorporating assessments and measurements in order to obtain priority-scale ratios for the distribution of influences among factors and factor groups in decisions (Saaty, 2006; Darmawan, 2017). Analytic Network Process (ANP) model of female laborers’ empowerment in Arabica Kintamani coffee processing industry that was produced in previous research (Darmawan, 2017) revealed there are five female empowerment strategies as follows: partnership synergy (weight 0.11), growth of female laborers’ competence (0.39), institutional strengthening (0.14), strengthening of marketing function (0.16), and stimulus for application of machinery and equipment technology (0.20). Thus, referring to the ANP Model of empowerment of female laborers, the main priority of empowering female laborers is through strengthening the competence of female laborers. This finding is in line with Setyowati (2010) opinion on the development of human resource competence as a solution to improve the work of the organization. The ANP model is developed under UPHs internal business process conditions in the Kintamani Bangli region that is not yet optimal.

Implementation of female laborers’ empowerment model of Arabica coffee processing industry

The results of the implementation of female laborers’ empowerment model in Arabica coffee processing industry at UPH in Kintamani Bangli are as follows: (1) identified the potential of female workers that need to be developed in UPH Kintamani Bangli based on the vision and capital possessed (strength based solving approach): female laborers learn about the coffee value chain from farmers to consumers and choose the skills needed to improve capability and turn their income; (2) training (training modules are provided): production and process management, marketing and service functions for the development of market networks, and consolidation of entrepreneurial spirit; (3) UPH management, namely: (i) the development of UPH institutions oriented to the collective business community; (ii) the accounting system (accounting principles, recording and recapitulation of transactions, financial statements, business statistics, and key performance indicators); (4) identified the need for infrastructure development in UPH, mainly updating equipment and coffee processing machines and ICT infrastructure for online business transactions; (d) strengthening business through benchmarking to more advanced FMUs and strategic partnerships (production, financial, and trade means) in the context of strengthening the performance of the community-based Arabica coffee value chain; (d) the social innovation of female laborers is apparent from their involvement in the making of: (a) UPH development roadmap, (b) Standard Operating Procedures (SOP) of machine utilization (pulper, huller, roasting, and powders) and value-added SOPs, and (c) the Rules of Procedure (PTT) of strategic partnership.

However, training regarding the improvement of product design innovation capabilities and the development of change-based organizations on this occasion has not yet been planned (Kandapuly, 2002; Purhantara, 2009; Yrd and Omur, 2010; Rahab et al., 2011). In line with Gawe et al. (2009), Arabica coffee processing industry at UPH Kintamani Bangli region should have strategic orientation, innovation service to produce high-quality specialty processed Arabica coffee in UPH, and refers to IG certification standard, supported by unique product design innovation to support business performance and partnership.

Managing the results and impacts of female laborers’ empowerment

Female laborers’ empowerment activities in UPH Kopi Arabika Kintamani are often seen as the final product and are separated from activities to achieve the goal of empowerment, so that after completion of the mentoring as if completed the activity. There is even a view that assumes that after the training is completed as if the goal to be achieved has been realized. This view is very misleading because basically, the training activities of the female laborers are one of the media for UPH management Arabica Coffee is aware of the
problems and needs and actions needed to overcome the problem, as well as fulfill its needs. Female laborers' empowerment activities should be viewed as a system or sub-system or as part of a series of activities to achieve the goal of enhancing women's capability in UPHs in the context of improving the performance of the coffee value chain. Here, female laborers’ empowerment is assumed as an integrated system, consisting of interconnected sub-systems, ie human, technological, financial, social, institutional, and information and communication technology (ICT) sub-systems. In order to empower female laborers not to be separated from other activities, in the sense of providing significant supportive power, the results and impacts of empowerment need to be managed as well as possible, and activities of monitoring activities post-female laborers' empowerment activities.

Steps in managing the results and impacts of female laborers' empowerment are as follows: monitoring and evaluation of female laborers' empowerment, Follow-up Plan (RTL) of female laborers' empowerment, identification of carrying capacity of RTL and RTL constraints, and periodic evaluation. Thus, it appears that responsibility for the impact of female laborers’ empowerment is not solely on the task force of female laborers empowerment and government at district and provincial levels. The commitment and sense of belonging from stakeholders, especially the management of UPH Kopi Arabika Kintamani, is the success factor of post-empowerment of female laborers in UPH.

CONCLUSION AND SUGGESTION

CONCLUSION

The results of the implementation of female empowerment model in Arabica coffee processing industry at UPHs in Kintamani Bangli are as follows: (1) identified the potential of woman workforce that need to be developed in UPHs Kintamani Bangli based on vision and capital owned by women labor force (strength based solving approach). Female laborers learn about the coffee value chain from farmers to consumers and choose the skills needed to improve capability and in turn their income; (2) training (training modules are provided): production and process management, marketing and service functions for the development of market networks, and entrepreneurship; (li) the accounting system (accounting principles, recording and recapitulation of transactions, financial statements, business statistics, and key performance indicators); (i) the development of UPHs institutions oriented to the collective business community; (4) identified the need for infrastructure development in UPHs, mainly updating equipment and coffee processing machines and ICT infrastructure for online transactions at UPHs; (d) strengthening business through benchmarking to more advanced UPHs and strategic partnerships (production, financial, and trade means) in the context of strengthening the performance of the community-based Arabica supply chain; (d) the social innovation of female laborers in the form of being involved in making: (a) UPHs development roadmap, (b) machinery utilization SOPs (pulper, huller, roaster, and powders) and value-added SOPs, and (c) Regulation of strategic partnership.

SUGGESTION

The female labor force group of Arabica coffee processing industry at UPH Kintamani Bangli area should be oriented to produce specialty-quality Arabica coffee preparations in line with IG certification, underpinned by a distinctive product design innovation to support business independence and partnership contract sustainability.

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