Socio-economic study on empowering women farmers to support the SDGs

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Abstract. SDGs number 5 is a goal for women to increase their participation in the country's economic development. There are many sectors where women can develop and have an impact on a country's development. Among the many existing development sectors, agriculture is one of the sectors with the most contribution to Indonesia's GDP. It is from the fact that Indonesia is a country that is rich in natural resources. However, there are still many Indonesian farmers, especially women, who live in poverty. Therefore, empowerment is an alternative to improve their standard of living. This study will examine the empowerment model among women farmers, at least in the agricultural sector in the area where they live. The research method used is a literature study. The results will show the pattern of empowerment formed among groups of women farmers in several regions in Indonesia. This pattern will explain how empowerment developed so that the participation of women farmers in economic development can increase in the future.

1. Introduction
The small and medium-scale agricultural sector is still one sector that dominates the Indonesian economy and contributes significantly to Indonesia's income. This sector has several benefits as a provider of employment, food for the population, industrial raw materials, and a foreign exchange earner through non-oil exports [1]. However, behind that, field conditions have not been followed by good quality human resources (HR) to meet higher productivity [2]. Whereas the ability of human resources is an essential factor in addition to natural resources and technology, considering that humans are "the man behind the gun" [3]. One of the reasons behind this situation is that sectoral economic growth is faster than the growth of the workforce. So that the turning point of the use of labor (labor turning point) takes longer to achieve [4]. The data shows that Indonesia's potential agricultural harvested land area has decreased from 2018, which reached 11,377,934 ha to 10,677,877 ha in 2019. The reduction impacts land production, reducing from 59,200,533 tons in 2018 to 54,604,033 tons in 2019 [5]. There was a decrease in the number of jobs within the agricultural sector by around 4.87% in 2020. They were followed by a decline in domestic agricultural supply by 6.20%. This decline was more significant than other countries such as Saudi Arabia (3.10%), Mexico (5.81%), or India (6.03%) [6].

Other data also shows the potential of Indonesia's vast and fertile agricultural land. Wherefrom the ground with an area of 189.1 million ha, it has at least 31.9 million ha of optimal fertile land and 157.2 million ha, which is a sub-optimal land and can be utilized for agriculture [7]. Another data shows that
the Indonesian agricultural sector in 2020 accounts for at least 2.3% of Indonesia's total exports. Agriculture can survive the crisis because it can create high informal employment, especially during the economic crisis. On average, Indonesians spend around 51% of their monthly income on food needs [8].

Meanwhile, underprivileged communities spend around 62.76% of the total monthly income [6]. The agricultural sector absorbs a lot of informal workers, especially women. These women farmers also play a significant role in agricultural activities ranging from seeding, planting, maintenance to harvesting farm products [2]. However, these women farmers are underdeveloped due to limited workforce and time and ineffective assistance from other parties [9]. FAO (Food and Agriculture Organization) states that most women in developing countries are women farmers, who only control about 19% of total agricultural land ownership in developing countries, including Indonesia [10].

Seventy percent of Indonesian women live in rural areas, of which 55% work in the agricultural sector. There is an assumption that women's position in agriculture can run concurrently with their role in the domestic industry (household), so their participation is relatively high [11]. Rural women farmers are responsible for around 60-80 per cent of food production in developing countries, but women farmers are still under-appreciated as one of the foundations of state development [12]. Farm women play a role in increasing the income of farming families, especially on the sidelines of the rice harvest season. Because male farmers generally only grow food crops and do not carry out other productive activities like growing vegetables or fruits [13]. The husband's job as a farmer has not met the family's economic needs, thus encouraging women to work in the rice fields. However, the available land is still minimal, so that the level of welfare of farmers, in general, is still low [14]. In addition, women farmers also have several limitations, such as low levels of education and skills, low ability to capture opportunities, and low potential utilization [4]. Women farmers in Indonesia deserve to be empowered to improve Indonesia's family economy [15].

This study provides an overview and new survey regarding the socio-economic aspects of empowering women farmers to support sustainable development goals (SDGs). This study aims to identify factors of empowerment that are following the SDGs scheme significantly to increase the productivity of women farmers. The increase in productivity is expected to encourage an increase in the farmer's exchange rate (NTP), which will also positively impact the welfare level of women farmers [16]. Empowerment is used as an alternative to development by granting autonomy to the community, thus building new habits for community independence [17]. Empowerment is one of the development patterns based on groups, so it is often referred to as community-driven development. Development directed at the community is expected to increase the ability to solve problems and the skills needed [18]. Empowering women is more effective through groups because it creates a dialogue that strengthens group awareness and solidarity [19].

Empowerment of women is essential because often, women rarely get the opportunity to improve their quality. Women are often seen as less productive in the economy because of direct participation in income-generating activities, leading to gender discrimination [10]. The agricultural sector then becomes one of the suitable vehicles for empowering Indonesian women because Indonesia is an agrarian country with farmland and labor [19]. The empowerment program emerged as a critique of the concept of development that puts forward modernism to create dependence [20]. Women farmer empowerment programs must be clear about the recipients and how the program implementation is carried out, reflecting on the learning process rather than only focusing on results [1]. Therefore, it is necessary to have empowerment and agents of change from community empowerment institutions that free the program from creating dependence [21].

2. Research methods
This research uses a qualitative approach with a literature study method. The data used in this study is secondary data from various journal articles related to the socio-economic aspects of empowering Indonesian women farmers. Data were obtained from 27 journal articles which were sorted using the Google Scholar platform. Data analysis uses content analysis through data collection, data reduction,
data presentation, and concluding stages. The conclusions obtained will show the pattern of empowerment of women farmers according to the existing literature review.

3. Results and discussion

3.1. Socio-economic aspects of women farmers

Female farmers are the backbone of the family and do not only contribute to the agricultural sector [3]. Farm women, in general, are also responsible as housewives for farming families, so they have a dual role [10]. Women farmers are sometimes faced with three jobs: production or work, reproduction, and roles in the community [22]. Many women farmers work to supplement the daily food needs of the farming family. They also set aside a portion of their business results to be stored in the form of rice. They did it as a form of investment when farming families need additional costs [14]. Farm women are at least responsible for some aspects of farming family life. They maintain household food security, regulate the household economy, and utilize land and free time [12].

Farm women in the socio-cultural structure are considered as husband's servant figures who often have limitations and freedoms. These limitations include low levels of education, skills, ability to capture opportunities, and technological innovation [4]. Women farmers are also not involved in decisions and policymaking. It happens because women farmers are considered less capable and have low insight. Farm women also have limited capital and support from their husbands [23]. This situation shows that from a gender perspective, women still experience socio-cultural discrimination. These women play a vital role in almost the entire process of farming activities. They started from land preparation, planting, care, pest and disease eradication, harvest period, and post-harvest. However, there is a disparity in roles between women and men in the agricultural sector. Women farmers account for 52.68% or 510 hours of total agricultural activities, compared to male farmers who only have 458 hours or about 47.32% of entire farm activities [11].

Women contribute quite a lot, especially to family income, where there is at least a contribution of 37.52% to 40.32% of every woman who works in the productive sector. Their income range is also different, but at least a minimum of IDR 30,000 per day [24]. Another report on the socio-economic conditions of farming families showed that, on average, the income in a farmer's household was Rp.43,694,613 per year [25]. If the contribution of women is around 37.52% per year, then we can estimate that the material contribution that women farmers can provide on average reaches Rp. 16,394,218 per year. Or around Rp.45,500 per day. This number is proof that women farmers play a significant role in increasing family income. For example, the women farmers in Sumberharjo, Sleman, earn an average of Rp. 856,961 per month or around Rp. 28,500 per day. Although materially, it may not be too large compared to men, this number has become evident that women have a central role in implementing agriculture and supporting the family economy [10].

The amount of income certainly varies from one place to another, but in general, all farmers experience the same problems related to income. The problem is the low farmer exchange rate (NTP). One of the obstacles behind this situation is the agricultural supply chain which has long passed by middlemen. These traders will always give low prices to farmers due to oversupply [26]. This income is also followed by a particular workload, reaching 11.15 hours/day for women farmers in rural areas. This number is much different from men's workload, which is only 7.24 hours/day. It cannot be separated from the role of women farmers in the family and work [17]. Whereas on the other hand, farmers still must face production risks and have the potential to reduce the amount of average income received [25].

One of the steps that have been taken to increase income is through women farmer groups (KWT). This KWT serves as a place of activity for women farmers to improve skills and training to support the economy of its members [3]. Women farmer groups (KWT), according to Minister of Agriculture No. 237 of 2007 concerning Guidelines for Institutional Farmers, are farmers or breeders who are gathered because of the similarity of environmental conditions and shared interests to develop farming businesses. The number is generally around 20 people or more and comes from various age
backgrounds [9]. This kind of women farmer group has the principles of kinship, deliberation, consensus, cooperation, unity, and a good level of religiosity for individual development [19]. Social interaction in farmer women's groups can be seen through the principles of mutual help, openness, group discipline, togetherness, and usability. With this kind of background, it is necessary to empower KWT. However, the problem that generally arises is that KWT members are often constrained by age and busyness. Sometimes they also feel resigned to the situation, thus slowing down the potential for empowerment [3].

3.2. Empowering women farmers to support SDGs
Empowerment through KWT is one of the steps that women farmers can take to improve their level of welfare. Women farmers can carry out the program in a directed and planned manner. The learning process in empowerment consists of planning, implementation, and evaluation. Planning includes identifying needs, objectives of the program being implemented, program resources both material and non-material, and strategies for implementing empowerment programs. The program’s implementation must pay attention to the period of activity, participation, place, methods, materials, and assessment indicators prepared. Meanwhile, program evaluation seeks to identify the level of achievement of objectives, direct and indirect impacts, and analyze the consequences of unplanned programs [21].

Regarding its implementation, at least women farmers can implement several programs [9]. These activities include savings and loan programs, processing of agricultural products based on locality, field counselling, and training in making monthly reports on KWT activities. This recording is essential because the dominance of small and medium-sized agriculture in Indonesia has been very poorly recorded. It is also necessary to conduct comparative studies on other KWTs and farm management [3].

Empowerment of women farmers can be realized through informal life skills education, increasing access and opportunities for entrepreneurship training and technology. Changes in technology can play a positive role in increasing income for low-income farming communities [2]. Women farmers can use technology to support the marketing of harvested or post-harvest products, where one of the well-known platforms is Facebook [15]. The establishment of joint business groups (KUBE) can become an alternative for women's economic strengthening and gender equality, thereby increasing women's bargaining position in the family and community [22]. Although on the other hand, there are still obstacles in the application of harvesting technology. Some of them are due to limited access and knowledge of technology and the low interest of farmers in modern technology [5]. However, there are some dimensions of empowerment that women farmers must meet. These dimensions include the fulfilment of access to resources and material, the extent of awareness through awareness of gender and economic disparities, the size of participation through representatives of low economic class, and the dimension of control through the allocation of power between men and women [19].

Empowerment is also a measuring tool for sustainable development (SDGs) based on the concept of Gender and Development (GAD), which expects development conditions for all individuals regardless of their gender [12]. The GAD concept also supports the SDGs, especially for the fight against gender discrimination. This approach emphasizes women, including women farmers, as active agents of change in development [22]. The women farmer empowerment program must have a change agent that functions as a companion to the empowerment program [13]. The goal is to ensure that the program is carried out according to plan and minimize mistargeting or objectives. The group facilitator plays a role as an active figure providing information and advice, exchanging ideas, raising awareness, and holding group training [3]. The success indicator of activity through empowerment is the increase in the knowledge and skills of the residents, which can increase the income from farming. The sustainability of the program can be seen through business independence and the development of businesses that have been formed [18].

Impacts can be obtained through empowering KWT for women farmers, both socially and economically. Changes in behavior, adding insight, increasing the role of women, and communication skills are some of the social benefits obtained. While economically, empowerment can increase job
creation and provide added value to agricultural products [17]. KWT can also boost rice production, because it is proven to be able to increase the productivity of women farmers [16]. Although on the other hand, there are several challenges of empowerment programs such as mistargeting, the creation of seeds of social conflict, the weakening of community social capital such as cooperation and self-reliance. It is partly due to the actions of program managers who are not fair or transparent and are not appropriate [20].

We will achieve empowerment of women farmers through increasing the effectiveness of counselling and training, improving agricultural regulations, improving rural infrastructure, business development, and technology adoption, strengthening motivation and social capital of women farmers, increasing job opportunities and labor absorption of women farmers, and protection for women farmers [4]. The whole concept will be adapted to the idea of sustainable agriculture, according to the Law. The aim is none other than for the basic needs of the community, increasing the income and standard of living of farmers, encouraging the expansion of employment and farming opportunities, as well as expanding the processing results of the agricultural sector that maintains the natural ecology [5]. It is also proof that the empowerment of women farmers is very supportive of the sustainable agricultural development program (SDGs).

3.3. Discussion
Women have long been considered passive agents of development, giving rise to gender discrimination and a low view of their abilities individually and collectively. Various research have shown that women have limitations in developing their capacity, so they are forced to play a less active role in building the family economy and the country's economy as a whole [4]. On the other hand, this research proves that this perspective is wrong. Women dare to directly contribute to the public sector based on their sacrifice and concern for the family economy. Some research showed that women, especially women farmers, actually work with a high burden. However, earning a low average income is even subject to adverse discrimination [10,11,24].

The GAD development approach became one of the alternative approaches that began to involve women in development contributions. It is inseparable from GAD's goal to increase the contribution of both men and women without any element of discrimination against them. Conceptually, this approach is quite good, but it still needs to be questioned about its implementation. One alternative that can be taken and by the GAD approach is empowerment. The program must answer the socio-economic problems of women, improve the quality of human resources for women farmers, and reduce or even slowly eliminate the inherent discrimination so far. The primary step that women farmers can take in the agricultural sector is forming women's farmer groups (KWT) or joint business groups (KUBE). The existence of these groups is very substantial because they can encourage, motivate, and play a role in the sustainability of existing agricultural businesses. However, so far, the empowerment of KWT and KUBE is sometimes problematic. One of them is the lack of assistance [3,19].

The empowerment of women farmers must prioritize assistance from outside parties and be sustainable. It is inseparable from KWT members' limitations, especially in education, technological capabilities, marketing, and capital. Many empowerment patterns can be made for women farmers, such as savings and loan programs, post-harvest processing, and agricultural production counselling. Considerable sacrifice is required to achieve the goal of increasing the socio-economic welfare of peasant women. The gifts focus on women farmers themselves and all individuals and institutions who hope for the same purpose. Whether it is from the family environment, the environment of fellow workers, the educational environment, and the government, it is necessary to make synergies in making sacrifices to achieve sustainable development goals. This hope is per what was conveyed by an Indian figure, Jawaharlal Nehru, that if the state wants to change society, it is necessary to change its daughters because they are the backbone of the family community and culture [12].
4. Conclusions
Pro-women development needs attention from all stakeholders regarding the development goals themselves. The agricultural sector, which is one of Indonesia's leading sectors, also requires equal attention. Women farmers still experience much discrimination, especially socially and economically. They are less regarded as independent and influential figures, mainly because of patriarchal culture and the perception that women farmers cannot develop. They have made a reasonably significant contribution. Even in some locations, it has even exceeded the assistance of men. Women farmers need much help in the goal of increasing welfare and driving the economy. The form of activities that can support these goals is empowerment through savings and loan programs, agricultural production counselling, and post-harvest processing. The commission must involve assistance as an agent with information and knowledge and run continuously, not only in one period. This synergy between parties is needed to fulfil all sustainable development goals as an implemented alternative.

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