The Effect of Social Capital in Improving The Capacity of Rural Women As “Emping Melinjo” Cottage Industry Actors in Banten Province, Republic of Indonesia

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Abstract

This study aimed to see the role of social capital at both the micro level and the meso level in overcoming the problem of the weakness of women's rural capacity of the emping melinjo cottage industry in Banten Province. The study was conducted in Banten Province, with a sample of 453 people consisting of 154 people in the industrial zone, 147 people in the agricultural zone and 152 people in the tourism zone. The analysis method used in this study was the statistical inverertia namely Structural Equation Modeling (SEM). The results of the analysis showed that social capital at both the micro level and the meso level played a role in improving the capacity of rural women in cottage industry. The social capital of meso level was influenced by the existence of environmental support, especially the availability of infrastructure, the socio-economic environment and the support of the family environment, while in micro level, social capital was influenced by individual characteristics, especially the level of formal education, but less supported by the family characteristics, especially the formal education level of the head of the family.
Micro-social capital that played a role primarily is the proactive action, obligations and beliefs of rural women of cottage industry emping melinjo. While the meso-social capital plays a role in capacity building especially concerning aspects of social norm and trust.

Keywords: Emping melinjo cottage industry; Micro-social capital; Meso-social capital; Capacity level of rural women.

1. Introduction

Many rural women in Banten are active as cottage industry actors, but their condition is less developed. This is allegedly caused by the weakness of their capacity level, as many women cottage industry actors are influenced by the social capital aspect. Cottage industry for some rural women, become a means of social and cultural change in the family [1, 2, 3], as well as one of household survival strategy [4].

Cottage industry provides space for rural women to run public sphere, improve the economic recovery, opens opportunities and employment, and increases income and welfare [2, 5] and able to suppress the migration of the population out of rural areas [6].

The inclusion of women in the cottage industry is the fact that women are productive development assets, and the involvement of women in the cottage industry has several conveniences, among others. The production process takes place within the house, uses simple technology, does not require special skills, and needs the relatively small required capital. Cottage industry for women is the most ideal alternative because women are able to carry out double roles without having to abandon the reproduction function, housewife. In addition, cottage-based industries are also a means of learning for women, especially women in rural areas in developing skills, cooperation and social networks.

The attractiveness of other cottage industries as a family economic activity is partly because of being easy to implement, using time use on a sideline basis, having small failure rate, requiring nospecial skill, and bounding no certain rules, so that rural women can run multi role both public role and domestic role simultaneously well [7]. Furthermore, [8] discloses that the inclusion of women in the labor market or productive employment with the target of household economic improvement, the change of family economic structure, becomes a measure of woman ability in running “emping melinjo” cottage industry.

Cottage industry is part of a small industry with characteristics as follows: (a) its activities are not well-organized, (b) a business without a permit (c) the pattern of business is not focused, (d) less untouched by government policies (e) easily switch to other sectors, (f) the technology used is still a simple, (g) the scale of small businesses tend to spend leisure time, (h) based on experience, (i) generally done alone or only assisted relatives / family does not need to be paid, (j) the capital comes from savings or informal loans, and (k) based on the value-added production [9].

The development of cottage industry in Indonesia from year to year continues to increase, even is able to survive in crisis condition. Based on data of Micro Business (UM) in year 2014 launched by BPS, it increased by 11.55
percent compared to year 2013 which was only equal to 2.63 percent with employment absorption reaching 10.33 percent in 2013, [10]. Multiple roles of women, triple burden of women, are a form of women ability, which is economically contributing to the increase in income generating and welfare. It is in line with the increase of women skills which is more focused and honed, especially in utilization of production sources and market networks.

Limited woman access to productive resources, in the form of knowledge, skills, labor, technology, information and capital network, makes rural women more marginalized, and it is often found in some activities. The availability of technology is still patriarchal, where men tend to benefit more to utilize or access it compared to women. Nevertheless, the shift in the domestic role to public one in the family opens space for women especially rural women. Working for capability is not only limited on using free time but also as a means of earning a living, although economically sometimes less profitable; in consequently, it increases the length of woman deterioration [11, 12].

The capacity of rural women in the household as domestic role and business activity as public role is part of the capacity of women. Arising concerns in society that independent woman will result in the loss of her natures, both as mother, wife and daughter, [13]. If woman is economically independent, she will have equal opportunities with man [14]. An interesting phenomenon of rural woman is the concept of survival which becomes a new force for women. The limited resources motivate rural women to be more creative in carrying out the public role because the goal is the fulfillment of family economic needs [15, 11, 16, 4]

The cottage industrial activities of rural women are often confronted with specific actions, such as managing households, taking care of family needs, and managing family financial patterns that are domestic and routine activities. In some places, women activities in the public sphere cause negative perception, such as the limited frequency of their meetings with family members because the mother is rarely at cottage [3]. The ability of women in rural areas to run public activities is not only to meet the needs of life, but also to manage the resources owned, such as time allocation, selection of business premises and production processes. Ability in the form of competence cannot be separated with the environment that supports it. In the social domain, this condition will result in self-confidence, self-respect, and self-reliance [17].

Referring from several research results [18, 19, 20, 21], the capacity of rural women is defined as the ability of rural women to utilize and integrate optimally their resources (natural resources, human resources, place, capital, and network). [15], revealed that there are three things that encourage women to engage in public activities, such as, firstly, elevating women and families to a more real world, breaking down patrilineal structures within the household and family, and providing a better bargaining position; secondly, minimizing the process of exploitation of women, in the form of discriminative wage level, work environment, gender based violence and domestic violence; and thirdly, involving public activities to social and economic improvements for individu and family.

Capacity can be interpreted as empowerment, which enables rural women to survive, according to their ability, and to utilize optimally the economic and social resources. Woman empowerment is also an accumulation of the
increase of knowledge, experience and behavior, while the environment is a stimulus in developing woman self-ability in rural areas [17, 19, 22].

Naturally, the rural women of “emping melinjo” cottage industry, have an embedded capacity in themselves. The high level of individual capacity is demonstrated by the level of knowledge, skills and behavior. The capacity that develops in rural women is a form of self-ability, and embedded into behaviors or habits, while the values of belief, norm, and cooperation are the social resources that become elements of social capital. Economically, the strong weakness of social capital cannot be measured with certainty, but it can be seen from the target achievement target, besides that social capital is also able to support the rural woman activities, as a means to bridge the capacity of women in rural areas [19, 23, 17, 24, 25].

On the other hand, the existence of social capital, both the micro and the meso levels for some people is still considered as an obstacle for the role of women, both in carrying out domestic and public activities. The strength of patriarchal culture, through structure and rules or social norms developed in rural society influence micro social capital of rural women in running public role. The low level of woman rural capacity is also influenced by the generally low level of knowledge, skills and behavior of individuals. In line with the description above, this research aims to (1) analyze the existence of micro-social capital and meso-social capital of rural women; (2) analyze the existence of women rural capacity level of “emping melinjo” cottage industry; (3) analyze the factors affecting the capacity level of rural women of “emping melinjo” cottage industry; (4) develop strategies for improving the capacity of rural women in “emping melinjo” cottage industries.

2. Research Method

This research used cross sectional design. The research which was conducted in Banten Province, which was divided into three zones based on geographical location, including: Industrial zones, agricultural zones, and tourism zones. The study was conducted from May to December 2015 with 453 respondents from the population of 6,857 women in rural areas as actors of “emping melinjo” cottage industry. Determination of the sample is done by using proportional random side in accordance with the research zone.

The collected data of this study were consisted of primary data and secondary data. Primary data were collected through interviews using questionnaires, in-depth interviews, observations and documentation studies. The data consist of respondent characteristic (ξ1) such as age, duration of education, business scale, access to information, mastery level of technology, and mastery level of raw material; family characteristics (ξ2) such as marital status, family age of head, family cohort education and family head income level); extension activities (ξ3) such as the suitability of the metric, the accuracy of methods and the intensity of extension activities; environmental support (ξ4) such as the indicator of the family environment, the socioeconomic environment and the availability of infrastructure. Micro-social capital (η1) was measured through trust indicators, proactive measures, obligations, and family cooperation level while meso-social capital (η2) was measured using indicators of trust, social norms, and proactive actions. And the capacity level (η3) is measured by indicators of production source utilization, business planning, business opportunity identification, problem solving, and adaptation capability.
The variables of extension activity and environmental support are measured using the Likert scale of "1 = never, 2 = sometimes, 3 = often, 4 = always", while the micro-social capital, meso-social capital and capacity level were measured by using Likert scales: "1 = disagree, 2 = less agree, 3 = agree, 4 = strongly agree". Scores of the values of each variable are transformed with indexes 1 to 100 corresponding to the value scores produced.

The data was transformed first to facilitate the analysis. The data transformation guide could be done by determining the smallest index value for the lowest score and the largest index value in accordance with the data generated. The general formula of transformation refers to [26], is the following:

\[
\text{Indicator Transformation Index} = \frac{\text{The number of achieved scores} - \text{The number of minimum scores}}{\text{The number of maximum scores} - \text{The number of minimum scores}} \times 100
\]

Gradation scores were used from the most negative to the most positive. Score 1 was used for the most negative response and score 4 for the most positive response. Data analysis was done descriptively and inverently, and descriptive analysis was used to calculate the mean and standard deviation of each research variable. One way Anova analysis and Structural Equation Model (SEM) analysis were used to analyze the influence of exogenous and endogenous latent variables.

3. Results and Discussion

3.1 The Individual Characteristics and The Family Characteristics of Rural Women of Emping Melinjo Cottage Industry Actors

The average age of rural women in the cottage industry in Banten Province was 42.3 years, with a formal education rate of 6.5 years (80.0 percent graduate from elementary school), and non-formal education over the past six months has been inter-2-3 times (98.7 percent) in the form of education and training related to the development of small industries.

The experience in running the business was about 11.3 years (46.3 percent) with activity time span of 6.3 hours per day (57.4 percent), and the scale of business run by rural women averaged 284.2 kg per month, evenly distributed in all zones. The motivation of women in “emping melinjo” cottage industry was more than orientation on the needs of the family and the market due to the availability of resources and environmental support.

Access to information was generally very low, especially in utilizing and seeking market information, technological innovations and raw material access. Most women take advantage of kinship and friendship networks. Similarly, the searching and purchasing of raw materials, were in amount of 4.0 kilogram per month (were less visible in Table 1), and most cottage industry actors only used local markets, while local institutions (groups of joint ventures, cooperatives and community).

For some rural women, “emping melinjo” cottage industry is a business activity that runs from generation to
generation, and does not require outside knowledge such as attending courses and training. There are many things that backwards the rural women in the public role (business). Most of the women (65.0 percent) of women run cottage industry-based on needs of family members, while 25.0 percent based on the ability of individuals in running business activities and 10.0 percent continuing parent business. The burden of most rural woman families (76.8 percent) was middle-class families (3-5 persons) with high family incidence including high group with an average of 1.25 million rupiah per month (see Table 1).

**Table**: racteristic of individual and family of “emping melinjo” cottage industry actors

<table>
<thead>
<tr>
<th>Characteristics of Individual and Family</th>
<th>Zona (Score)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Age (Year)</td>
<td>41.7</td>
</tr>
<tr>
<td>Formal Education (Year)</td>
<td>5.3</td>
</tr>
<tr>
<td>Business Scale (Kg)</td>
<td>123.0</td>
</tr>
<tr>
<td>Business Experience (Year)</td>
<td>11.6</td>
</tr>
<tr>
<td>Information Access (Times)</td>
<td>1.8</td>
</tr>
<tr>
<td>Purchase of Raw Materials (Times)</td>
<td>3.3</td>
</tr>
<tr>
<td>Number of Family (People)</td>
<td>3.3</td>
</tr>
<tr>
<td>Income of Family Head (Rp in millions)</td>
<td>1.11</td>
</tr>
</tbody>
</table>

### 3.2 Variable Description Related to Strengthening the Capacity of Rural Woman through Improving Social Capital

The level of rural woman capacity is the ability of rural women of “emping melinjo” cottage industry in planning, selecting, determining and utilizing economic resources. The capacity of rural women was in the medium category (Table 2), and the existence of micro-social capital and the environment support are in the medium category, but the extension activities are in the low category.

**Table 2**: Description of variable score related the capacity of rural women trough strengthening social capital.

<table>
<thead>
<tr>
<th>Name of Variables</th>
<th>Zona (Score)</th>
<th>Result of t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industry</td>
<td>Agriculture</td>
</tr>
<tr>
<td>Extention Activity</td>
<td>40.3</td>
<td>49.0</td>
</tr>
<tr>
<td>Environmental Support</td>
<td>63.4</td>
<td>61.4</td>
</tr>
<tr>
<td>Micro-Social Capital</td>
<td>65.8</td>
<td>74.8</td>
</tr>
<tr>
<td>Meso-Social Capital</td>
<td>61.9</td>
<td>63.9</td>
</tr>
<tr>
<td>Capacity Level</td>
<td>72.9</td>
<td>70.3</td>
</tr>
</tbody>
</table>
Different test results indicate that the scores obtained by each factor have significant differences except the social capital of the meso level and the extension variable in each zone. Meso-social capital and the rural women capacity level in each zone have scores that are almost identical and not significantly different. The low level of extension activities (Table 2), is caused by limited extension personnel, and the lack of government support in the development of “emping melinjo” cottage industry.

3.3 Relationship of Micro-Social Capital and Meso-Social Capital with Rural Women Capacity of Cottage Industry Actors

The stronger social capital of rural women is the higher capacity of women in rural areas of “emping melinjo” cottage industries. Partially, the effect of micro-social capital and meso-social capital as shown in Table 3 has a good correlation. This is indicated by the amount of coefficient generated at 5% confidence interval (\(\alpha = 0.05\)), except the indicator of business planning which is notcorrelated to meso-social capital with a coefficient of 0.072, so it is said to be insignificant, which means that the ability of rural women in planning the business is not related to the strength of meso-social capital.

Table 3: Corelation coeffisient between capacity level and micro social capital and meso-social capital of rural women

<table>
<thead>
<tr>
<th>Code</th>
<th>Capacity Level</th>
<th>Micro-Social (Family)</th>
<th>Capital Meso-Social (Community)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y31</td>
<td>Utility of Production Source</td>
<td>0.235**</td>
<td>0.193**</td>
</tr>
<tr>
<td>Y32</td>
<td>Business Plan</td>
<td>0.293**</td>
<td>0.072</td>
</tr>
<tr>
<td>Y33</td>
<td>Identification of Business opportunity</td>
<td>0.269**</td>
<td>0.327**</td>
</tr>
<tr>
<td>Y33</td>
<td>Problem Solving</td>
<td>0.350**</td>
<td>0.288**</td>
</tr>
<tr>
<td>Y35</td>
<td>Capability on Adaption</td>
<td>0.285**</td>
<td>0.197**</td>
</tr>
<tr>
<td>Y3</td>
<td>Capacity</td>
<td>0.302**</td>
<td>0.295**</td>
</tr>
</tbody>
</table>

Note:  *) Significance on \(\alpha=0.05\)  **) Significance on \(\alpha=0.01\)

Partially, the correlation generated from micro-social capital and meso-social capital influence to rural women capacity level as shown at Table 3. The table shows that adaptation level, problem-solving level and opportunity
identification rate become measures of improving rural women business capacity.

Social capital has an important position to develop capacity, in the form of mutual trust, sense of security/norms, and proactive responses/actions [27], and it is a key indicator of the formation of meso-social capital (community). The relationships or interactions which are built in the family in the form of micro-social capital (family), in improving the capacity of rural women of “emping melinjo” cottage industry actors are bipolar with multiple roles [19], meaning that micro-social capital in aggregation gives meaning to the opening of women role in public activities. The interaction of micro-social capital is able to increase the capacity of rural women in developing cottage industry of “emping melinjo”.

The meso-social capital, in some ways acts as a social bridging between the wishes of cottage industry actors and outsiders (suppliers and customers), social networks built through the community, not merely connecting but being social glue. Because it can strengthen collective action, commitment (mutual understanding), and togetherness, among individuals in a mutually beneficial frame [29, 30].

3.4 Factor Analysis Affecting The Capacity Level of Rural Women of “Emping Melinjo” Cottage Industry Actor

The level of women capacity in rural areas is directly affected by micro-social capital or family, especially the aspects of family cooperation, family obligations, trust and proactive actions of women in the family, while meso-social capital or community directly affects the capacity through the belief aspects of proactive and normative actions social. Besides, directly influencing the capacity, social capital also contributes to micro-social capital. The magnitude of the effect of each variable is shown in Table 4.

Figures 1 and table 4, show that the hybrid model is generally good enough to measure a model, so that further analysis can be done [28]. The level of rural women capacity of the “emping melinjo” cottage industry is an implementation of the business planning capability indicators, the ability to utilize the source of production, the adaptability and the ability to solve problems.

Based on Figure 1, it can be interpreted that the latent variables of meso-social capital provide direct and tangible influence on capacity, and have an indirect effect through micro-level social capital. Decompositions resulted from the model include:

1) The latent variable of micro-social capital affects directly and significantly on the latent variable capacity ($\beta = 0.42$).
2) The latent variation of meso-social capital influences the capacity of rural women through micro social capital ($\beta = 0.43$).
3) The latent variation of female characteristics will not directly affect the capacity of rural women in “emping melinjo” cottage industry but the re-growth of micro social capital will, the resulting loading value of ($\beta = 0.38$).
4) The latent variable of environmental support affects indirectly the capacity of rural women but through the strengthening of meso-social capital, with loading factor of ($\beta = 0.31$)
It is generally known that the level of women rural capacity is directly influenced by the strengthening of meso-social capital due to the strengthening of rural micro-women social capital. In this case, the strengthening of meso-social capital of rural women of “emping melinjo”cottage industry actors plays an important role, to increase the capacity of the rural women either directly or indirectly. Structurally, the level of women's rural capacity can be formulated as follows: \( \eta_3 = 0.42 \times \eta_1 + 0.35 \times \eta_2 \) with \( R^2 = 26 \) percent.

From the value of coefficient of determination \( (R^2) \), the established model gives information that the influence of micro-social capital \( (\eta_1) \) and meso-social \( (\eta_2) \) contribute to increase capacity of 26.0 percent, while other factors outside of the model contribute 74.0 percent.

### Figure 1: Model of SEM, Factors influencing Rural Woman Capacity Level through Strengthening Social Capital (n=453)

### Table 4: Direct and Indirect Influences to endogenic variables and exogenic variables of rural woman of “emping melinjo” cottage industry actors in Banten Province.

<table>
<thead>
<tr>
<th>Relationship among variables</th>
<th>Influence Coeffiien Value</th>
<th>Total</th>
<th>Value (t)on ( \alpha = 0.05 )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \xi_1 \rightarrow \eta_1 )</td>
<td>0.91**</td>
<td>0.91</td>
<td>6.17</td>
<td>0.45</td>
</tr>
<tr>
<td>( \xi_2 \rightarrow \eta_1 )</td>
<td>-0.35**</td>
<td>-0.35</td>
<td>-2.59</td>
<td></td>
</tr>
<tr>
<td>( \xi_3 \rightarrow \eta_1 )</td>
<td>0</td>
<td>0.05</td>
<td>1.68</td>
<td></td>
</tr>
<tr>
<td>( \xi_4 \rightarrow \eta_1 )</td>
<td>0</td>
<td>0.18**</td>
<td>2.36</td>
<td></td>
</tr>
<tr>
<td>( \eta_1 \rightarrow \eta_2 )</td>
<td>0.20**</td>
<td>0.20</td>
<td>2.20</td>
<td></td>
</tr>
<tr>
<td>( \xi_3 \rightarrow \eta_2 )</td>
<td>0.18**</td>
<td>0.18</td>
<td>2.38</td>
<td>0.70</td>
</tr>
<tr>
<td>( \xi_4 \rightarrow \eta_2 )</td>
<td>0.88**</td>
<td>0.88</td>
<td>8.31</td>
<td></td>
</tr>
<tr>
<td>( \eta_1 \rightarrow \eta_3 )</td>
<td>0.42**</td>
<td>0.50</td>
<td>5.44</td>
<td>0.26</td>
</tr>
<tr>
<td>( \eta_2 \rightarrow \eta_3 )</td>
<td>0.35**</td>
<td>0.35</td>
<td>4.42</td>
<td></td>
</tr>
</tbody>
</table>
3.5 **Strategy of Strengthening Rural Women Social Capital in Increasing Rural Women Capacity in Banten Province**

The hybrid model obtained from SEM analysis shows that the influence value, validity value, and significant reliability value between endogenous latent variable and exogenous latent variable in rural women capacity building of “emping melinjo” cottage industry actors, the result of SEM analysis (Figure 1) shows that variables affecting woman capacity in rural areas of cottage industry “emping melinjo” in Banten Province are micro-social capital and meso-social capital. The strategy of rural women capacity building through strengthening social capital in Banten Province based on Figure 1 is done through three approaches/strategies, including; **firstly**, capacity building of women by increasing the existence of meso-social capital through enhancement of extension activities by considering material suitability and accuracy of extension method, while environmental support is done by optimizing infrastructure aspect, socio-economic environment and family support. **Secondly**, the strengthening of micro-social capital is determined by the role of individual characteristics, especially formal education, business scale and access to information; while the characteristics of the family will provide benefits to the micro-social capital investment if the meso-social capital in the community plays a role. Meso-social capital or community increases if environmental support and extension activities are maximally utilized, it can be done, among others through; (1) encouraging and facilitating the creativity of rural women; (2) encouraging and facilitating the use of technology and product innovation; (3) improving knowledge, attitude and skills (search and storage of raw materials, packaging and delivery); and (4) conducting training and facilitation of information access. So there is a change of mindset of women and families to become more open. **Thirdly**, a closed attitude by the family has a negative effect on micro-finance capital exploitation, the work that can be done is by improving the character of women in cottage industry and their families through: (1) increasing family participation; (2) improving scale/capacity; (3) changing reposition/attitude from in-word-looking to out-word-looking; (4) maintaining business continuity; and (5) keeping to build network.

4. **Conclusions and Recommendations**

Micro-social capital, meso-social capital and rural woman capacity level of “emping melinjo” cottage industry actors in Banten Province are included in the category. Micro-social capital is influenced by work aspects in the family, obligations, and trust issues. While the meso-social capital such as the trust aspect as dominant factor,
the rural women capacity level especially problem solving, adaptation, utilization of production source and business planning aspect, color woman capacity level. Micro-social capital will only affect the capacity of women in rural areas, while the meso social capital is not only impact on the increase of micro social capital but also affect the strengthening of micro social model, the existence of meso social capital is determined by positive impact of environmental support, especially infrastructure availability, environmental, socio-economic and family support aspects, as well as extension activities, especially material conformity and method accuracy. Micro-social capital, besides influenced by individual characteristics of cottage industry actors, is also a positive impact of meso social capital, so the efforts to strengthen meso social capital will affect the capacity of women in rural areas and strengthen the existence of micro social capital of family. Strategies to increase the capacity of rural women appear to be necessary by improving individual characteristics, especially the strengthening of business scale and access to business information (marketing, price, technology/innovation) and mastery of raw materials so that social capital increases, and the increase of micro social capital is determined by the existence of family cooperation and the obligation of family trust, while the level of capacity will increase if it is supported by the increase of ability in solving problems and the ability to utilize the source of production.

References


