

Critical Success Factor of the Sustainable Empowerment of Sericultural Farmers in Thailand

Pichaya Surapolchai

Faculty of Education, Chulalongkorn University, Thailand

E-mail: pichaya.s@hotmail.co.th

Ubonwan Hongwityakorn

Faculty of Education, Chulalongkorn University, Thailand

E-mail: ubonwan_h@yahoo.com

Article History

Received: 24 April 2020

Revised: 12 May 2020

Published: 30 June 2020

Abstract

This research aims to (1) analyse critical success factors in sustainably empowering sericultural farmers and (2) provide suggestions in sustainably empowering sericultural farmers. The research applies qualitative methods, participatory observation and in-depth interview which draws on Anthony Giddens's theory of Structuration as its framework. The six sericultural farming groups, who have succeeded in group operational management, in the Northeast Thailand, where most of famous silk fabrics are produced, are selected through snowball sampling technique. The results from content analysis show five critical success factors, including the creation of proactive leadership, building group's vision through communication and engagement, philosophy of sufficiency economy and good governance based management, supporting horizontal network, and promoting research and development in trans-disciplinary to meet the various market demand. This research provides five suggestions for the sericultural-farmer empowerment which are developing proactive leadership capacity through educational-institution level, knowledge transfer by knowledge management, conducting basic and trans-disciplinary sericulture-related programs, creating a variety of green products from silk, and building platforms of learning and business networks among generations.

Keywords: Critical Success Factor, Sustainable Empowerment, Sericultural Farmer

Transition of Sericulture in Thailand

Sericulture is regarded as rural empowerment creation due to the provision of opportunities to rural communities in various aspects (Yadav and Jadhav, 2017: 207-208; Geetha and Indira, 2011: 90). In Thailand, especially in Northeast region, sericulture has become alternative career, generated additional income to farmers after cultivation of rice season and supported the local labour force (Vianmana and Nohmi, 2020: 19). Additionally, sericultural farming plays a significant role in driving rural sustainable development in terms of economic development through raising income, building up sustainable land-use, providing employment, traditional conservation, as well as natural resources preservation (Bhattacharjya, Alam, Bhuimali, and Saha, 2019).

Since the 1st National Economic Plan B.E. 2504 was influenced by the green revolution concept, Thailand's agricultural production system was transformed to be more chemical in order to gain higher productivity to meet the demands of the rapidly increasing world population (Poomprasertchok, 2012: 4; Lianjamrun et al., 2005). The chemical agriculture require chemicals for the higher productivity. This change has led to the instability in the

farmers' lives because of the increase in manufacturing cost from chemicals resulting in household's debts. Moreover, price of agricultural commodities was being forced by the government and global market, these consequently decreased farmers' expertise and strength (Attavanich, Chantarat, Chenphuengpawn, Mahasuweerachai and Thampanishvong, 2019; Chenphuengpawn, Attavanich, Chantarat and Sa-ngimnet, 2019), this implies that the farmers has lost their power in decision-making and negotiation. Some farmers were forced to abandon their homeland and move to urban which affect sericultural farming system from the change in production. The rapid economic development, with the use of chemicals, deforestation, modernization of life style, space explosion and the change in land use impacts ecosystem worldwide, causes in climate change crisis and changes in sericulture practice (Ram, Maji and Bindroo, 2016: 1115-1116).

How Thai Sericultural Farmer was Disempowered

Nowadays, sericultural farmer are at risk due to issues involving inheritance to the newer generation. Since the nature of sericultural farming requiring a long time to produce results, the perspectives and attitudes of the new generation towards farmers, together with the economic pressure, resulted in sericultural farming not becoming a popular choice of career. In addition, management within current sericulture farmers still faces incongruity in the conservation of local wisdom, limited access to the support from related organisations and the lack of knowledge and skills to meet the demands in the contemporary century as well as lacks of access to information on advanced technology (Geetha and Indira, 2011: 101). Since inheritance the career is still in the form of only following old generation with memorizing rather than knowledge management transition through skill development, practice, implementation and continuous development (Thampiya, 2017-2018), sericultural farming is at risk of decreasing or disappearing in the future, even there are the supports of sericulture from various public, private and educational-institution sectors.

Therefore, this research aims to 1) analyse critical success factors in sustainably empowering sericultural farmers from six selected sericultural farming groups in the Northeastern parts of Thailand as case studies, and 2) provide suggestions in sustainably empowering sericultural farmers in Thailand.

Conceptual Framework

Drawing on Anthony Giddens, this research analyses critical success factors through applying the sociological theory of structuration. There are three factors which are structure, modality and interaction comprising of nine variables (see Figure 1), (1) interaction comprising of communication, power and sanction is able to be transformed into (2) structure, which are signification, domination and legitimization through (3) modalities, consisting of interpretive schemes, facilities and norms and vice versa (Giddens, 1984 cited in Dumay, 2008: 520-522). For Giddens' concept of structuration describing in sericultural farming view across time and space, on the one hand, sericultural farmer who plays as an 'agency' role is able to change structural features such as socio-economic status, the control over decision-making, the creation of norm influencing the direction of social change to create social, economic and political orders (Warth and Koparanova, 2012), while, on the other hand, the social-economic including political schemes playing as 'structure' role can impact sericulture practices, resources allocation and group communication and management. The research framework also concerns with the three dimensions of learning which leads to sustainable empowerment: Cognitive/knowledge, Affective/perception, and Psychomotor/skill (Hoque, 2017: 45-50), and causes in rural sustainable development through the provision of more power in decision-making, the increase in employment at all aged and the change in community environment (Hiware, 2016: 23, 28).

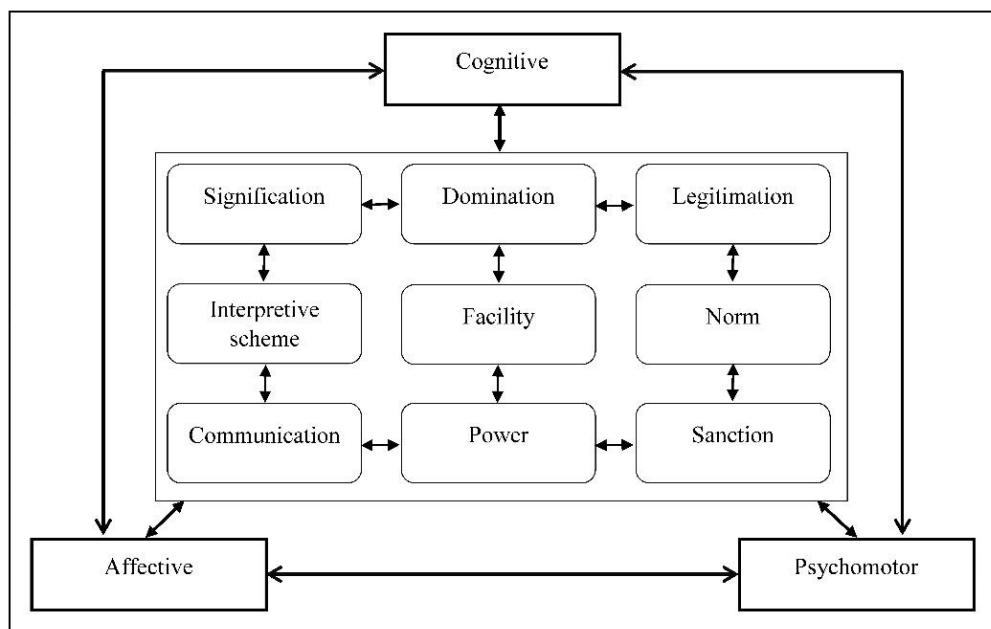


Figure 1 Conceptual Framework

Source: Adapted from Giddens (cited in Dumay, 2008) and Hoque (2017)

Research Methodology and the Selection of Case Studies

Qualitative method is applied through in-depth interviews and participatory observation, as data collection methods, and content analysis as a research tool. The nine variables from the three factors of Structuration theory, as well as the three conditions of empowerment including cognitive, affective, and psychomotor are developed to interview questions with key informants of each group.

Area of Study and the Selection of Case Studies was conducted in Northeast region of Thailand as targeted area due to the prominence diversity of culture and tradition. This region had more rice fields, however, the productivity tended to be lower than other regions because of sandy soil, which is unable to retain water, but better for livestock farming. Therefore, there was a creation of artwork and handicraft through planting mulberry, raising silkworm and silk weaving after rice crop which is inherited from the old generation. Moreover, silk is regarded as a part of Northeast, called Isan, people's lives and most of famous silk fabrics are produced from this Northeast region (The Queen Sirikit Department of Sericulture, 2012). The six case studies in this region are selected through snowball sampling technique from five experts who work with and participate in silk farmer group. There are four selection criteria of sericultural farmer group which are (1) well-management with structure and the systematic division of work, (2) member-driven collaboration and engagement in group, (3) the creation of collective norms and regulations in group and (4) achieving certification or becoming learning center (Grant-Vallone, 2011: 99; Ruengdet and Wongsurawat, 2010: 395). **Key informants** consist of group leaders, representatives of group committees and general members from each group.

Research Results

From the interviews with the concerned stakeholders and the representatives from the six target groups, there are three collective issues which are, firstly, it is necessary that successful sericultural groups as the case studies are basically required formal registration, working as co-operative society or community enterprise. Secondly, every group have been operating over 30 years, most of the members are more than 50 years old and all of them collectively

have experience and expertise in sericulture practice. Thirdly, Most of these groups well manage their workflow with their board structure (see Figure 2).

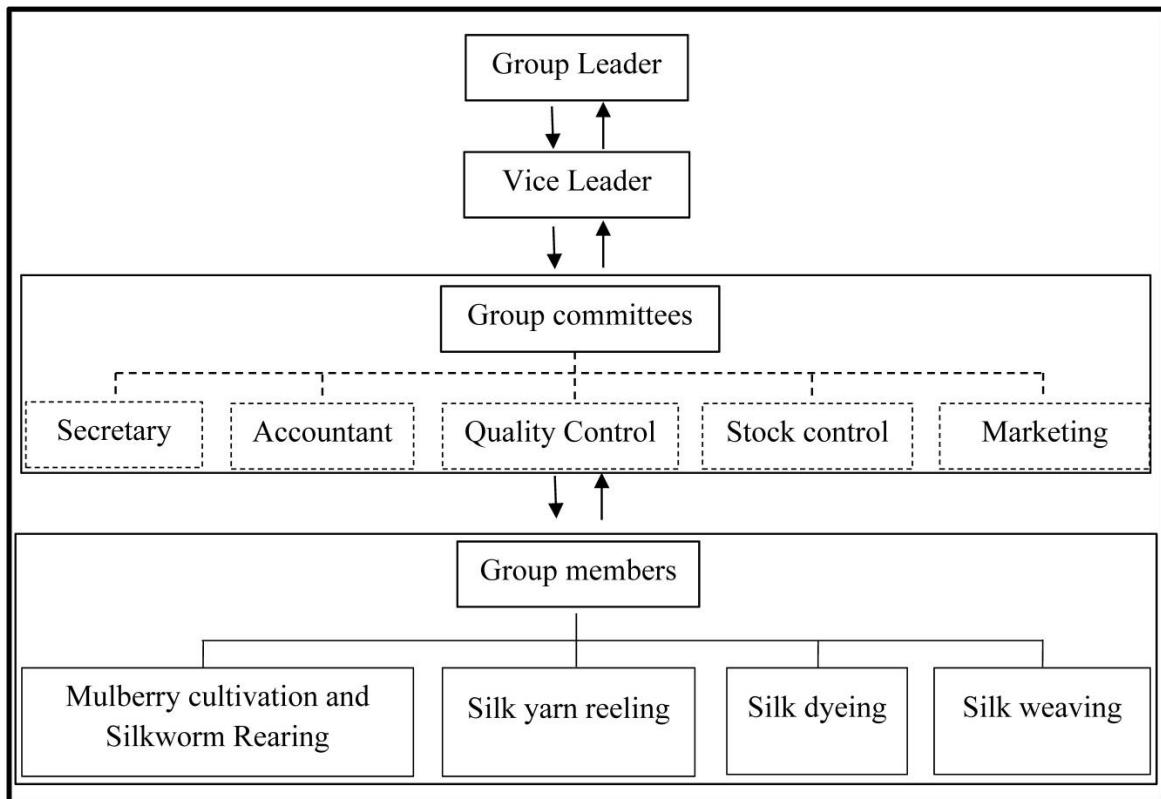


Figure 2 Structure of Sericultural Farming Groups

The research result also shows five collective critical success factors in sustainable empowerment sericultural farmer as follows:

1. **The creation of proactive leadership** is regarded the most significant factor for the group. The leader of the sericultural group seems to have ‘power’ in group’s operation because the leader takes responsibility in the group’s direction and management. There are 3 main collective characteristics of the six group leader which, first, they are all local people. Second, they have a complete knowledge with the basic skill of sericultural farming production. Third, all the leaders grew up and internalise silk farming from their parents and older generations resulting in becoming an essential part of their life. The data from in-depth interviews the leader of the 6 groups (2018) show the linkage between this profession and their daily lives as follows:

“I live in this community since I was born. I have learnt the way of sericultural farming from my parents, actually from my grandmother. I look and follow them. I was taught every about silk farming process, it is necessary for all locals because of our tradition and culture, we believe that if any lady cannot weave the silk fabric, she could not get married as the same as men if cannot make sericultural-related tools” and “Whether I tried other jobs, silk farming is still in my memory.”

For the group operational management, the group leader plays the most significant role in the cooperation with the networks from various sectors such as public, private, enterprise and educational institution sectors in order to sericultural farming group development. One of the case studies (Field study, 2018) reveals that “I cannot stay at home and waiting for help. But I have to explore the new things to improve our products like an experiment.” Moreover, most of these group (2018) says that:

“The way to improve our group, both in knowledge and skill is to discuss with government agencies about our concern and goal, and conduct project proposal for financial and knowledge supports. Cannot be stagnant, but have to improve all the times!”

The Group leaders are responsibility in setting group’s direction, goal and practice. One of the group explores the transition of silk production (2018) that:

“In the past, we produced silk in the household and sell within our community to generate additional income. However, the group’s goal has changed since the new lead who is nominee of private company appointed. We have been communicated and persuaded to industrial silk production because of lower cost and shorter time, but gain stable income. This changes perception and makes farmers turn to be more industrial silk producer.”

2. Building group’s vision through communication and engagement is a basic requirement of every group. Group vision is frequently developed employing two-way communication. The key informants for every group (2018) points out that:

“The group is originally initiated from common concern in term of their socio-economic status relating to living quality. It starts from small group discussion to identify group objective, this makes all the members have the same understanding on the purpose of the group operation.”

The relationship between group’s members feels like kinship because most of them are originally local inhabitants and some group, the members come from only 3-4 families. The interesting point of building group’s vision reflects the ‘interaction’ among members through ‘communication’ in a variety of tool, for example, every group arranges monthly meeting, as ‘interpretive scheme’ to discuss and analyse current situation and problem solving to create vision (‘signification’) of the group, and indirectly impact power in negotiation and decision-making. Moreover, the monthly meeting also provide a chance for the member, who is chosen to attend training course, to exchange their knowledge to other members which make pride for that member. In the case of new member, it is required to understand the goal and accept the rules and norms of the group. The meetings are arranged via both traditional means of communication, such as a public address system and telephone calls, and more contemporary ones through social network applications such as LINE and Facebook, depending on the availability and affordability of the group.

However, since the most of members are retired, the oldest of whom is over 90 years of age and most of whom are past their sixties, it causes difficulty in attending the meeting venues. Also, their young family members are not interested to attend the meetings for the old due to unavailability and ignorance of this career. As a result, intra-group communication is inaccessible to these old individuals. When questioning about new generation in sericulture, the members (2018) review that:

“The young generations were sent to provincial school and some satisfied to continue their study in university, so they have more choice of opportunities to choose their career with more stable income generation that can improve their socio-economic status.”

This is regarded as every group’s concern and threat as a new ‘power’ of sericultural farmer to the transition to the contemporary 21st century.

3. Philosophy of sufficiency economy and good governance based management are the mode of operation and the community’s living principle. It represents ‘norm’ of the sericultural farmer group. For example in management term, the consensus of decision-making as well as designation of group committees allows all members to participate and make agreement and prove by majority voting. “Every vote is equal.” said by Leaders and group members (2018). It reflects the norm for community establishing the democratic practice. Moreover, the significance of well management is systematic task allocation according to member’s expertise from mulberry cultivation to silk weaving and marketing under the control of the group leader as the node of production in each process.

As for the leaders, it is significant that they adhere to good governance, transparency, and accountability. Some groups appointed accountant, stock control and quality control committees with authority, this seems to create ‘norm’ and ‘legitimation’ relating to ‘domination’ of group’s practice. As accountant committees (2018) said:

“The bank accounts thus need to be kept up to date constantly and their detailed can be accessed any time at the members’ request.” and “My position directly supervises financial accounts, the leader will not in the position to approve the budgets, meaning that all transactions will be made unbeknownst to the leader.”

The leader who respects others’ views and allows other members the opportunity to learn are likely to care about the community rather than themselves, and accepted and followed by others. As one of group leader (2018) said “I have to do because others will see, trust and follow me.” On the contrary, some group leader still faces obstacles due to political and financial issues which mislead their norm and collective vision of the group and results in distrust among members, and the group is not able to achieve their goal.

4. Supporting horizontal network is an important supporting factor that brings about capital development and resources to the group’s practices. Horizontal networking is regarded as ‘power’ which increase the number of ‘facilities’ such as material and resource to the group. From the field study (2018), it is found that “the more networks the group have, the more supports the group gains”. To compare between the six groups, there are the different support from the different sector. The group connecting with only public sector is trained in only sericulture-focused issue, while connecting with a variety of sectors such including private and social enterprise tends to be more worldwide with multi-disciplinary and able to access more resources. The group with more networks (2018) explores that:

“We have never lacked of materials because we have lots of members from many places.” and “When we need an improvement, we can join in academic project to produce some sericultural innovations such as value-added products from silkworm dropping.”

5. Promoting research and development in trans-disciplinary in sericultural farming is needed as ‘sanction’ due to the change of market demand. At present, the concept of ‘green’ product is widely interested as it inculcates an ecological awareness and advocacy, the sericultural farming is a type of agriculture that meet ‘green’ and ‘sustainability’ concept. However, the consumption of buyers is limited as niche market because of its high price, and proper-care needed. From the interviews, it is found that these six-group have clear target markets, which mostly are from public officer and public sector, enabling the members to continually produce silk. The two groups (2018) said that:

“Our main market is royal project to which we can ship our products. It motivates us physically and morally, feeling of privilege and pride, and becomes our main source of income generation and encourages us to continue producing high-quality silk and maintain their standards.” and “Since we changed to industrialised sericultural farming, silkworms are raised for their cocoons, which are then traded only to private companies with the new leader as the middleman. The price is standardized. The company will check the quality of cocoons, if cocoons are under-standard, you will gain less income.”

While other groups (2018) describes:

“We opt for new tools of communication like online social media, reaching new generations and outsiders with marketing channels accessible to them such as LINE and Facebook. This move towards online social media is executed by having new generations in the community as the members who help with the marketing channel. Besides, we also help develop products to meet the demands of expanding groups of customers, counting on associate networks in several sectors and receiving their supports for developing new products which are to be distributed in the domestic market and to be exported.”

The change in market demand of silk product is ‘domination’ which affects the ‘signification’ of sericulture. For the first group, the standardization of sericultural-related commodities is regulated by the companies, generating no further research and development of the products and the sericultural process. This reflects the farmers’ lack of bargaining power when dealing with the market. Although raising silkworms for their cocoons can be a more quickly lucrative enterprise that provides the farmers with more constant income, the concomitant discontinuity in passing down the cultural practice of sericulture to later generations could threaten the community with the loss of their local wisdom.

Research Discussion and Conclusion

Sericulture has a long history in Thailand, especially in Northeast of Thailand. It has played a significant economic and cultural roles over decades. However, the transition in economic development has impacted sericultural farming practice, as well as disempowered sericultural farmers in many aspects. According to research result on critical success factors of empowering sericulture farmers in Thailand drawing on the theory of structuration, there are five critical success factors which are the creation of proactive leadership, building group’s vision through communication and engagement, philosophy of sufficiency economy and good governance based management, supporting horizontal network, and promoting research and development in trans-disciplinary to meet the market demand which are mainly considered as ‘power’ and ‘communication’ factors to change social, economic and political scheme of sericulture in Thailand. The factors will be discussed and lead to suggestions of empowerment, as follows:

The analysis on the critical success factors of empowering sericulture farmers in Thailand shows that to create proactive leadership is the most significant factor to sustainable empowerment of sericultural farmer group. Proactive leadership plays an important role as power of domination on group direction and management. However, the situation of most sericultural farmer seems to be over 50-60 years old. It is consistent to Merat, Allahyari, Seidavi and Hubbard (2018: 37-38) who reported that sericulture farmers were mostly older than 50 years. Therefore, the transition in power of domination of sericultural farmer is required to support and create the new or young generations. However, there is still a different perception on sericulture between Thailand and Iraq because in Iraq new-generation explores that sericulture gain very high income, while Thai’s perception of farmer in socio-economic status is still low. Therefore, in Iraq, there is recommendation to policy on financial motivation that attract new or younger and more educated persons to the sericultural profession. It is quite similar to Akhter and Cheng (2020: 16) for economic incentives, but in this case uses microcredit for empowerment to sustainable socio-economic development.

For Thai’s sericultural farmer, there are various economic supports from many sectors, where provide availability and accessibility to the farmer, but still not attractive for new generation. The recommendation is that knowledge management is the key element in building sustainable attraction for young generation. It is consistent to Vianmana and Nohmi (2020: 24) and Bachmann, Cruzada and Wright (2009) who express the importance on training by farmers to farmers selected within their communities based on their ability to practice. Comparing to Thai’s sericultural farmer, even though such a knowledge transfer is contentiously practiced, there is still a lack of effective knowledge management through proper integrated education system in order to change their perception on sericultural farming from difficult-skilled task, to be part of life which be able to create value added of silk textile. This can be proceeded through STEAM learning which will transfer to new form of sericultural profession. In addition, proactive leadership also need to be supported in accessibility to technology and social media in order to be a channel for communication to external. This is relevant to Afolabi, Ojelabi, Omuh, Tunji-Olayeni and Adeyemi (2018:

862), Mosik, Sediadi and Hamid (2013: 80) and Uphoff (2012). Moreover, Geetha and Indira (2011: 101) state that the accessibility to resources and social networking will enhance political empowerment to support sustainable empowerment.

There are two more significant related-factors which are: operational management based on good governance are fundamentally essential, but for Thai farmer whom is considered as low socio-economic status, the implementation of philosophy of sufficiency economy becomes a tool in building internal strength and self-immunity which are the ability of people to protect themselves against any external turbulence and to cope with events that are unpredictable or uncontrollable through knowledge, ethical behaviour, honesty and perseverance (Mongsawad, 2010: 134) and may lead to sense of self-worth (Lohani and Aburaida, 2017: 27; Warth and Koparanova, 2012). Finally, the promotion of research and development in trans-disciplinary to meet various market demand is one of the external important factors as its great power in transforming Thai sericultural market to be more value added commodity. Suggestions for the sustainable empowerment of Thai sericultural farmers based on the research result.

- 1) The promotion of new or young generation should be attracted to this profession through the support in critical and design thinking combining with the application of learning process on STEAM (Science, Technology, Engineering, Arts and Mathematics).
- 2) To support a variety of people participating in sericultural farming, it is recommended to contribute into short-term basic of sericulture and trans-disciplinary on long-term educational program and the support of communication through new technology such as social network is needed to persuade new generation into sericulture farming.
- 3) Since knowledge transfer is required, knowledge management, not only in basic skill and knowledge of sericultural farming process, but also the advanced knowledge such as cost-benefit analysis should be practiced and concerned by academic sectors cooperating with local farmer in order for inheritance to the young generation.
- 4) Since the demand of 'green' product is widespread, the green technology supporting circular and green economy should be initiated to produce a variety of 'green' sericultural commodities.
- 5) Acceptance should be created among old and young generations by providing platforms with joint efforts from related agencies from various sectors. They should take concerted efforts in drawing people with related skills into their networks and create spaces for shared learning and business partnerships, which will profit all involved stakeholders.

Acknowledgement

We acknowledge the financial support of the 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund). The authors thank all sericulture farmer groups, the Queen Sirikit Department of Sericulture, as well as Queen Sirikit Sericulture Centers for kindly cooperation and support.

References

Afolabi, A., Ojelabi, R., Omuh, I., Tunji-Olayeni, P. and Adeyemi, M. (2018). Critical Success Factors Influencing Productivity of Construction Artisans in the Building Industry. *International Journal of Mechanical Engineering and Technology*, 9(8), 858-867.

Akhter, J. and Cheng, K. (2020). Sustainable Empowerment Initiatives among Rural Women through Microcredit Borrowings in Bangladesh. *Sustainability*, 12, 2275.

Attavanich, W., Chantarat, S., Chenphuengpawn, J., Mahasuweerachai, P. and Thampanishvong, K. (2019). *Farms, Farmers and Farming: A Perspective through*

Data and Behavioral Insights. PIER Discussion Papers, Puey Ungphakorn Institute for Economic Research.

Bachmann, L. Cruzada, E. and Wright, S. (2009). *Food Security and Farmer Empowerment: A Study of the Impacts of Farmer-led Sustainable Agriculture in the Philippines.* Laguna: MASIPAG.

Bhattacharjya, D. Alam, K. Bhuimali, A. and Saha, S. (2019). Perspectives of Sericultural Farming for Sustainable Development. in P.K. Paul and B.K. Santra (eds.). *Ecology, Sustainability and Technology: The Paradigm Shifting* (pp. 79-101). New Delhi: New Delhi Publishers.

Chenphuengpawn, J., Attavanich, W., Chantarat, S., and Sa-ngimnet, B. (2019). Dynamics of Thai agriculture, return and risk of agricultural households *Puey Ungphakorn Institute for Economic Research 14*: 1-15.

Dumay, J. (2008). Narrative disclosure of intellectual capital: A “structurational” analysis. *Management Research News*, 31(7), 518-537.

Geetha, G. and Indira, R. (2011). Silkworm Rearing by Rural Women in Karnataka: A Path to Empowerment. *Indian Journal of Gender Studies*, 18(1), 89-102.

Grant-Vallone, E. (2011). Successful Group Work: Using Cooperative Learning and Team-Based Learning in the Classroom. *Journal on Excellence in College Teaching*, 21(4), 99-121.

Hiware, C. (2016). Farmer’s Empowerment through Sericulture Industry from Aurangabad District, Maharashtra State, India. *Entomology and Applied Science Letters*, 3(2), 22-28.

Hoque, M. (2017). Three domain of learning: Cognitive, affective, and psychomotor. *The Journal of EFL Education and Research*, 2(2), 45-52.

Lianjamrun, W. et al. (2005). *From the green revolution to genetic engineering, benefits and impacts on Thailand.* Bangkok: Thailand Research Fund.

Lohani, M. and Aburaida, L. (2017). Women Empowerment: A Key to Sustainable Development. *The Social Ion*, 6(2), 26-29.

Merat, A., Allahyari, M., Seidavi, A. and Hubbard, W. (2018). Factors influencing the adoption of sericulture by farmers in Guilan Province, Iran. *AIMS Agriculture and Food*, 3(1), 26-40.

Mongsawad, P. (2010). The Philosophy of the Sufficiency Economy: A Contribution to the Theory of Development. *Asia-Pacific Development Journal*, 17(1), 123-143.

Mosik, M., Sediadi, E. and Hamid, M. (2013). Awareness among Young Architect and Photovoltaic Potential in Malaysia. *Procedia Social and Behavioral Sciences*, 85, 70-81.

Poomprasertchok, S. 2012. New Generation of Farmers and Agriculture in the Next Period. *The Research Community*, 105(18), 4.

Ram, R., Maji, C. and Bindroo, B. 2016. Impact of Climate Change on Sustainable Sericultural Development in India. *International Journal of Agriculture Innovations and Research*, 4(6), 1110-1118.

Ruengdet, K. and Wongsurawat, W. 2010. Characteristics of Successful Small and Micro Community Enterprises in Rural Thailand. *Journal of Agricultural Education and Extension*, 16(4), 385-397.

Thampiya, M. 2017-2018. *The Strategic of Creating Awareness of Thai silk and Thai royal dress of Her Majesty Queen Sirikit.* Retrieved from www.dsdl2016.dsdl.go.th/doc_pr/ndc_25602561/PDF/8484st/%E0%B8%A%E0%B8%A7%E0%B8%A1.pdf.

The Queen Sirikit Department of Sericulture. 2012. *Wisdom of Isan Indigenous Thai Silk Yarn.* Bangkok: The Queen Sirikit Department of Sericulture.

Uphoff, N. 2012. **Empowerment of Farmers through ICT.** Retrieved from www.un.org/esa/socdev/egms/docs/2012/UphoffICT.pdf.

Vianmana, S. and Nohmi, M. 2020. Study on Factors Creating Additional Income among Good and Excellent Silk Weaving Groups in Northeast Thailand. *Journal of Rural Problems*, 56(1), 19-25.

Warth, L. and Koparanova, M. 2012. *Empowering Women for Sustainable Development*. Geneva: United Nations Economic Commission for Europe.

Yadav, U. and Jadhav, N. 2017. Empowerment of Rural Women through Sericulture. *Environment Conservation Journal*, 18(1&2), 207-209.