

Factors that Influence a Cooperatives Performance: A Systematic Literature Review

Zaifalaila Zakaria^{a*}, Abdul Rahman Abdul Rahim^b, Zaki Aman^c, ^aFaculty of Business and Management, Universiti Teknologi MARA, Shah Alam, Malaysia, ^bArshad Ayub Graduate Business School, Universiti Teknologi MARA, Shah Alam, Malaysia, ^cMalaysian Palm Oil Board, Bangi, Malaysia, Email: ^{a*}zaifalaila@outlook.my, ^baman@uitm.edu.my, ^czaki@mpob.gov.my

Cooperatives are widely recognised as a democratically controlled and voluntary joint business. However, limited systematic reviews have been carried out on the factors that influence a cooperatives performance. This has motivated the implementation of this study to analyse the existing literature on factors that influence cooperatives performance by conducting a systematic literature review according to the PRISMA method. A systematic search was undertaken to March 2020. This search identified 26 related studies. As a result of this systematic review, five main themes emerged which are management practices, governance practices, members participation, environment, and policy instrument. This study narrowed the knowledge gap regarding the complexity to identify the suitable factors of a cooperatives performance that matched the dual social and economic objectives of the cooperatives. Although the cooperative sector is facing unforeseeable challenges, this study suggests the profound factors that guide the cooperative's manager to improve their performance towards future survival.

Key words: *A systematic review, PRISMA, cooperatives, performance.*

Introduction

The evolution of the cooperatives theory can be traced back to 1764 with the formation of Fenwick Weavers' Society from Scotland (ICA, 2018). According to International Cooperatives Alliance (ICA) and several scholars, the key-terms to define cooperatives are voluntarily united and democratically controlled business to achieve common social, economic and cultural needs (Altman, 2010; Riva & Garavaglia, 2016; Zeuli & Cropp, 2004). Thus, the simplest interpretation to understand a cooperative is to see it as a jointly member-

owned and governed business that serves the aspirations of its members as well as their social and economic.

However, the cooperative movement has been alleged to be inefficient organisations (Abd Rahman & Zakaria, 2018; Xaba, Marwa, & Mathur-Helm, 2019). This allegation commonly revolves around issues such as weak governance structure, lack of innovation and entrepreneurship approach, substantial investment and subsidised from government, inappropriate political activities leading to financial irregularities, as well as inability to survive in a complex and competitive market (Abd Rahman & Zakaria, 2018; Altman, 2010; Bancel, Kurimoto, & Draperi, 2015; Dale et al., 2013; Errasti, Bretos, & Nunez, 2017; Martins & Lucato, 2018; Mubirigi, Shukla, & Mbeche, 2016; Soboh et al., 2012; Xaba et al., 2019). Thus, it is crucial to investigate the performance of cooperatives given that this sector is crucial for national socio-economic development. This research calls for urgent attention and actions to enhance its long term performance (Abdul Aris, Madah Marzuki, Othman, Abdul Rahman, & Hj Ismail, 2018; Dale et al., 2013; Marcis, Bortoluzzi, de Lima, & da Costa, 2019).

Albeit the plethora of previous studies have explored the factors that influence cooperatives performance, efforts to systematically review these studies are in dearth. Prior to this study, a systematic review on cooperatives performance is lacking in terms of the review procedures employed (e.g. databases searched, studies excluded, search terms used) which eventually make it difficult to replicate the study. This study attempts to narrow the critical gap in the literature by identifying the factors that have an influence on a cooperatives performance according to systematic literature review guidelines. Furthermore, the previous systematic reviews have examined the performance of the cooperative based on ownership and governance structure (Grashuis & Su, 2019) and measurement (Benos, Kalogeras, Wetzels, Ruyter, & Pennings, 2018). This study is crucial given that existing literature that provides a holistic review of the factors that influence cooperative performance is underexplored (J. R. V. Franken & Cook, 2015). Therefore, this study attempts to narrow the literature gap by providing the scope of the factors that need to be focused by the policymakers and cooperative's management to enhance cooperatives performance while understanding its phenomenon.

Along this line of reasoning, it is pertinent to conduct a systematic review framework on the factors that will help to guide the cooperatives towards exceptional performance. In facilitating a relevant systematic review, this study is guided by the main research question: how do cooperatives be able to enhance their performance? Thus, this study aims to (1) characterise the factors that influence cooperatives performance, and (2) systematically and critically evaluate the linkages between variables which have been examined as factors that influence cooperatives performance. The first section of this study enlightens the objectives

of conducting a systematic review on the performance of the cooperative. The second section specifies the systematic search based on the PRISMA (Preferred Reporting Items Systematic Reviews and Meta-Analysis) guidelines (Liberati et al., 2009; Moher, Liberati, Tetzlaff, & Altman, 2009). The third section systematically reviews, synthesises, and discusses the scientific literature on factors that influence cooperatives performance. The last section crystallises the conclusion of this study and future research priorities. This review sheds lights on finding a predictor that may help unlock the potential of the cooperatives.

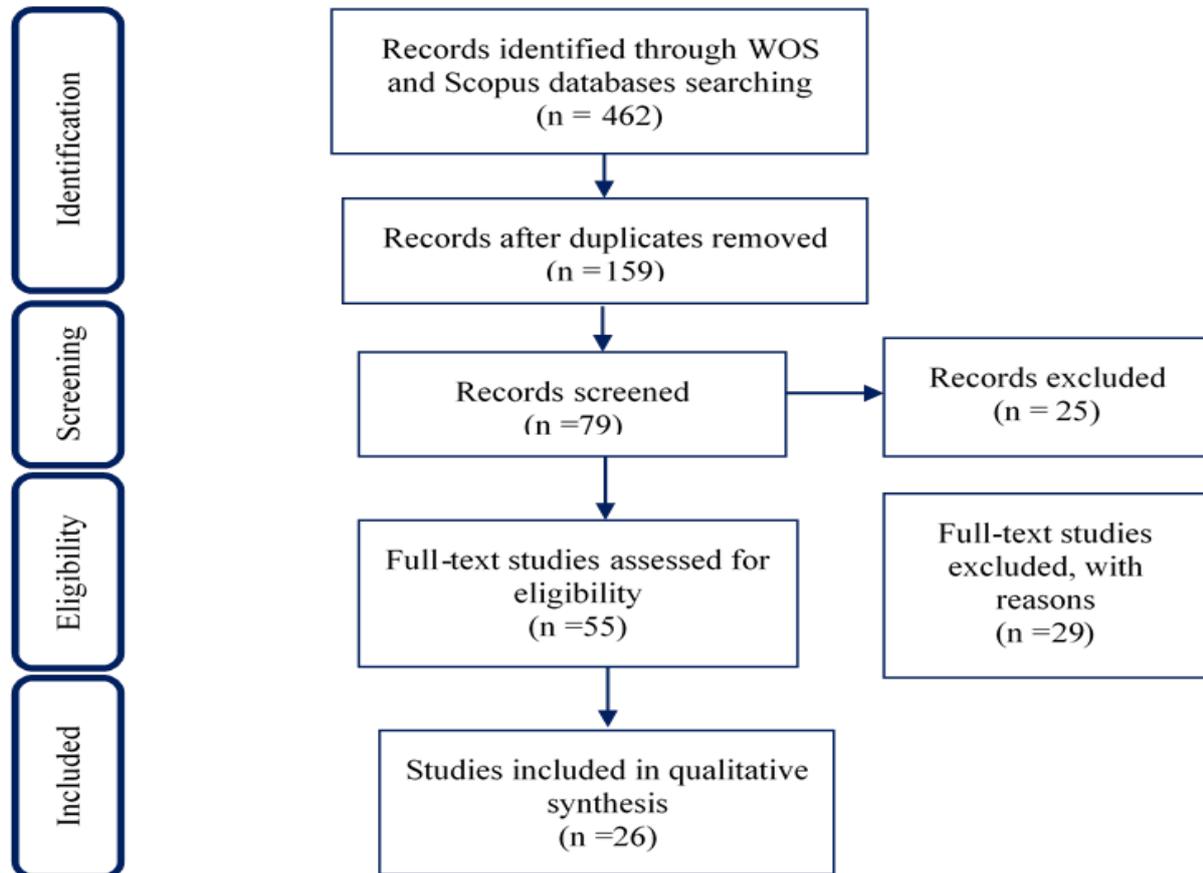
Methodology

This section elucidates the method used to retrieve previous studies related to various variables that have been examined as factors which influence cooperatives performance. The present study uses the method called the PRISMA protocol, which systematically searched studies from electronic journal databases, namely Scopus and Web of Science (WOS), by using relevant keywords. The suitability of the PRISMA protocol for this study is because it provides advantages through identifying the inclusion and exclusion criteria while examining a large database of scientific literature in a defined time (Sierra-Correa & Cantera Kintz, 2015). These advantages permit for a rigorous search of terms related to variables that influence cooperatives performance in the various sector. This review is based on two leading scientific journal databases, namely Scopus and WOS. These databases are accessible to the authors through their institution's library subscription. This permitted various top tier, and current publications, namely Wiley, Science Direct, Emerald, and Springer to be sourced and analysed for this study (Munodawafa & Johl, 2019; Shaffril, Krauss, & Samsuddin, 2018).

Identification

The review process was performed in January 2020. Figure 1 illustrated the four stages, namely identification, screening, eligibility and included, which involved in the systematic review process. The keywords to be utilised in this study were in tandem with answering the research question raised above, which would be used for the search process.

Figure 1. The PRISMA flow diagram for literature search on the factors that influence cooperatives performance



Source: Adapted from Moher et al. (2009)

After combining the search results from the two databases records into one list as of 31 March 2020 in Microsoft Excel format, a total of 462 studies were obtained. Combining publication records from both databases into one list is crucial, given that duplicate studies were expected to be discovered (Munorudawafa & Johl, 2019). Subsequently, 159 duplicated studies were removed. Table 1 summarised the keywords related to factors that influence cooperatives performance relying on previous studies.

Table 1: Keywords and searching of information strategy

Databases	Keywords used	Total
Scopus	TITLE-ABS-KEY ("cooperative* performance*" OR "co-operative* performance*" OR "co-op* performance*")	269
Web of Science	TOPIC: ("cooperative* performance*" OR "co-operative* performance*" OR "co-op* performance*")	193

Source: Authors' compilation

Screening

Several eligibility and exclusion criterion are determined, as exhibited in Table 2. First, this study only selected peer-reviewed studies with empirical data. Second, this study excluded non-English publication to avoid ambiguity.

Table 2: The inclusion and exclusion criteria

Criterion	Eligibility	Exclusion
Literature type	Journal (research studies)	Conference proceeding, book series, and chapter in the book
Language	English	Non-English
Timeline	Between 2014 - March 2020	<2014
Indexes	Social sciences, business, management and accounting, economics, econometrics, finance, multidisciplinary, and agricultural sciences.	Science Citation Indexed Expanded

Source: Authors' compilation

Thirdly, as observed on the research trend of cooperatives performance in Scopus and WOS databases, it was decided that a sufficient research period would be six years. Finally, studies in a hard science index were excluded. After the application of eligibility and exclusion criteria, 55 studies are selected for assessment of title and abstract.

Abstract Assessment

At this stage, only the remaining 55 studies that fulfilled the inclusion criteria as specified in the review protocol were selected for abstract analysis. Abstract of 29 studies which were not relevant in the context of cooperatives were excluded. Additionally, four studies used a systematic literature review to explore cooperatives performance in terms of its measurement matrix (Benos et al., 2018), networked agricultural industrialised cooperatives and opportunism (Aguar, Pigatto, Bernardo, & Morales, 2020), cooperative governance, ownership, finance and members attitude (Grashuis & Su, 2019), as well as cooperatives survival concerning external development (Grashuis, 2018b). Therefore, in total, 26 studies from the 55 studies, then selected for final in-depth qualitative synthesis.

Data Abstraction and Analysis

For quality assessment, the Journal Impact Factor, as well as citations frequency, have been considered, as this reflects the quality of the selected studies (Teixeira da Silva & Memon,

2017). Next, after quality assessment, the selected studies were synthesised by reading through the abstracts, then the full-length assessment of studies (in-depth) was conducted using content analysis to identify themes related to cooperatives performance. The first author curated the themes established by factors of cooperatives performance, while other co-authors were coding selected studies randomly. The results were compared and discussed among the authors' team to address any discrepancies during the analysis (Haider, Boonstra, Peterson, & Schlüter, 2018; Mohamed Shaffril, Ahmad, Samsuddin, Samah, & Hamdan, 2020). Once data were synthesised, organised areas around the themes will be drawn as the result of this study.

Results

The 26 included studies are summarised in Table 3, and detailed summaries are provided in the Appendix. The detailed summaries are organised by the method of data collection: 21 studies conducted self-administered surveys, three studies based on secondary data (Grashuis, 2018a; Syachrudin, Nurlis, & Laras Widyanto, 2018; Xaba et al., 2019), and two studies used the combination of primary and secondary data (Chareonwongsak, 2017; J. R. V. Franken & Cook, 2019). In relation to the geographical context of the study, three studies were conducted in the United States (J. R. V. Franken & Cook, 2019; Grashuis, 2018a, 2018c), followed by two studies in Spain (Castilla-Polo, Gallardo-Vázquez, Sánchez-Hernández, & Ruiz-Rodríguez, 2018; Sánchez-Navarro, Arcas-Lario, & Hernández-Espallardo, 2019), two studies in Italy (Bontis, Ciambotti, Palazzi, & Sgro, 2018; Marcos-Matas, Ruggeri, & Ghelfi, 2018), five studies in Indonesia (Dyahrini, Nugraha, & Rachman, 2019; Ernita, Firmansyah, & Martial, 2020; Marwan, Idris, & Sari, 2018; Susanti & Arief, 2015; Syachrudin et al., 2018), four studies in Malaysia (Hammad Ahmad Khan, Yaacob, Abdullah, & Abu Bakar Ah, 2016; Shakir, Ramli, Pulka, & Ghazali, 2020; Shamsuddin, Ismail, Zaidi, Daud, & Yusuff, 2019), two studies in Thailand (Chareonwongsak, 2017; Prasertsang, Routrary, Ahmad, & Kuwornu, 2020), two studies in China (Liang, Huang, Luc, & Wangd, 2015; B. Liu & Li, 2018), two studies in Ethiopia (Garoma, Admassie, Ayele, & Beyene, 2014; T.W. Gezahegn, Van Passel, Berhanu, D'haese, & Maertens, 2020), one study in Portugal (Graca & Arnaldo, 2016), one study in Greece (Kontogeorgos, Giannakopoulos, & Chatzitheodoridis, 2018), one study in India (Kumar, Tiwari, Dutt, Pachaiyappan, & Balaraju, 2017), one study in Rwanda (Shapira et al., 2018) and finally one study conducted in South Africa (Xaba et al., 2019). Building upon the geographical context of the included studies, the cooperatives are relevant as a significant contributor to the socio-economic development across different contexts, cultures, and social groups.

Through the thematic analysis, five themes, namely, management practices, governance practices, members participation, environment, and policy instrument evolved from the results of the scoping review based on the three areas as follows: 1) organisational-related

factor, 2) individual factor, and 3) situational or external factor. Most of the included studies examined organisational-related factors from two perspectives: management practices and governance practices. It was discovered that 16 studies examined management practices in terms of intellectual capital, human capital and social capital (Bontis et al., 2018; Hammad Ahmad Khan et al., 2016; Liang et al., 2015; B. Liu & Li, 2018; Shakir et al., 2020), cooperatives reputation (Castilla-Polo et al., 2018; Graca & Arnaldo, 2016), quality management system (Kontogeorgos et al., 2018), innovation and capitalisation (Marcos-Matas et al., 2018), market orientation (Sánchez-Navarro et al., 2019), dynamic capability (Susanti & Arief, 2015), compensation schemes (Gezahegn et al., 2020), fixed assets and volume of loans (Syachrudin et al., 2018), planning and administrative procedures (Kumar et al., 2017), and optimisation of resources (Xaba et al., 2019) as organisational-related factors that influence cooperatives performance. However, one study by Kontogeorgos et al. (2018) revealed a negative relationship between quality management practices and cooperatives performance. Furthermore, four studies suggested cooperative governance as the organisational-related factor that influences its performance significantly, in the matter of positive board members motivation (Chareonwongsak, 2017), board structures such as smaller board size and outside directors (J. R. V. Franken & Cook, 2019), ownership between hybrid and traditional cooperatives (Grashuis, 2018c) and higher governance compliance (Shamsuddin et al., 2019). It is thus implied that there were various forms of management practices that could be applied by the cooperative's manager towards better performance, as exhibited in Table 3.

Table 3: Summary of studies meeting the selected criteria

Authors	Areas	Themes	Factors
Bontis et al. (2018); Francisca Castilla-Polo, Gallardo-Vázquez, Sánchez-Hernández, & Ruiz-Rodríguez (2018); Gezahegn et al. (2020); Graca & Arnaldo (2016); Grashuis (2018a); Hammad Ahmad Khan et al. (2016); Kontogeorgos et al. (2018); H.D. Kumar et al. (2017); Qiao Liang, Huang, Luc, & Wangd, (2015); Y. Liu & Guo (2018); Gustavo Marcos-Matas et al. (2018); Sánchez-Navarro et al. (2019); Shakir et al. (2020); A.A. Susanti & Arief (2015); Syachrudin et al. (2018); Xaba et al. (2019)	Organisational-related factors	Management practices	Intellectual capital, reputation, operating profit margin, social capital, human capital, dynamic capability, fixed assets and volume of loans, optimisation of resources and cooperatives size, capitalisation and innovation, planning and administrative procedures, and compensation scheme and quality management system
Chareonwongsak (2017); J. R. V. Franken & Cook (2019a); Grashuis, (2018c); Z. Shamsuddin et al. (2019)		Governance practices	Board members motivation, structures, ownership, and governance compliance
Dyahrini et al. (2019); Ernita et al. (2020); Garoma et al. (2014); Gezahegn et al. (2020); Marwan et al. (2018); Prasertsang et al. (2020)	Individual factor	Members participation	The level of participation, motivation, entrepreneurship attitude, and heterogeneity
Garoma et al. (2014); Sánchez-Navarro et al. (2019)	Situational factor	Environmental	Climate change and environment uncertainty
Shapira et al. (2018)		Policy Instrument	Government incentives schemes

Source: Authors' compilation

Importantly, six studies revealed that individual factors in the context of participation, commitment and motivation of cooperative's members (Ernita et al., 2020; Garoma et al., 2014; Hammad Ahmad Khan et al., 2016; Marcos-Matas et al., 2018; Marwan et al., 2018;

Prasertsang et al., 2020) lead to higher performance of the cooperatives. While two studies reported that members heterogeneity could decrease and increase cooperatives performance (Gezahegn et al., 2020; Sánchez-Navarro et al., 2019). Furthermore, three studies examined the individual factors that influence cooperatives performance based on the relationship between entrepreneurship behaviour (Ernita et al., 2020; Marwan et al., 2018), and leadership characteristic (Dyahrini et al., 2019). Marwan et al. (2018) postulated that cooperatives performance increased result from the higher board of director's entrepreneurship behaviour and members participation. In total, nine studies support the hypotheses that individual factor is a crucial predictor that enhance cooperatives performance (Ernita et al., 2020; Garoma et al., 2014; Hammad Ahmad Khan et al., 2016; Marcos-Matas et al., 2018; Marwan et al., 2018; Prasertsang et al., 2020).

Third, situational factors are commonly explained as the influences that do not occur from within the individual or organisational of the cooperatives. In particular, three studies examined environmental uncertainty (Sánchez-Navarro et al., 2019), climate change (Garoma et al., 2014) and government policy concerning incentives scheme (Shapira et al., 2018) as situational factors that influence cooperatives performance. Based on this review, most publications measure cooperative performance as the outcome variables in terms of its financial, subjective, and objective appraisal consistent with theoretical literature (Benos et al., 2018; Grashuis & Su, 2019). This indicates that cooperatives worldwide have engaged in a diversity of ownership, structure, governance, and management practices to achieve better performance.

Discussion

The authors identified that the relationship between various forms of management and governance practices are the most reported organisational-related factors that influence cooperatives performance given that 19 out of 26 included studies assessed and confirmed the existence of the relationship. Overall, this review has found strong support that cooperative must enhance their resources and capabilities, namely intellectual capital, social capital, human capital, entrepreneurship, leadership, reputation, capitalisation, and innovation, to improve its performance. In particular, included studies found that managing each of these organisational-related factors specifically on their intangible resources and capabilities will, in turn, affect cooperatives performance for future business survival.

In the context of cooperative governance, the role of the board members is critical in formulating strategic business orientation while empowering its member's wellbeing (Birchall, 2017). It is paramount for cooperative board members to have a higher motivation to conduct effective oversight that will enable better governance practices for cooperatives to build their strength while benefitting its members (Chareonwongsak, 2017; Shamsuddin et

al., 2019). In this connection, the dual objectives of cooperative form have provided a governance structure that matched the economy that focuses on sustainable wellbeing such as to provide decent work and reduce poverty, rather than solely on economic growth (Burjorjee, Nelis, & Roth, 2017; Herbert, Foon, & Duguid, 2016; Riva & Garavaglia, 2016). Indeed, the findings of the included studies resonate with cooperative governance principles and values that emphasised on a transparent set of rules and control for its sustainable financial and economic growth, as implied by several scholars (Errasti et al., 2017; Kyazze, Nkote, & Wakaisuka-Isingoma, 2017; Nurhazani et al., 2016; Saleh & Hamzah, 2017). Thus, governance practices that enhance transparency, accountability, communication, and control are necessary to hinder free riding or opportunistic pursuit in the cooperatives which are detrimental to their performance.

This review also supports the importance of the individual factor specifically on membership participation in the context of cooperative because it usually relates to productivity (Grashuis & Su, 2019). It is thus implied that higher members participation for the future growth of cooperatives will be attained through greater engagement with cooperative's management, members, and relevant authority which include possible measures such as external assistance, and improvement of member's capabilities through training and education (Mubirigi et al., 2016). However, heterogeneity in the level of member participation in the cooperative is detrimental to its efficiency (Gezahegn et al., 2020). Their findings consistent with previous studies that revealed significant increment in membership would bring potential risks to the cooperatives performance due to the heterogeneous characteristics and background of the members (Cai, Ma, & Su, 2016; Pennerstorfer & Weiss, 2013). Thus, priority must be given by the cooperative's management in maximising members participation, while ensuring optimal membership size is achieved simultaneously.

Finally, this systematic review discovered that studies on situational or external factors have received limited attention by the scholars given that only three studies have investigated environmental uncertainty (Sánchez-Navarro et al., 2019), climate change (Garoma et al., 2014), and incentives scheme (Shapira et al., 2018) as factors that influence cooperatives performance. Nevertheless, businesses including cooperatives must be able to evolve and adapt to encounter external factors related to global trends, environmental and sustainability issues such as climate change, limited natural resources, and desertification (Abdul Aris et al., 2018; Ismail, Zainol, Yusoff, & Rusuli, 2019). This review does not address whether there are better or worse factors which will be the best in influencing cooperatives performance, and therefore must be adhered by the cooperatives. This review thus indicates that cooperatives decisions to embark in strategies or decisions to improve its performance require careful consideration on the balancing of various factors such as membership size, member's participation, governance practices as well as management and financial capabilities of cooperatives.



Conclusion

This study has several limitations. It does not explore the capabilities of the cooperatives and the trade-offs that must be undertaken to implement strategies related to the factors that will enhance their performance. Hence, future researchers are encouraged to conduct a quantitative study to determine the capabilities of cooperatives and to provide more robust evidence focus on the situational factors specifically on sustainability issues such as climate change, deforestation, and limitation of natural resources that influence cooperatives performance. Indeed, cooperatives are complex business organisations because they have significant dual objectives that provide a strong positive impact on its member's needs and long-term profitability. Thus, this study outlines the complexity of interacting organisational, individual, and situational factors that must be addressed when developing possible strategies that would be influencing cooperatives performance. Given the unique business model of cooperatives which based on the mutual principles and values to meet the demands of their members, indeed cooperatives are required to sustain its performance in conducting their business activities efficiently. In conclusion, this review sheds new lights for the need to find explicit factors that contribute to exceptional cooperatives performance.

Contribution/Originality: The contribution of this study extends the body of knowledge on cooperatives literature and helps the policymakers and cooperative's manager shed new lights on the factors that influence on cooperatives performance while understanding its phenomenon.

REFERENCES

- Abd Rahman, N., & Zakaria, Z. (2018). The Efficiency of Co-operative Management in Malaysia. *Journal of Nusantara Studies (JONUS)*, 3(2), 134. <https://doi.org/10.24200/jonus.vol3iss2pp134-146>
- Abdul Aris, N., Madah Marzuki, M., Othman, R., Abdul Rahman, S., & Hj Ismail, N. (2018). Designing indicators for cooperative sustainability: the Malaysian perspective. *Social Responsibility Journal*, 14(1), 226–248. <https://doi.org/10.1108/SRJ-01-2017-0015>
- Aguiar, L. G., Pigatto, G. S., Bernardo, C. H., & Morales, A. G. (2020). Network cooperatives and the reduction of opportunism in the agribusiness segment: a systematic bibliographic review. *Independent Journal of Management & Production*. 12, 125-136. <https://doi.org/10.14807/ijmp.v11i1.1010>
- Altman, M. (2010). History and Theories of Cooperatives. *International Encyclopedia of Civil Society Springer, New York, NY*, (December), 563–570.
- Anderson, B. L., & Henahan, B. M. (2003). What Gives Cooperatives A Bad Name? In *NCR 194 Meeting* (pp. 1–12).
- Bancel, J.-L., Kurimoto, A., & Draperi, J. (2015). *Guidance Notes to the Co-operative Principles*. Retrieved from <https://www.ica.coop/sites/default/files/publication-files/ica-guidance-notes-en-310629900.pdf>
- Benos, T., Kalogeras, N., Wetzels, M., Ruyter, K. de, & Pennings, J. M. E. (2018). Harnessing a ‘Currency Matrix’ for Performance Measurement in Cooperatives: A Multi-Phased Study. *Sustainability*, 10(12), 4536. <https://doi.org/10.3390/su10124536>
- Birchall, J. (2017). *The Governance of Large Co-operative Businesses*. Manchester. Retrieved from <https://www.ica.coop/sites/default/files/publication-files/governance-report2017coops-ukfinalweb-1823508697.pdf>
- Bontis, N., Ciambotti, M., Palazzi, F., & Sgro, F. (2018). Intellectual capital and financial performance in social cooperative enterprises. *Journal of Intellectual Capital*, 19(4), 712–731. <https://doi.org/10.1108/JIC-03-2017-0049>
- Burjorjee, P., Nelis, Y., & Roth, B. (2017). *Land Cooperatives as a Model for Sustainable Agriculture : A Case Study in Germany*. Blekinge Institute of Technology, Karlskrona, Sweden.



- Cai, R., Ma, W., & Su, Y. (2016). Effects of member size and selective incentives of agricultural cooperatives on product quality. *British Food Journal*, 118(4), 858–870. <https://doi.org/10.1108/BFJ-11-2015-0456>
- Castilla-Polo, F., Gallardo-Vázquez, D., Sánchez-Hernández, M. I., & Ruiz-Rodríguez, M. C. (2018). An empirical approach to analyse the reputation-performance linkage in agrifood cooperatives. *Journal of Cleaner Production*, 195, 163–175. <https://doi.org/10.1016/j.jclepro.2018.05.210>
- Chareonwongsak, K. (2017). Enhancing board motivation for competitive performance of Thailand's co-operatives. *Journal of Co-Operative Organization and Management*, 5(1), 1–13. <https://doi.org/10.1016/j.jcom.2017.01.001>
- Dale, A., Duguid, F., Lamarca, M. G., Hough, P., Tyson, P., Foon, R., ... Herbert, Y. (2013). Cooperatives and Sustainability: An investigation into the relationship. *Report International Co-Operative Alliance*, 1–76.
- Dyahrini, W., Nugraha, D. N. S., & Rachman, I. (2019). The leaderships and the advantages to compete the effect on cooperative performance in West Java. *International Journal of Innovation, Creativity and Change*, 6(5), 181–196.
- Ernita, Firmansyah, & Martial, T. (2020). Entrepreneurship attitude of managers, member participation, and cooperative performance: Evidence from Indonesia. *Management Science Letters*, 10(8), 1719–1728. <https://doi.org/10.5267/j.msl.2020.1.008>
- Errasti, A., Bretos, I., & Nunez, A. (2017). The Viability of cooperatives: The fall of the Mondragon Cooperative Fagor. *Review of Radical Political Economics*, 49(2), 181–197. <https://doi.org/10.1177/0486613416666533>
- Franken, J. R. V., & Cook, M. L. (2019). Do corporate governance recommendations apply to U.S. agricultural cooperatives? *Sustainability (Switzerland)*, 11(19). <https://doi.org/10.3390/su11195321>
- Franken, J. R. V., & Cook, M. L. (2015). Informing measurement of cooperative performance. In *Interfirm Networks* (pp. 209–226). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-10184-2_11
- Garoma, D., Admassie, A., Ayele, G., & Beyene, F. (2014). Analysis of the Impact of Fishery Cooperatives on Fishing Activity of Rural Households Around Lake Ziway and Lagano in Ethiopia. *Middle - East Journal of Scientific Research*, 19(2), 144–162. <https://doi.org/10.5829/idosi.mejsr.2014.19.2.11740>



- Gezahegn, T. W., Van Passel, S., Berhanu, T., D'haese, M., & Maertens, M. (2020). Do bottom-up and independent agricultural cooperatives really perform better? Insights from a technical efficiency analysis in Ethiopia. *Agrekon*, 59(1), 93–109. <https://doi.org/10.1080/03031853.2019.1663223>
- Graca, C. A. M., & Arnaldo, C. (2016). The role of corporate reputation on co-operants behavior and organizational performance. *Journal of Management Development*, 35(1), 17–37. <https://doi.org/10.1108/JMD-08-2014-0079>
- Grashuis, J. (2018a). A quantile regression analysis of farmer cooperative performance. *Agricultural Finance Review*, 78(1), 65–82. <https://doi.org/10.1108/AFR-05-2017-0031>
- Grashuis, J. (2018b). An exploratory study of cooperative survival: Strategic adaptation to external developments. *Sustainability (Switzerland)*, 10(3). <https://doi.org/10.3390/su10030652>
- Grashuis, J. (2018c). An exploratory study of ownership and governance interrelationships in traditional and hybrid farmer cooperatives. *Managerial and Decision Economics*, 39(6), 664–673. <https://doi.org/10.1002/mde.2936>
- Grashuis, J., & Su, Y. (2019). A Review of the Empirical Literature on Farmer Cooperatives: Performance, Ownership, Governance, Finance, and Member Attitude. *Annals of Public and Cooperative Economics*, 90(1), 77–102. <https://doi.org/10.1111/apce.12205>
- Haider, L. J., Boonstra, W. J., Peterson, G. D., & Schlüter, M. (2018). Traps and Sustainable Development in Rural Areas: A Review. *World Development*, 101, 311–321. <https://doi.org/10.1016/j.worlddev.2017.05.038>
- Hammad Ahmad Khan, H., Yaacob, M. A., Abdullah, H., & Abu Bakar Ah, S. H. (2016). Factors affecting performance of co-operatives in Malaysia. *International Journal of Productivity and Performance Management*, 65(5), 641–671. <https://doi.org/10.1108/IJPPM-05-2014-0077>
- Herbert, Y., Foon, R., & Duguid, F. (2016). *Sustainability Reporting for Co-operatives: A Guidebook*. Brussels: International Co-operative Alliance. Retrieved from <https://www.ica.coop/en/media/library/publications/sustainability-reporting-co-operatives-guidebook>
- ICA. (2018). What is a cooperative? Retrieved October 19, 2018, from <https://www.ica.coop/en>



- Ismail, M., Zainol, F. A., Yusoff, M. N. H., & Rusuli, M. S. C. (2019). The driving force of the business sustainability model among co-operatives in Malaysia. *Journal of Social Sciences Research*, 5(3), 826–829. <https://doi.org/10.32861/jssr.53.826.829>
- Kontogeorgos, A., Giannakopoulos, N., & Chatzitheodoridis, F. (2018). Exploring the quality management systems on cooperatives' performance before the economic crisis. *Quality - Access to Success*, 19(164), 48–54.
- Kumar, H. D., Tiwari, R., Dutt, T., Pachaiyappan, K., & Balaraju, B. L. (2017). Organizational performance and management constraints of sheep and wool producers' co-operatives in Karnataka. *Indian Journal of Animal Sciences*, 87(4), 501–505.
- Kyazze, L. M., Nkote, I. N., & Wakaisuka-Isingoma, J. (2017). Cooperative governance and social performance of cooperative societies. *Cogent Business and Management*, 4(1), 1–14. <https://doi.org/10.1080/23311975.2017.1284391>
- Liang, Q., Huang, Z., Luc, H., & Wangd, X. (2015). Social capital, member participation, and cooperative performance: Evidence from China's Zhejiang. *International Food and Agribusiness Management Review*, 18(1), 49–78.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., ... Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. In *Journal of clinical epidemiology*. <https://doi.org/10.1016/j.jclinepi.2009.06.006>
- Liu, B., & Li, Z. (2018). Director-Generals' Human and Social Capital, and Management Performance of Farmers' Cooperatives: Evidence from China's Fujian. *International Journal of Management and Economics*, 54(2), 149–165. <https://doi.org/10.2478/ijme-2018-0014>
- Liu, Y., & Guo, X. (2018). Mechanism of cooperative performance improvement in agricultural product supply chain based on behavioral cognitive science. *NeuroQuantology*, 16(5), 580–587. <https://doi.org/10.14704/nq.2018.16.5.1388>
- Marcis, J., Bortoluzzi, S. C., de Lima, E. P., & da Costa, S. E. G. (2019). Sustainability performance evaluation of agricultural cooperatives' operations: a systemic review of the literature. *Environment, Development and Sustainability*, 21(3), 1111–1126. <https://doi.org/10.1007/s10668-018-0095-1>

- Marcos-Matas, G., Ruggeri, A., & Ghelfi, R. (2018). The role of members' commitment on agri-food co-operatives' capitalization, innovation and performance. *International Food and Agribusiness Management Review*, 21(3), 379–390. <https://doi.org/10.22434/IFAMR2016.0163>
- Martins, F. S., & Lucato, W. C. (2018). Structural production factors' impact on the financial performance of agribusiness cooperatives in Brazil. *International Journal of Operations and Production Management*, 38(3), 606–635. <https://doi.org/10.1108/IJOPM-10-2015-0637>
- Marwan, M., Idris, I., & Sari, I. K. (2018). The Impact of Board Directors Entrepreneurship and Membersr Participation on Cooperativesr Performance, 57(Piceeba), 663–667. <https://doi.org/10.2991/piceeba-18.2018.86>
- Mohamed Shaffril, H. A., Ahmad, N., Samsuddin, S. F., Samah, A. A., & Hamdan, M. E. (2020). Systematic literature review on adaptation towards climate change impacts among indigenous people in the Asia Pacific regions. *Journal of Cleaner Production*, 258, 120595. <https://doi.org/10.1016/j.jclepro.2020.120595>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ*, 339(jul21 1), b2535–b2535. <https://doi.org/10.1136/bmj.b2535>
- Mubirigi, A., Shukla, J., & Mbeche, R. (2016). Assessment of the Factors Influencing the Performance of Agricultural Cooperatives in Gatsibo District, Rwanda. *International Journal of Information Research and Review*, 3(9), 2755–2763. Retrieved from <http://www.ijirr.com/sites/default/files/issues-files/1284.pdf>
- Munodawafa, R. T., & Johl, S. K. (2019). A systematic review of eco-innovation and performance from the resource-based and stakeholder perspectives. *Sustainability (Switzerland)*, 11(21). <https://doi.org/10.3390/su11216067>
- Nurhazani, M. S., Azlan, Z. A., & Kamarul Baharin, A. M. (2016). Investigating board of directors' perceptions on corporate governance practice in cooperatives. *International Journal of Contemporary Applied Sciences*, 3(1), 265–289. Retrieved from www.ijcas.net
- Ortmann, G. F., & King, R. P. (2007). Agricultural cooperatives I: History, theory and problems. *Agrekon*, 46(1), 18–46. <https://doi.org/10.1080/03031853.2007.9523760>



- Pennerstorfer, D., & Weiss, C. R. (2013). Product quality in the agri-food chain: Do cooperatives offer high-quality wine? *European Review of Agricultural Economics*. <https://doi.org/10.1093/erae/jbs008>
- Plunkett, B. (2005). *The Portfolio Problem in Agricultural Cooperatives: An Integrated Framework*. University of Missouri. Retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/4112/research.pdf?sequence=3&isAllowed=y>
- Prasertsang, P., Routrary, J. K., Ahmad, M. M., & Kuwornu, J. K. M. (2020). Factors influencing farmers' satisfaction with the activities of horticultural cooperatives in Thailand. *International Journal of Value Chain Management*, 11(1), 42–62. <https://doi.org/10.1504/IJVC.2020.105480>
- Riva, E., & Garavaglia, E. (2016). The sustainability and political agency of social cooperatives in Italy during the great recession. *International Journal of Sociology and Social Policy*, 36(7–8), 435–455. <https://doi.org/10.1108/IJSSP-01-2016-0005>
- Saleh, N. M., & Hamzah, N. (2017). Co-operative governance and the public interest: Between control and autonomy. *Jurnal Pengurusan*, 51(2017), 209–224. Retrieved from <https://doi.org/10.17576/pengurusan-2018-51-18>
- Sánchez-Navarro, J. L., Arcas-Lario, N., & Hernández-Espallardo, M. (2019). Antecedents of opportunism in agri-food cooperatives | Antecedentes del oportunismo en las cooperativas agroalimentarias. *CIRIEC-Espana Revista de Economía Publica, Social y Cooperativa*, (97), 111–136. <https://doi.org/10.7203/CIRIEC-E.97.13282>
- Shaffril, H. A. M., Krauss, S. E., & Samsuddin, S. F. (2018). A systematic review on Asian's farmers' adaptation practices towards climate change. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2018.06.349>
- Shakir, K. A., Ramli, A., Pulka, B. M., & Ghazali, F. H. (2020). The link between human capital and cooperatives performance. *Journal of Entrepreneurship Education*, 23(1).
- Shamsuddin, Z., Ismail, A. G., Zaidi, M. A. S., Daud, W. M. N. W., & Yusuff, W. S. (2019). Does the governance compliance effect cooperative performance? *International Journal of Innovation, Creativity and Change*, 5(2), 1701–1720.
- Shapira, G., Kalisa, I., Condo, J., Humuza, J., Mugeni, C., Nkunda, D., & Walldorf, J. (2018). Going beyond incentivizing formal health providers: Evidence from the Rwanda Community Performance-Based Financing program. *Health Economics*, 27(12), 2087–2106. <https://doi.org/10.1002/he.3822>



- Sierra-Correa, P. C., & Cantera Kintz, J. R. (2015). Ecosystem-based adaptation for improving coastal planning for sea-level rise: A systematic review for mangrove coasts. *Marine Policy*, *51*, 385–393. <https://doi.org/10.1016/j.marpol.2014.09.013>
- Soboh, R., Oude Lansink, A., & Van Dijk, G. (2012). Efficiency of cooperatives and investor owned firms revisited. *Journal of Agricultural Economics*, *63*(1), 142–157. <https://doi.org/10.1111/j.1477-9552.2011.00324.x>
- Susanti, A. A., & Arief, M. (2015). The Effect of Dynamic Capability for the Formation of Competitive Advantage to Achieve Firm's Performance (Empirical Study on Indonesian Credit Co-operatives). *Advanced Science Letters*, *21*(4), 809–813. <https://doi.org/10.1166/asl.2015.5885>
- Syachrudin, D., Nurlis, & Laras Widyanto, M. (2018). Analysis of financial distress prediction in cooperative financial institutions. *International Journal of Scientific and Technology Research*, *7*(10), 100–105.
- Teixeira da Silva, J. A., & Memon, A. R. (2017). CiteScore: A cite for sore eyes, or a valuable, transparent metric? *Scientometrics*, *111*(1), 553–556. <https://doi.org/10.1007/s11192-017-2250-0>
- Xaba, S. T., Marwa, N., & Mathur-Helm, B. (2019). Efficiency evaluation of agricultural cooperatives in Mpumalanga: An empirical study using the DEA approach. *African Journal of Economic and Management Studies*, *11*(1), 51–62. <https://doi.org/10.1108/AJEMS-10-2018-0291>
- Zeuli, K. A., & Cropp, R. (2004). *Cooperatives: Principles and practices in the 21st century*. Wisconsin. Retrieved from http://library.uniteddiversity.coop/Cooperatives/Cooperatives-Principles_and_practices_in_the_21st_century.pdf

Appendix

The 26 publications included in the systematic literature review are listed together with empirical techniques and hypotheses.

No	Authors	Empirical Techniques	Hypotheses	Support
1.	Bontis et al. (2018)	Principal component analysis (sample was 151 founding members of social cooperatives)	Intellectual capital influence financial performance. Intellectual capital influence social performance.	√ √
2.	Castilla-Polo et al. (2018)	Structural equation modelling (sample was 76 managers from olive oil cooperatives)	The reputation of cooperatives directly and positively affects their performance.	√
3.	Graca & Arnaldo (2016)	Structural equation modelling (sample was 263 co-operants of the three biggest dairy cooperatives in Portugal).	Corporate reputation has a positive and statistically significant relationship with performance (all dimensions accepted except in the good employer dimension).	√
4.	Grashuis (2018a)	Quantile regression analysis (1,000 farmer cooperatives data from USDA)	There is an association between operating profit margin and financial performance.	√
5.	Kontogeorgos et al. (2018)	Panel data analysis	Quality management system and cooperatives performance (negative).	X
6.	Kumar et al. (2017)	The sample was 50 dairy cooperatives	Planning and administrative procedures, human resource management, financial management and membership strategies influence performance.	√
7.	Liang et al. (2015)	Ordinary least square regression analysis (sample was 147 farmer cooperatives, with 81 cases from Jiaxing and 66 cases from Taizhou).	Social capital (external, relational, and cognitive dimension) influence performance.	√

No	Authors	Empirical Techniques	Hypotheses	Support
8.	B. Liu & Li (2018b)	Structural equation modelling (sample was 303 farmer cooperatives)	Relationship between the Director General's social capital and operational performance of cooperatives. Relationship between the Director General's social capital and operational performance of cooperatives. The mediating role of cooperative management effectiveness.	√ √ √
9.	Shakir et al. (2020)	Correlation and linear regression analysis (sample was 135 cooperatives chairpersons, deputy chairpersons, secretaries and treasurers)	Relationship between human capital and performance.	√
10.	Anna Astrid Susanti & Arief (2015)	Structural equation modelling (sample was 162 credit cooperatives)	Dynamic capability significantly increased competitive advantage and led to an increase in performance.	√
11.	Syachrudin et al. (2018)	Logistic regression analysis (80 saving and loan cooperatives)	Efficiency aspect (the ratio of fixed assets to total assets) influence the health of the cooperatives. Liquidity aspect (the ratio of the volume of loans to received funds) influence the health of the cooperatives.	√ √
12.	Xaba et al. (2019)	Data envelopment analysis (19 agricultural cooperatives)	Technical and scale efficiency increase performance.	√

No	Authors	Empirical Techniques	Hypotheses	Support
13.	Hammad Ahmad Khan et al. (2016)	Pearson correlation and multiple regression analysis using SPSS (sample was 72 board members of 100 best cooperatives)	There is a strong positive relationship between structural capital, relational capital, and members' participation with the performance (all dimensions accepted except in the human capital dimension).	√
14.	Marcos-Matas et al. (2018)	Structural equation modelling (Sample target was managers of 52 cooperatives included small medium and large firms and every typology of agri-food sector)	The relationship between members commitment increase, the level of capitalisation increase, that positively relates to the cooperative innovation and higher performance.	√
15.	Sánchez-Navarro et al. (2019)	Tobit regression model (140 key informants of heads or managing directors of agri-food marketing cooperatives)	Cooperative members' heterogeneity, environmental uncertainty, and cooperatives' market orientation increased opportunism. Member's dependence on the cooperative, long-term orientation of the member's relationship and member's market orientation reduced opportunism.	√ √
16.	Chareonwongsak (2017)	Structural equation modelling (sample was 330 board of directors and the managers from the cooperatives). Financial and non-financial indicators from Co-operative Auditing Department and Co-operative Promotion Department	Board members motivation and cooperatives performance. Expectancy, instrumentality, and valence have influence board members motivation.	√ √

No	Authors	Empirical Techniques	Hypotheses	Support
17.	J. R. V. Franken & Cook (2019b)	Three stages least square method (sample was 460 board chairs from the top 1000 cooperatives) and financial performance data are obtained from the U.S. Department of Agriculture (USDA) Cooperative Statistics database	Smaller board improves performance. Larger board improves performance. Including outside directors improves performance. Longer CEO tenure improves performance.	√ √ √ √
18.	Grashuis (2018c)	Analysis of variance (survey response from CEOs and board chairpersons of 371 U.S. farmer cooperatives)	There is an interrelationship between ownership and governance characteristics in traditional and hybrid farmer cooperatives.	√
19.	Z. Shamsuddin et al. (2019)	Static panel data estimation techniques and Panel-Corrected Standard Error (data of 100 prominent cooperatives).	There is a positive impact of governance compliance assessment on performance.	√
20.	Dyahrini et al. (2019)	Structural equation modelling (sample was 373 cooperative's managers)	Leadership and competitive advantages. Leadership and performance. Competitive advantages and performance. Relationship between leadership and cooperatives performance mediates by competitive advantages.	√ √ √ √
21.	Ernita et al. (2020)	Regression (100 leaders/managers and 100 members of the cooperatives in North Sumatera Province, Indonesia)	Entrepreneurship attitude of managers and members participation. Members motivation and members participation.	√ √

No	Authors	Empirical Techniques	Hypotheses	Support
22.	Marwan et al. (2018)	Associative analysis (sample was 55 cooperatives' treasurers in Padang)	The higher board of director's entrepreneurship, the higher members participation and higher performance.	√
23.	Prasertsang et al. (2020)	Heteroscedasticity-corrected ordinary least squares regression (sample was 290 horticultural cooperatives)	Horticultural activities by cooperatives such as business participation, meeting attendance, investment in shares, business value, trust in the committee, profitability, information flow and the suitability of the location of the cooperatives.	√
24.	Garoma et al. (2014)	Descriptive statistics, budgetary analysis and the propensity score matching (179 fishing households among cooperatives members and non-members).	Household members participation in fishing activities increases fishery cooperatives performance.	√
25.	Gezahegn et al. (2020)	Stochastic frontier approach (sample was 511 cooperatives was selected in four zones in the Tigray region in Northern Ethiopia)	Members heterogeneity participation decrease cooperative efficiency. Compensation scheme increases cooperatives efficiency. Community or self-initiated cooperatives more efficient than government or NGO initiated.	√ √ √
26.	Shapira et al. (2018)	Randomised controlled trial set analysis (sample was 2,376 households. Also, interviews were conducted with 197 cooperatives community health workers (CHW) presidents)	Demand-side incentives can increase healthcare service utilisation in addition to a supply-side pay-for-performance scheme.	√

Source: Authors' compilation