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# ADOPTING BUSINESS PROCESS MANAGEMENT MODEL TO MEASURE COOPERATIVE PERFORMANCE

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## ABSTRACT

A distinguishing feature of cooperative enterprises is their adherence to distinct principles: user-ownership, user-control, and user-benefit. In terms of business processes, this uniqueness should not affect business performance, since the business process system contains virtually no asymmetric information between the entities. The purpose of this research is to evaluate the execution of business processes and to suggest a model for business process management in an apparel producers cooperative. Based on evidence gathered mostly via observation, interview, and focus group discussion with the cooperative board of directors, it is determined that the cooperative lacks a defined pattern of business process management and performance assessment. The cooperative is essentially a small auction house for trade. In a cooperative business process system, there are two types of actors: in-system entities and outer-layer entities. In this approach, the cooperative serves as the system's center, while its members serve as both provider and consumer. Members supply as suppliers, but as customers, they need equipment, ice, fuel, daily necessities, and other requirements. A series of scenarios are presented for evaluating the cooperative performance using business process management. Additional study is required to evaluate the model's implementation.

**Keywords:** cooperative business, performance, business process management

## 1. INTRODUCTION

Measuring the performance of business processes is seldom addressed in the context of cooperative businesses. Measuring business process performance is mostly used in investor-owned firms (IOFs) and small-to-medium-sized businesses (SMBs/SMEs).

A cooperative (cooperative) is a one-of-a-kind business. It is owned by people who utilize them, not by investors or partners motivated by profit maximization (Fairbairn, 1994). It may be the only kind of company in which members are both beneficiaries of the collective business's advantages and owners. This means that members must use the cooperative goods and services, which are determined by the cooperative nature (Tchami, n.d.). As a social business, the cooperative has the potential to provide significant social benefits while simultaneously generating economic value (Mazzarol et al., 2011).

Individual members often have a poor position in the business processes system. The cooperative member is intended to strengthen member negotiating power inside the system, thus improving their lives. The cooperatives enable members to pool their resources, thus strengthening their position and negotiating power as an entity in the business processes system.

The business process is a complicated system due to critical capabilities that are prerequisites to its summoning the resources, determination, and skills needed to succeed ith processes (Hammer, 2007). The production cooperative, like the original equipment manufacturer (OEM), is essential to the business processes manufacturing system. Likewise, the consumer cooperative has a very important position as a distributor who must be able to manage business processes related to the provision of goods and services needed by members.

In contrast to the IOFs and small businesses, business process performance assessment of cooperatives is seldom addressed. Business process performance measurement is primarily concerned with the customer and operational aspects in the IOFs and SMEs. On the other hand, performance assessment for cooperatives is often focused on its role in maximizing benefit to its members, both economically and in other ways.

Due to its unique features, the business process performance assessment of a cooperative should take into account additional factors that are not included in IOFs and SMEs measurements. This article provides an overview and assessment of the cooperative performance measurement, as well as a model for the cooperative performance measurement based on the Business Processes Management (BPM) paradigm.

## 2. LITERATURE REVIEW

### A. Business Process Management (BPM)

The discourse of business processes emerged along with the need for quality measurement. (Deming, n.d.) started with statistical process control, which emphasized reducing or even eliminating variation and using statistical techniques to isolate the root causes of process performance problems. (Van Looy & Shafagatova, 2016) define the BPM as managing entire chains of events, activities, and decisions that ultimately add value to the organization and its customers. The chains of events, activities, and decisions are called processes.

A good description of Business Process Management (BPM) is stated by (Hammer, 2007) According to Hammer that BPM is an integrated system for managing business performance by managing end-to-end business processes. BPM is described as a design, document, and implementation process cycle. The cycle starts with the creation of a formal process, which once implemented must be managed, and its performance must be measured. This cycle is derived from Deming's "Plan-Do-Check-Action" (PDCA) cycle with the addition of the attention to process design.

Vom Brocke & Rosemann (2015) propose and describe the six core elements of BPM in detail. The elements include strategic alignment, governance, methods, information technology, people, and culture. The six core elements are then decomposed each into five distinct capability areas as part of an assessment of each of six core elements.

### B. Business Process Performance Measurement

Similar to BPM, the topic of process business performance has also become a critical issue in both the literature and practical as it is directly related to business performance. Business performance has been developed by scholars in different models, systems, frameworks, or measurements. Kaplan and Norton (2007) propose Balance Score Card (BSC) model to assess business performance based on a four-dimensional approach: 1) financial perspective, 2) customer and market perspective, 3) internal business process perspective, and 4) learning and growth perspective.

Assessing business performance is as important as process-oriented management or BPM (Van Looy & Shafagatova, 2016). This is in line with Norton and Kaplan's BCS model (Kaplan and Norton, 2007). In the context of resources, an organization can do more with its current resources by boosting the effectiveness and efficiency of its way of working, i.e., its business processes (Sullivan 2001).

### C. Cooperative Enterprise

A cooperative is described as an independent organization of individuals who have come together voluntarily to address their shared economic, social, and cultural needs and ambitions via the ownership and management of a jointly owned and democratically managed business (ICA, 2019). The cooperative, defined by its ideals, is a distinct business in comparison to IOFs and SMEs. According to (Nilsson, 1996), the cooperative principles represent two types of concepts: business principles governing how the

cooperative and member relationship should be formed, and society principles governing how members' transaction costs should be minimized.

From a partnership viewpoint, the cooperative is unusual in that members have a dual interest: patronage (as a consumer or supplier) and investment (as an owner/shareholder). According to (Tchami, n.d.), one of the primary characteristics of a cooperative is that it is one of the few, if not the only, type of company in which members are both beneficiaries of the collective business's advantages and owners. (Harris et al., 1996) asserted that cooperatives can utilize information more effectively than other vertically integrated companies. Both the member and the cooperative have a stronger motivation to collect and send data. Additionally, the cooperatives provide a means of achieving economies of scale while maintaining expertise about the goods.

**D. Measuring Cooperative Performance**

In keeping with its distinctiveness, assessing cooperative success should include not just economic and organizational variables, but also social ones, even though many academics place a premium on economic considerations when assessing performance. According to (R. A. M. E. Soboh et al., 2009), cooperative financial performance may be divided into two categories: those that focus economic theory of the company and those that prioritize accounting methods. Economically, (R. Soboh et al., 2012) use efficiency metrics to assess cooperative success. Efficiency is classified as technical efficiency, which includes input-oriented technical, scale-related technical, and allocative technological efficiency.

Generally, research on cooperative performance focuses on non-economic factors. (Bagnoli & Megali, 2011) propose a multidimensional control model to account for all of the factors that should be considered while evaluating cooperative performance. Economic and financial success, social efficacy, and institutional legitimacy are all must be evaluated. Each dimension is further subdivided into technical indicators based on its associated metric.

In addition to these three dimensions, (Bagnoli & Megali, 2011) incorporate the following measures: For economic-financial and social effectiveness, the term "productivity of inputs" refers to the output of inputs. Compliance with the non-distribution restriction in the economic-financial and institutional legitimacy domains. For the areas of social effectiveness and institutional legitimacy, the correlation between accomplished results (revenue, outcomes, and impact) and declared purpose, as well as worker and user/beneficiary participation in decision-making.

Non-financial success indicators, according to (Beaubien & Rixon, 2012), are classified into four categories: personnel profile, community investment, members, and environment. These categories apply to all types of cooperatives.

Giocamini, Chiaf, and Mazzoleni utilize the concepts of solidarity, mutuality, participation, and cooperatives as social dimension indicators (Giocamini, Chiaf, and Mazzoleni, 2017). They create a dual-

dimensions matrix to quantify cooperative success on both an economic and social level. Each dimension is scored between -100 and 100, with a lower score indicating a less effective and efficient performance by the cooperatives.

Benos et al., (2018) conduct research on cooperative performance that takes into account the characteristics of the cooperative organizational structure. They advocate for a methodology for the cooperative performance evaluation in which two categories (representing the cooperative character as a company and a social membership organization) are evaluated. The nature of the company is further subdivided into three subcategories: business financial appraisal (BFA), business efficiency evaluation (BEA), and subjective business appraisal (SBA), with the organization (the cooperative) serving as the unit of analysis. Meanwhile, the nature of social membership is classified as objective membership assessment (OMA) and subjective membership evaluation (SMA), with the member(s) serving as the unit of analysis.

## 3. METHODS

This research is based on a case study on apparel producer's cooperative in West Java Province, Indonesia. Currently, the cooperative is solely serving as a production house of its members, and ironically, each member is still looking for customers and selling their respective products.

The business process is followed, and an internal evaluation of the cooperative performance is conducted. Primary data are mostly gathered via observation, interviewing, and conducting Focus Group Discussions (FGD). Secondary data is gathered from sources with a significant connection to BPM, BPM performance, cooperative work, and cooperative performance. As a so-called "social business", many stakeholders are engaged in coaching and supervising cooperative performance, which serves as a source of secondary data.

The performance of a cooperative is determined by comparing the degree to which it meets the performance criteria specified by the rules that apply to both financial and institutional elements. Financial and operational performance is measured using financial and business process metrics, while non-economic performance is measured using social and institutional metrics.

## 4. RESULT AND DISCUSSION

In the current scenario, where the cooperative controls just the auction and credit union, comprehensive performance assessment is difficult. This is because there is a dearth of data to measure. The cooperative success is evaluated on five dimensions: institutional, business, financial, member benefits, and societal benefits. The parameters are then transformed into indicators that represent the cooperative success. According to Bagnoli & Megali (2011), the dimensions include all of the performance's triangular dimensions. Economic and financial value contributed are included in the business and financial aspects, as are social effectiveness and benefits to members and society. Institutional legitimacy is included in the institutional component.

The assessment of the cooperative performance across all five dimensions shows that almost all indicators indicate that it performs poorly. This result comes from the FGD, and experimentally, the performance measuring records accessible is likewise very sparse. There is little data to quantify the cooperative performance, particularly in terms of economic and social effectiveness. As a result, performance metrics will be established using an illustrative model in which the cooperative acts as a socioeconomic entity that benefits both members and society.

As an organization whose main objective is not just profit maximization but also stakeholder welfare and socioeconomic inclusion, as Matei & Dorobantu (2015) highlight, the cooperative must be able to provide value-added both economically and socially. As a result, the cooperative is encouraged to expand its company in areas that are directly related to the members' primary activities, such as retail shops, payment gateways, and agencies. Through the retail shop, the cooperative may supply members with the tools they need to go to work, as well as everyday needs for members and their families.

Payment gateway is a third-party service that enables members to pay third-party bills. Along with convenience, members may pay their bills at a cheaper rate than they would with another payment partner. The agency, as a line of business, may provide income for the cooperative. The agency is a fee-based seller of third-party goods or services such as tickets, gasoline, and so on.

The business model that allows the cooperative to operate with various business lines entails a large number of entities that comprise the business process system. The relationship between members, the cooperative, and other entities in the system exists. Regarding BPM, the figure below depicts the cooperative as the system's heart, while members represent the entities that serve as both providers and consumers, and what and how data is collected and distributed throughout the system and the activities performed by all the cooperative elements.

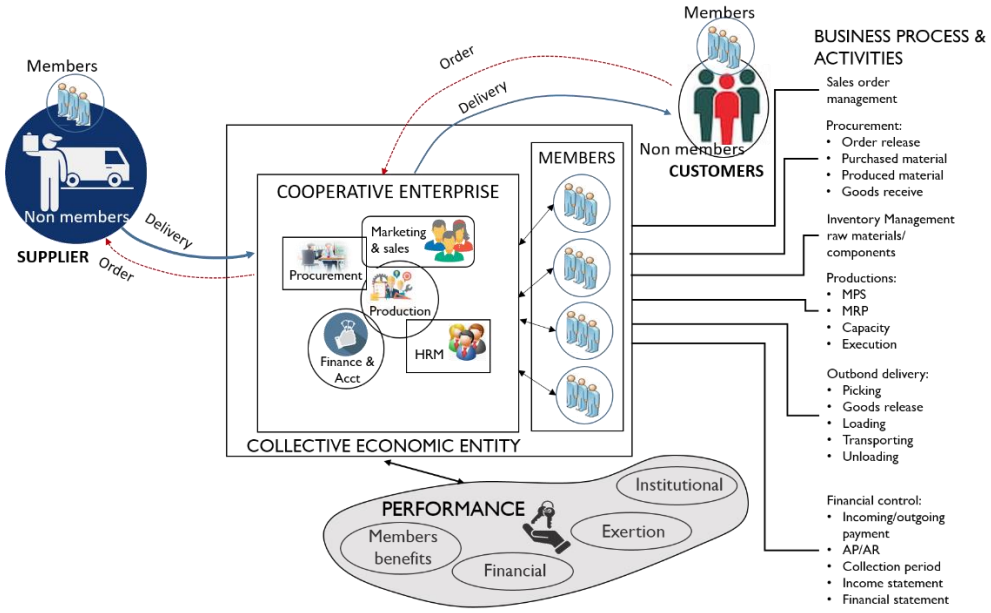


**Figure 1. The co-cop ecosystem, processes, and activities**

Figure 1 shows the position of the cooperative in its business ecosystem, its interactions with other entities both inside and outside the system, as well as activities and business processes as a consequence of these interactions. The cooperative is not sufficiently supplied by members to sell items such as equipment, gasoline, food, and daily needs. The cooperative needs suppliers that are not members. The cooperative is interested in partnering with suppliers outside of its membership who are capable of providing products at reasonable rates, thus benefiting members economically.

Scholars usually evaluate cooperative success on economic, financial, and social dimensions. Economic and financial performance measurements are used to ensure that businesses are fiscally accountable (Bagnoli & Megali, 2011). A comprehensive evaluation of the cooperatives' success considers social and institutional factors in addition to financial ones.

The cooperative performance is evaluated using four dimensions: members' benefits, financial, exertion, and institutional. The BPM model leads performance assessment based on end-to-end processes for all activities and processes in each of the performance dimensions. Recall the six core elements of BPM that are proposed by Vom Brocke & Rosemann (2015), the assessment should include how the cooperative align its strategy with related partners, establishes and implement the cooperative governance, uses methods in performing processes, utilizes information technology, strengthens member participation, and builds strong organizational culture. Adopting BPM in measuring cooperative performance can be described below:

### A. Members' benefit

Members' benefits are benefits of the cooperative for members in terms of both economic and non-economic values, such as ease access to both material sources and market, ease to meeting daily needs, a better business climate, and a higher standard of living. In terms of BPM, members' benefits are operationalized through the functions of the cooperative business such as production, retail, sales, collaboration, and alliances with related parties, as well as interactions with members.

From an output standpoint, cooperative success is measured by how well it meets the needs of its members. The more competent the cooperative is at meeting member requirements, the more successful the cooperative will be. The cooperative capacity to satisfy members is assessed by the time it takes to satisfy the member's request and the availability of the products the member requires. The more quickly the cooperative can meet member requirements, the better. In terms of availability, the more readily accessible the products, the greater the co-capacity. The final metric of effectiveness is the surplus generated by the cooperative.

### B. Financial

Financial performance indicators are quantifiable metrics used to measure how well a company is doing. It also means a measure of the performance of all business processes and activities. The financial business process is a set of sequential tasks that takes a set of data to a finished state. Financial business processes can be divided into areas of business function and other activities that are cost center. In the production, financial business processes cover the entire process from procurement, inventory management, inventory counting, materials and components absorption, work-in-process, to the releasing product to the final product warehouse. In the retail business, the financial business process covers the entire process from the procurement of merchandise, SKU management, inventory counting, to the delivery of goods to customers.

Referring to Figure 1, the mapping of business processes that lead to the measurement of financial performance can be derived from the processes and activities on the right side of the figure. This process mapping facilitates the cooperative in formulating process performance standards from a financial perspective and measuring the achievement of these standards. Adopting the BPM model in measuring financial performance must also include procedures for assessing financial performance indicators such as capital structure, total deposits and loans, profitability, profitability, ROI, liquidity, and also surplus/deficit.

Financial indicators are used in the socioeconomic model to assess the economic and financial situation. (Bagnoli & Megali, 2011) provide detailed definitions for these indicators. The distinction between the BPM and socio-economic models is that the BPM model emphasizes the relationship between the provider and the consumer, while the socio-economic model emphasizes the relationship between the cooperative and the member. The advantages to society may include employee retention, economic activity in which

the society can participate, and the availability of products they need.

### C. Exertion

The exertion describes the business portfolio managed by the cooperative, planning, and control, business management strategies and policies, and business performance. The performance assessment of this dimension refers to the business process for each business portfolio activity and also involves BPM for financial performance assessment. Measuring the cooperative social effectiveness/exertion focuses on the advantages to members and society as a whole. Member advantages may include profit sharing/distribution, reduced costs for equipment and other necessities, and a faster turnaround time for products they need.

### D. Institutional

The institutional elements are evaluated by examining how the cooperative adheres to regulations, both formal and informal, as well as norms. Compliance indicators include the completion of legal requirements (valid act of formation, documented and institutionalized governance such as standard operating procedures/SOP, and other processes). Due to the cooperative limited scope of operation, they only have a single document addressing this issue.

The implementation of the BPM model to measure institutional performance is carried out by mapping the process of documentation and its renewal, completeness of business licenses, membership and renewal, member participation, and the adequacy of organizational elements. The cooperative must manage the database so that it is easy to store and retrieve documents as needed.

## 5. RESEARCH IMPLICATION

The implementation of BPM-based cooperative performance appraisal is expected to harmonize all cooperative business processes so that it can uniform the paradigm and stakeholder perspective on cooperative performance. With BPM, it is easier to assess cooperative performance based on four dimensions, member benefits, finance, business, and institutions because performance standards can be clearly defined based on the process. The implementation of the BPM model can also be a solution in assessing the performance of cooperatives by external stakeholders, especially authorized government institutions, in conditions of the COVID-19 pandemic where human movement and interaction are very limited.

## 6. CONCLUSION AND SUGGESTION

In comparison to IOFs or SMEs, the cooperative is a distinct business. It is a socioeconomic kind of company in which the proprietors serve as both supplier and client. Measuring the performance of business processes may be accomplished using a mix of BPM and socioeconomic models. From a resource standpoint, cooperative success is evaluated in terms of resource use efficiency. From an output standpoint, cooperative success is measured by how well it meets the needs of its members. Cooperative adaptability is shown by its capacity to react to member and non-member relationship changes.

At the moment, there is insufficient data to evaluate cooperative performance. To optimize its function as a socioeconomic company, it is recommended that the cooperative expand its retail, agency, and payment gateway operations. The study's drawback is the study's tiny unit of analysis. Further study should include more cooperatives to ascertain the true state of their performance and the reflection of their business process systems.

## REFERENCES

Bagnoli, L., & Megali, C. (2011). Measuring performance in social enterprises. *Nonprofit and Voluntary Sector Quarterly*, *40*(1), 149–165. https://doi.org/10.1177/0899764009351111

Beaubien, L., & Rixon, D. (2012). Key Performance Indicators in Co-operatives: Directions and Principles. *Journal of Co-Operative Studies*, *45*(2), 5–15. http://www.ingentaconnect.com/content/ukscos/jcs/2012/00000045/00000002/art00002

Benos, T., Kalogeras, N., Wetzels, M., de Ruyter, K., & Pennings, J. M. E. (2018). Harnessing a "currency matrix" for performance measurement in cooperatives: A multi-phased study. *Sustainability (Switzerland)*, *10*(12), 1–38. https://doi.org/10.3390/su10124536

Deming, E. (n.d.). On Statistical Techniques in Industry as a National Resource. In *Interional Statistical Institute*.

Fairbairn, B. (1994). The meaning of Rochdale: The Rochdale pioneers and the co-operative principles. *Occasional Papers*, 1–55. http://ageconsearch.umn.edu/record/31778/files/re94fa01.pdf

Hammer, M. (2007). The process audit. *Harvard Business Review*, *85*(4), 111–123.

Harris, A., Stefanson, B., & Fulton, M. (1996). and Cooperative Theory. *Journal of Cooperatives*.

Matei, A., & Dorobantu, A. D. (2015). Social Economy – Added Value for Local Development and Social Cohesion. *Procedia Economics and Finance*, *26*(15), 490–494. https://doi.org/10.1016/s2212-5671(15)00878-3

Mazzarol, T., Limnios, E. M., & Reboud, S. (2011). Co-operative enterprise: A unique business model? *Future of Work and Organisations, 25th Annual ANZAM Conference, 7-9 December 2011*, *December*, 1–22.

Nilsson, J. (1996). The nature of cooperative values and principles: Transaction cost theoretical explanations. *Annals of Public and Cooperative Economics*, *67*(4), 633–653. https://doi.org/10.1111/j.1467-8292.1996.tb01411.x

Soboh, R. A. M. E., Lansink, A. O., Giesen, G., & van Dijk, G. (2009). Performance measurement of the agricultural marketing cooperatives: The gap between theory and practice. *Review of Agricultural Economics*, *31*(3), 446–469. https://doi.org/10.1111/j.1467-9353.2009.01448.x

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

Tchami, G. (n.d.). *Handbook on Cooperatives for use by Workers' Organizations*.

Van Looy, A., & Shafagatova, A. (2016). Business process performance measurement: a structured literature review of indicators, measures and metrics. *SpringerPlus*, *5*(1), 1–24.

https://doi.org/10.1186/s40064-016-3498-1

vom Brocke, J., & Rosemann, M. (2015). Handbook on business process management 1: Introduction, methods, and information systems. *Handbook on Business Process Management 1: Introduction, Methods, and Information Systems*, 1–727. https://doi.org/10.1007/978-3-642-45100-3