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Lean Supply Chain Strategies for Accelerating Business to Government (B2G) Demand Fulfillment in the Electronics Manufacturing Industry

Bambang Subagyo*, Moses Laksono Singgih

Magister Management Technology, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

Abstract - *This study introduces a novel approach to improving supply chain performance in Business-to-Government (B2G) operations by integrating a lean perspective with multi-criteria decision-making tools. As the B2G segment contributes 40% of PT XYZ's total revenue making it the company's most significant business stream its operational efficiency is critical. However, the company has experienced substantial delivery delays, leading to a government-issued warning and financial penalties totaling IDR 106,493,988 in Q2 of the 2023 fiscal year. To address this issue, we applied the Balanced Scorecard (BSC) framework to assess supply chain performance across four key perspectives comprehensively. We then employed the Analytical Network Process (ANP) method to identify strategic alternatives for improving demand fulfillment. The analysis revealed that cost emerged as the most critical criterion, accounting for 50.1% of the total weight. Consequently, the study recommends reducing total inventory by repurposing slow-moving goods into new bundled products. The study identified customer delivery lead time weighted at 9.8% as a key focus area from the BSC perspective, showing PT XYZ needs to prioritize delivery speed in future order management.*

Keywords – *Lean, Business to Government (B2G), ANP, BSC*

I. INTRODUCTION

Procurement of goods and services is a crucial activity that a government must undertake, both at the regional and central levels. Governments do this solely to advance and develop regional infrastructure to meet community needs and demands. In the process, procurement of goods and services for the government involves many layers of elements, including both companies and Micro, Small, and Medium Enterprises (MSMEs). The procurement process also involves a not insignificant portion of the government's budget each year. Procurement of goods and services through providers is a procurement process carried out by the government, which involves third parties. These third parties are providers of goods and services, contractors, or other forms of business entities such as Limited Liability Companies and Cooperatives. The government uses the LKPP e-catalog for e-Purchasing to procure goods and services.

The supply chain in the electronics manufacturing industry faces rapid market dynamics driven by technological developments and shifts in consumer preferences that continue to occur. This poses a significant challenge for the industrial supply chain involved. Companies in this sector must ensure that products are available on time and avoid burdening the warehouse with excess stock. Without comprehensive planning, shortages of materials or components can cause production delays. The company's products must be in the possession of customers at the right place and time when they want to consume them [1]. Supply chain management (SCM) is closely related to suppliers, manufacturers, and customers. The majority of industries consistently evaluate the performance of their supply chains to achieve an effective and efficient supply chain process within their business units. In both practice and literature, supply chain evaluation remains underdeveloped [2]. The supply chain logistics service process encompasses customer service, parts, and company management metrics, which are selected based on this definition [3]. Researchers developed an alternative approach with a multi-level step-by-step evaluation index system for a "score list" assessment of robust implementation estimates and observation plans [4]. Over the past few decades, various sectors have successfully adopted Lean Supply Chain Management (LSCM) practices and principles [5]. The most successful companies are those that consider external customers and suppliers in their internal improvement process [6]. PT XYZ is an electronics manufacturing company located in East Java that operates under three business models: Business to Consumer (B2C), Business to Business (B2B), and Business to Government (B2G). In conducting B2C, PT XYZ sells goods in the form of lamps as lighting for homes, which are marketed through distributors to retail stores. Customers can also buy them directly at these stores. In the B2B sector, PT XYZ runs its business by participating in tenders conducted by its

*Corresponding author. Email: bambang.sub2700@gmail.com

sales party which are held by several private companies or other agencies that are or will build lighting facilities in their area. In B2G, PT XYZ is a supplier of goods registered in the LKPP e-catalog since 2018 and a company that provides goods to the government.

In this study, the researcher chose the supply chain process in the B2G sector because this business is the largest income contributor among other companies, accounting for 40%. In addition, it is based on the delay in delivery. The customer imposed a penalty of Rp106,493,988 in Q2 of fiscal year 2023. Furthermore, each quarter failed to meet its on-time delivery target. Some customers from other areas sometimes tolerate on-time delivery, so they do not immediately impose a penalty but issue a warning to the company. The company often makes deliveries by air to meet its predetermined delivery target, resulting in a significant amount of air freight that the company must pay, as the majority of PT XYZ suppliers are based abroad.

Requests related to products with new specifications also often occur when the company participates in tenders. Therefore, the company must register the product with the Ministry of Trade to obtain SNI and SKEM certificates, as well as TKDN from the Ministry of Industry. The length of the certification process, from submission to issuance of test results, verification, and certification, often hampers the process of fulfilling goods. Additionally, the sales team's forecasts are frequently inaccurate and subject to sudden changes. As a result, the company cannot meet the demand for goods with the stock of goods in the warehouse, so the existing inventory has a reasonably large amount.

The lengthy internal process of responding to customers and fulfilling requests for goods, which involves multiple time-consuming stages, is an area that needs improvement by the company. The company also needs to conduct financial checks related to transactions made by its customers. Here, the transaction data between the company and the distributor, specifically related to the projects they previously obtained, needs to be verified. The company applies a credit limit system for each customer distributor, so it is necessary to settle each transaction made by the government. Balanced Scorecard (BSC) approach was used to collect data in the ongoing process. The researchers chose the Balanced Scorecard approach because its basic concept, developed by Robert Kaplan (1992), enables the translation of a company's vision, mission, and strategy. Although this approach doesn't explicitly target lean supply chains, it offers improved guidance for measuring a company's supply chain performance [7]. Since no research specifically explains lean supply chain performance in the electronics industry's B2G sector, further analysis is needed to determine and select potentially developable indicators based on the company's operations. The method used is the Analytic Network Process (ANP), which is employed as a tool for decision-making and to test the quantitative relationship between existing criteria.

II. LITERATURE REVIEW

Business to Government (B2G) is a business model where companies sell products, services, or information to the government or government institutions. This business model is applied to the central government, regional governments, or other institutions under the government. Business-to-Government (B2G) can be beneficial for companies and governments, including clear and stable contracts, secure transactions, and well-defined procedures, as well as involvement in community welfare, job creation, and contributing to the movement of regional economic growth. However, Business to Government (B2G) also presents various challenges, including the existence of complex government regulations, a lengthy and complicated tender process for projects, fluctuating government policies, and intricate application requirements. The government procurement system for goods and services is a crucial component of the transformation process aimed at achieving justice in establishing a clean and transparent government system. The transformation process is undertaken as an effort to make Indonesia a country with good, clean governance and free from personal, group, or class interests. Deviations still occur against the principles and provisions for the procurement of goods and services regulated in Presidential Decree No. 80 of 2003. By considering the deviations that happened, the Government Goods/Services Procurement Policy Agency (LKPP) formulated government goods and services procurement regulations through Presidential Regulation No. 12 of 2021, which regulates the electronic procurement of goods and services, also known as e-procurement. E-procurement can be interpreted as an application for the electronic implementation of auctions or purchases of goods and services, utilizing information technology. In the e-procurement process, regional and central governments can see all goods and services offered by the private sector. Regional and central governments can choose the specifications of goods that are in accordance with the procurement process they will carry out and can see the prices of each good and service transparently. With this, the government provides equal opportunities for business actors who want to partner with regional and central governments. The government goods procurement process, which in this case is regulated by the Electronic Procurement Service (LPSE), is divided into three main parts: e-catalogue/e-purchasing, tender, and direct appointment, as shown in Figure 1.

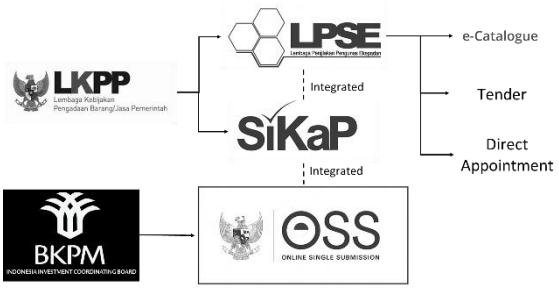

Figure 1 Diagram process of B2G

A. Semiconductor Supply Chain

Technological advances drive the rapid development of semiconductors. However, behind this development lies a very complex supply chain in producing a product, and the global distribution of this supply chain is related to all countries, which has significant implications for future technological competition and international security. Supply chain management issues have existed in the semiconductor industry since its inception, but have become increasingly important in the last decade [8]. The main problem in this industry is that early operations (fabrication, wafers, probes) are carried out in countries with cheaper labor costs. The production of a single computer chip often requires more than 1000 steps that cross international borders 70 times or more [9].

B. Lean Supply Chain

Lean Supply Chain can be defined as a set of organizations connected by upstream and downstream flows of products, services, information, and costs that work together to reduce costs and waste by efficiently pulling what is needed to meet the needs of each customer [10]. The implementation of a lean supply chain requires a different business model, where increased profits arise from cooperation rather than bargaining or exerting power over supply chain partners [11]. The entire flow from raw materials to the end customer is viewed as an integrated whole in lean supply chain where the company interface is considered as the result of the economic arrangement of assets that are governed by several contextual factors, such as level, geographic location of raw materials, and company size [12]. One approach that can help the supply chain reduce waste and achieve sustainability is Lean Production (LP), which is based on the Toyota Production System [13]. The principles of the lean concept include quality management, pull production, and error-proofing [14]. Techniques commonly employed in the lean concept include Kanban, 5S, visual control, takt time, and poka-yoke. In terms of manufacturing, it is implementing Just-in-Time (JIT), Total Productive Maintenance (TPM), and Total Quality Management (TQM) [15]. There needs to be a strategy for developing an understanding of the lean supply chain. Table 1 below are some strategies that can be applied.

Table I Strategy of Lean Supply Chain

Indicator	Description
Purpose	Companies focus on reducing costs, reducing waste or non-value-added activities.
Manufacture focus	Maintaining high utilization rates using Just-in time, on-demand inventory withdrawal systems.
Organization Structure	Using a static organizational structure with multiple levels of hierarchy
Supplier selection approach	Using suppliers who have low costs with good quality.
Inventory strategy	Perform high material turnover and minimize long-term storage.
Focus on lead time	Shorten lead time without adding costs
Product design strategy	Maximize performance and minimize costs.

C. Balanced Scorecard

Balanced Scorecard (BSC) is a performance measurement model introduced by Kaplan and Norton in 1992. Then, the concept was developed to help companies measure the performance of an organization [3].

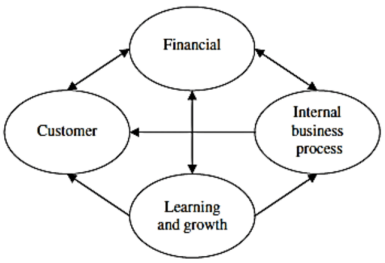

Figure 2 Perspective of Balanced Scorecard

The development of this method not only focuses on financial issues but also non-financial aspects. The assessment is carried out externally, specifically against customers and internal business processes, innovation, and growth within the company. The balanced scorecard (BSC) also assesses the results or consequences of past efforts and assessments of activities that drive future results [16]. Figure 2 is a perspective of the balanced scorecard.

D. Analytical Network Process

The decision-making method used in this study is the Analysis Network Process (ANP). This method was developed by Thomas L. Saaty, the creator of the

Analysis Hierarchy Process (AHP) method. The ANP method is an extension of the AHP method, as it addresses the weaknesses in the AHP method by accommodating the relationships between criteria. In ANP, there is feedback on the network structure, and dependencies on other factors can also occur. The presence of this feedback is also considered more accurate because it improves the priorities resulting from the assessment.

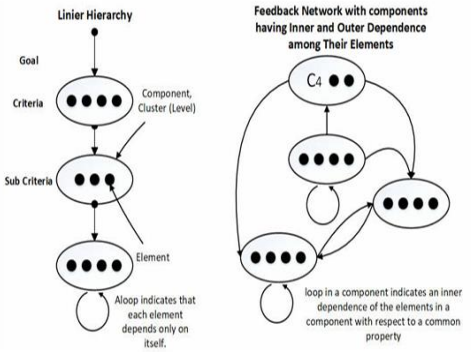

Figure 3 Differences of AHP and ANP [17]

In AHP, subjective assessments tend to occur when making comparisons, whereas in ANP, in-depth observation is necessary to produce more objective answers. The results of AHP are presented in the form of matrices and eigenvectors, which indicate a priority scale. In contrast, ANP is expressed in the form of a more stable super matrix, reflecting feedback. The scope of AHP is limited to the hierarchical structure, and ANP is broader. Figure 3 illustrates the differences between the structures of AHP and ANP [17]. When solving problems using the Analysis Network Process (ANP) method, several key principles must be understood. The principles that must be understood in ANP are decomposition, comparative judgment, synthesis of priority, and logical consistency.

1) *Decomposition* is solving a problem or dividing a whole problem into elements that form a hierarchy of decision-making processes, where each element is interconnected. To obtain accurate results, solving is performed on the elements until it is impossible to do further solving, thereby determining the level of the problem to be solved. The decision hierarchy structure is categorized into complete and incomplete. A decision is said to be complete if all elements at a level have a relationship to all elements at the next level. While the hierarchy is incomplete if the opposite of the incomplete hierarchy.

2) *Synthesis of Priority* is done by using eigenvector method to get relative weight for decision-making elements. Calculating eigenvalues and eigenvectors from comparison matrix. For example, there are N criteria (C1,.., Ci,., Cn) and pairwise comparison matrix A ¼ a_{ij}, where a_{ij}, represents the relative importance of criteria Ci and Cj. l For i and j, it is important that aii=1 and aij= 1/aji. Row vector mean vector method, introduced by Saaty is used to normalize the results and estimated weights, Wi is calculated in formula (1) as follows:

$$W_i = \frac{\sum_{j=1}^{n}\left(\frac{a_{ij}}{\sum_{i=1}^{n} a_{ij}}\right)}{n}, \forall_{i,j} = 1,2,\dots,n \quad (1)$$

The comparison matrix A completely responds to a_ik= a_ij.a_(jk) ∀_ijk. The following formula can be applied to obtain the approximate value of the largest eigenvalue λ_max.

$$AW = W\lambda_{max} = \frac{1}{n}\sum_{i=1}^{n}\frac{(AW)_i}{W_i} \quad (2)$$

3) *Logical Consistency* is an important characteristic in Analysis Network Process (ANP) and can be achieved by aggregating all eigenvectors obtained from various levels of the hierarchy and then obtaining a weighted composite vector that produces a decision-making sequence.

III. METHODOLOGY

In this study, the sampling method used is non-probability with purposive sampling technique. The research respondents were selected with the consideration that the respondents were directly involved or were considered to have the ability and understand the production process at PT XYZ. Respondents are experts in the fields of procurement, production processes, and sales. are strongly encouraged. In the ANP method, the validity reference is not assessed based on the adequacy of the number of respondents, but the respondents' ability to master the problem being researched. Respondents selected in this study had a minimum work period of 10 years and came from different departments, including SCM, production, and marketing.

TABLE 2 List of Respondent

Respondent	Position	Length of working
R1	Section Head of SCM	19 years
R2	Section Head Of Production	24 years
R3	In charge of Production	12 years
R4	In charge of Marketing	14 years

The results of the questionnaire from the respondents will be processed using the ANP method which will then select the criteria and alternative criteria from this study. The criteria and alternative criteria in this study are then perspective into the balanced score card method where alternative criteria will be selected to improve the supply chain process that occurs at PT XYZ.

IV. FINDINGS AND DISCUSSION

PT XYZ is a foreign manufacturing company from Japan engaged in electronics in the lighting business which was founded in 1996 and is located in Pasuruan Regency, East Java. During its operation period until 2015, PT XYZ had around 1000 employees who produced neon lamps, fluorescent lamps, HID lamps, and also LED bulbs for the needs of the Japanese retail market and also the Asian market. Along with the development of technology, neon, fluorescent, and HID lamps were discontinued in accordance with company policy due to the production process requiring high energy and cost and switched to focusing only on LED lamp production.

The Head Quarter of this company decided to close its subsidiary in Cikarang which also engaged in lighting and merged its two subsidiaries, and moved its production to East Java in 2016. Until now, the number of PT XYZ employees is around 200 people consisting of 150 permanent employees and the rest are contract and daily employees. PT XYZ developed its business process from focusing on making light bulbs to lamp housings / fixtures and light bulbs. The company also develops the retail market to the Business to Business (B2B) and Business to Government (B2G) markets by participating in several projects held by private and government agencies. In its journey in conducting Business to Government (B2G) since 2017, the company has experienced rapid growth in terms of sales. Business to Government (B2G) carried out by this company through the LKPP e-catalog and a number of tender projects participated by the company. The following is data on the company's achievements and developments in running B2G.

TABLE 3 List of Indicators

Indicator	Alternatives
Cost	Inventory total
	Regulation fee
	Labor cost
	Freight cost material
Quality	Customer complaint rate
	Rework rate of production
	Raw material defect rate
Time	Certification lead time
	Production process time
	Internal approval lead time
Delivery	Customer delivery lead time
	Ontime production
	Ontime delivery to customer

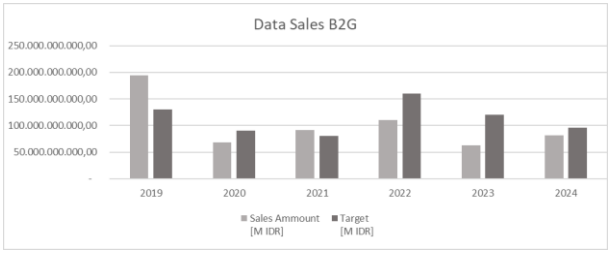

Figure 4 B2G developments carried out by PT XYZ

In 2023, PT XYZ achieved a minor milestone during its B2G operations. PT XYZ only gained 52.80% of the fiscal year business plan target. This is due to the large number of sales returns made by several local governments for goods that have been purchased. This is because several local government officials have the potential to experience corruption cases in transactions with other agencies, resulting in goods that have been sent being returned to PT XYZ. 85% of PT XYZ's main raw materials are sourced from imports from other countries because the technology in Indonesia is still not capable of producing light-emitting diodes (LEDs), controllers, and protection devices to the specifications of the products made. Meanwhile, 15% of other supporting raw materials from local companies are used limited to only a few materials, such as packaging, screws, cables, and aluminum. With this proportion, PT XYZ has the potential for delays in the arrival of goods if imported materials experience problems during shipping or when making purchases. Additionally, PT XYZ does not match the lead time of the suppliers they use.

A. Determination of Lean Supply Chain Assessment Indicators

The criteria used in this study to assess the lean supply chain based on the balanced scorecard perspective which adopts previous research conducted by Behrouzi and Wong (2011a). However, the indicators and sub-criteria in this study are adjusted to the conditions in PT XYZ and have previously been communicated with experts in this case in the SCM division which is the object and information in this study. Table 3 mentioned the indicator and alternatives indicator that used in this study.

In assessing the performance of PT XYZ's supply chain, four criteria and three sub-criteria were used, which were tested and selected based on their suitability as a framework from the perspectives of internal business processes, finance, customers, and innovation and learning. This weighting was done by giving a questionnaire to four respondents who were experts in certain fields. The assessment scale used refers to the development carried out by Saaty (2008). To unify the opinions of the four respondents, the results of the questionnaire were calculated on

average using the Geometric mean equation. Then, the calculation of the weighting results was carried out, involving four lean supply chain criteria: cost, quality, time, and delivery.

B. Data Analysis

The results obtained from the weighting value are further analyzed by creating a pairwise comparison matrix using Super Decisions software. This pairwise comparison matrix is used to obtain the eigenvector value and assess the consistency ratio of the pairwise comparison. The requirement for the consistency ratio (CR) value is less than 10% or CR $\leq$ 0.1. The pairwise comparison matrix for the criteria used in this study is presented in the Table. The eigenvector value is obtained from the calculation results using Super Decision software, where the resulting inconsistency value is the consistency ratio (CR) value, which is 0.05393.

TABLE 4 Pairwise Comparison Matrix Alternatives of Cost

	Cost	Quality	Time	Delivery	Weight
Cost	1.00	0.33	0.25	0.33	50.1%
Quality	3.00	1.00	0.33	2.00	17.1%
Time	4.00	3.00	1.00	3.00	8.3%
Delivery	3.00	0.50	0.33	1.00	24.2%
∑	11.00	4.83	1.92	6.33	

Based on Table 4, the cost criterion is a key factor that significantly influences the performance of PT XYZ's lean supply chain. In the following order, delivery has an influence of 24.2% on the performance of the lean supply chain.

TABLE 5 Pairwise Comparison Matrix Alternatives of Cost

	Inventory Total	Regulation Fee	Labor Cost	Freight Cost Material	Weight
Inventory Total	1.00	0.50	0.50	0.50	39%
Regulation Fee	2.00	1.00	0.50	2.00	19.5%
Labor Cost	2.00	2.00	1.00	2.00	13.8%
Freight Cost Material	2.00	0.50	0.50	1.00	27.6%
∑	7.00	4.00	1.92	6.33	

Based on Table 5, the consistency value of the cost alternative is CR of 0.045 or 4.5%. This means there is compliance with the CR value requirement, specifically, a value of less than 10%. The alternative with the highest value is the inventory total. The weight value represents the eigenvalue of those criteria or alternative criteria.

TABLE 6 Pairwise Comparison Matrix Alternatives of Quality

	Customer Complaint Rate	Rework Rate Of Production	Raw Material Defect Rate	Weight
Customer Complaint Rate	1.00	3.00	3.00	13.96%
Rework Rate Of Production	0.33	1.00	0.50	52.78%
Raw Material Defect Rate	0.33	2.00	1.00	33.25%
∑	1.67	6.00	4.50	

Based on Table 6, the highest eigenvalue is 52.78% for the alternative rework rate of production. This demonstrates the development of the assessment for lean supply chain performance at PT XYZ. CR value of alternative quality is 5.1%.

TABLE 7 Pairwise Comparison Matrix Alternatives of Time

	Certification Lead Time	Production Process Time	Internal Approval Lead Time	Weight
Certification Lead Time	1.00	2.00	3.00	15.7%
Production Process Time	0.50	1.00	3.00	24.93%
Internal Approval Lead Time	0.33	0.33	1.00	59.3%
∑	1.83	3.33	7.00	

Based on Table 7, the highest eigenvalue is 59.36% for the internal approval lead time alternative. The value of CR is 5.16%.

TABLE 8
Pairwise Comparison Matrix Alternatives of Delivery

	Customer Delivery Lead Time	Ontime Production	Ontime Delivery To Customer		Weight
Customer Delivery Lead Time	1.00	0.33	0.33		59.36%
Ontime Production	3.00	1.00	2.00		24.93%
Ontime Delivery To Customer	3.00	0.50	1.00		15.7%
∑	7.00	1.83	3.33		

Based on Table 8, With the highest eigenvalue being 59.36% for the customer delivery lead time alternative. The CR value is 5.16%. This indicates a significant impact on lean supply chain performance at PT XYZ.

C. Choosing The Best Strategy

After creating a pairwise comparison matrix of criteria and alternatives, the next step is to create a super matrix, namely an unweighted matrix, a weighted matrix, and a limiting matrix. These matrices are derived from calculations performed using the Super Decision software. From the three matrices, the limit matrix is tabulated according to the balanced scorecard perspective to produce selected criteria and alternatives, weighted according to their importance. Table 9 shows the selected criteria. According to the ANP concept, several alternatives were selected that had the highest weight, as calculated in Table 9. The selected options are considered to have the greatest influence and require improvement, along with the B2G process carried out by PT XYZ.

TABLE 9 LMIT Matrix With Balanced Scorecard Perspectives

BSC Perspectives	Criteria	Alternatives	Weight	Remark
Internal Process Business	Time	Certification LT	0.008294	
Internal Process Business	Quality	Customer Complaint Rate	0.015833	
Customer	Delivery	Customer Delivery LT	0.098881	Selected
Internal Process Business	Cost	Regulation Fee	0.030788	
Internal Process Business	Time	Internal Approval LT	0.031351	Selected
Financial	Cost	Freight Cost Material	0.043540	Selected
Financial	Cost	Labor Cost	0.015394	
Customer	Delivery	Ontime Delivery To Customer	0.041528	
Internal Process Business	Delivery	Ontime Production	0.026161	
Internal Process Business	Time	Production Process Time	0.013166	
Internal Business	Quality	Raw Material Defect Rate	0.037701	
Innovation & Learning	Cost	Inventory Total	0.201770	Selected
Internal Process Business	Quality	Rework Rate Of Production	0.059847	

Meanwhile, alternatives that are not selected do not mean that these alternatives have no influence on the lean supply chain process. These alternatives can be utilized in PT XYZ's advanced performance development process to have a more comprehensive impact and be continuously improved. There are no limitations on selecting options from the chosen criteria for the further development process. By applying the ANP method for analysis, this study identifies four alternatives for choosing a lean supply chain strategy, which are then evaluated from a balanced scorecard perspective for each alternative. The selected alternatives are customer delivery lead time (from the customer's perspective) and internal approval lead time (from the internal business perspective). Freight cost material (from a financial perspective), and total inventory (from an innovation and learning perspective. Identification of the four selected alternatives is adjusted to the business processes carried out by PT XYZ. The identification is as follows:

1. *Financial perspective*: From a financial perspective, the alternative considered for improving the performance of PT XYZ's lean supply chain is freight cost material. PT XYZ often delivers raw materials that do not match the lead time given by the supplier. This is due to the uncertainty of the forecasting process for sales in the B2G sector, so to meet this demand, PT XYZ accelerates the delivery of raw materials.
2. *From a customer perspective, an alternative that can be considered for improving the performance of PT XYZ's lean supply chain is reducing* customer delivery lead time. Uncertain demand from customers and the need for a fast demand fulfillment process make PT XYZ consider its fulfillment process. The number of orders affects the production process carried out at PT XYZ. The short delivery request time poses a challenge for PT XYZ to accept and fulfill this demand.
3. *From an innovation and learning perspective, an alternative that needs to be considered for improving* lean supply chain performance is total inventory. The need for inventory management, facilitated by a digital system between PT XYZ and distributors, will enable the maximum absorption of raw materials at PT XYZ. PT XYZ's flexibility in making new products or in the product development process is also needed by using materials in the warehouse. Communication between the marketing division, PPIC, and product development must be maintained continuously to ensure that the total inventory of raw materials is utilized effectively. It is necessary to conduct product bundling sales to quickly absorb inventory with high value, thereby generating profits for the company and reducing the amount and cost of inventory.
4. *From an internal business process perspective, the alternative considered is the* internal approval lead time. The documentation process, such as placing orders (purchase orders) for raw materials with suppliers that require approval up to the director level,

is a fairly lengthy process. The need to prepare forecast data and the number of customer requests to be processed requires a manual approval process. The person in charge (PIC) must request a signature from the director so that the purchase of materials can be immediately processed and officially released to the supplier. When the raw materials have arrived and can be passed to the production process stage, a credit limit approval process must be carried out by several managers, general managers, and directors so that the goods can be sent. This credit limit is a provision that PT XYZ applies to every distributor handling the B2G sector.

V. CONCLUSION

The results of this study are data processing with ANP obtained the cost criteria having the highest weight of 50.1% with the selected alternative being the total inventory that needs to be reduced by utilizing slow moving goods into new products. From the Balanced Scorecard perspective, the selected alternative is the customer delivery lead time with a weight of 9.8%, where the company needs to consider the delivery lead time given to customers when ordering goods.

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