Paper 78

The effects of human resource practices on agility and distribution support competencies (an empirical study of logistics service provider in Indonesia)

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Abstract - **Indonesia logistics industry has the greatest potential in the world, with over 200 million people, a huge number of trade agreements, growing e-commerce, and rising citizen purchasing power. This industry, however, has been hindered by a shortage of both quality and quantity of human resources employed in the sectors. To explore the effect of human resource practices have on logistics and supply chain competencies in Indonesia, this paper investigates the relationship between recruitment and selection, training and development, and reward management with the logistics and supply chain competencies of agility and distribution support. Data responses from 61 logistics service providers to a survey in 2022 were tested using hierarchical multiple regression analysis, which revealed recruitment and selection, as well as reward management only found to have a significant positive effect on agility competency. Whereas, training development has a significant positive effect only with distribution support. These results bring new insights that, in the Indonesian logistics sector, individual reward management can facilitate the development of agility, although it is considered a team-based competency. This highlights that LSP service levels in Indonesia are still based on individual effort, requiring effective and engaging individual reward management rather than team-based reward management.**

Keywords - **human resource management practices; logistics and supply chain competencies; Indonesia logistics industry**

I. INTRODUCTION

Logistic sector is viewed as a crucial interface to increase the international trade and has an important role on countries economic growth and development [1]. In terms of activity level and expenditure, the logistic sector substantially is a people business [2]. Therefore, the performance of logistics companies and countries strongly influenced by workforce quantity and quality [3]. In developing countries, especially in Indonesia, the logistics industry plays an important role in balancing economic growth across the island. The state of Indonesia, which has 17,504 islands, 225 million people, and vast natural resources such as oil, gas, coal, and palm oil, influences Indonesia's attempts to develop an effective and efficient logistics system. The greater the effectiveness and efficiency of the logistics system, the more likely this industry will continue to grow and contribute more to Indonesia's GDP (Gross Domestic Product) [4]. The logistics industry contributed IDR 881 663 billion to the Indonesian economy in 2019, accounting for 5.57 percent of GDP. Despite the fact that there is a decrease in 2020-2021 due to the COVID-19 situation [5]. The Indonesia's logistics industry is situated for growth due to trade agreements, ongoing improvements in transportation infrastructure, the growth of e-commerce, and rising buying power in the country. The logistics industry in Indonesia was estimated at US $81.30 billion in 2020, and it is predicted to expand to US$138.04 billion by 2026, with an annual growth rate of 9.22 percent throughout the forecast period [6]. Despite being a growing sector, logistics industry in Indonesia continues to experience a shortage of logistics experts, specialists, and professionals at both the management and operational levels. Jobs in this industry are not popular among students and recent graduates. Employees in logistics and supply chain management generally enter by "chance" owing to company's demand, rather than because developed their skills and competencies from the start. Therefore, it is difficult to recruit and select qualified employees in the logistic and supply chain industries in Indonesia This points to the fact that the present human resources working in the logistics sectors are both limited of poor quality and quantity. As a result, the lack of logistical talent has become an issue that cannot be underestimated any longer because the human resources are the main key to the development of logistics and the national supply chain [7].

IT and human resources are two critical components that enable the logistics and supply chain to operate [8]. Due to the reliance on skills and competencies, human resources are critical in logistic and supply chain management. Despite its relevance, this area is understudied; just 4.5 percent of articles published in the three major logistics journals between 2001 and 2005 addressed HRM challenges. From 1998 to 2014, many researchers uncovered just 109 HRM-related articles in 12 SCM and logistics journals, with each journal publishing an average of 0.57 papers each year. According to their thorough review of the literature, 87 percent of these publications addressed on logistical competency challenges [15]. Previous SCM (Supply Chain Management) study in China discovered that HRM practices have a significant effect on logistics service operations [9] [10] [11]. The human resource practices such as recruitment and selection,

training and development, reward management, and performance management are suggested to China's LSPs in order to solve the problem of skill shortage and develop the company's logistics and supply chain competencies [10] [12] [13]. According to other research, human resource practices such as training, reward management, performance management, job design, and staffing are critical for establishing an integrated supply chain, which leads to improved overall supply chain performance in terms of cost, quality, delivery, and flexibility [17]. The literature on human resource management reports that skilled workforces would be a significant contributor to the service competency of logistics service providers in Asian countries [11] [12] [13] [14]. However, little study has been conducted on how LSPs employ human resources to develop L&SC (Logistics and Supply Chain) competencies [12] [16].

As a result, the primary objective of this study is to examine the effect of human resource practices on logistics and supply chain competencies in Indonesia. Primarily, this paper examines the relationship between recruitment and selection, training and development, and reward management with the logistics and supply chain competencies of agility and distribution support. This study aims to contribute to the creation of a long-needed knowledge base to tackle problems caused by skilled workforce shortages in the Indonesian logistics service industry and achieve greater organizational performance.

II. METHODOLOGY

A. Conceptual Framework and Operationalization of Item Measurements

The conceptual framework used in this study describes an expected relationship between the variables (independent, dependent, and control variables). The conceptual framework employed in this thesis has been tested by several authors [10][12][18].

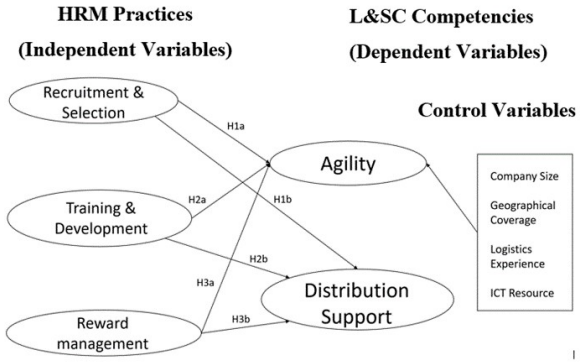

Fig.1 Conceptual Framework

Control Variables

As control variables in the data analysis, a five-item measuring construct of characteristics of company size (measured by the number of employees), geographical coverage (measured by the number of cities in Indonesia covered by operation), years of experience in the logistics industry, and ICT resource (measured by seven-point Likert Scale) are included in the data analysis potentially influence the L&SC competencies.

Dependent Variables

L&SC competencies are defined as the core capabilities that LSPs must establish using tangible or intangible resources to stay ahead of competitors by utilizing technological, production techniques, and management expertise to support the supply chain operation with cost-effective as well as high-quality products and services [16]. As a dependent variable, the L&SC competencies of agility and distribution support are measured using a five-item measuring construct. Each item of the construct was scored on a seven-point Likert scale (from "Strongly disagree" to "Strongly agree").

Independent Variables

HRM practices are defined as a set of distinct but interconnected activities, functions, and processes aimed at attracting, developing, and maintaining (or removing) intangible resources that contribute to sustained competitive advantage through firm-specific knowledge and competencies embedded in a firm's history and culture [19]. The authors used a fifteen-item construct to assess three key (recruitment and selection, training and development, and reward management) of human resource practices All constructs followed the seven-point Likert-type question format.

Table 1 - DESCRIPTIONS OF VARIABLES

Variables	Items in the questionnaire	Code	References	Measurement
Agility	We are capable of delivering quick shipment to meet customer needs	A1	Stank and Lackey, 1997; Swafford et al., 2006; Shang and Marlow, 2007; Cho et al., 2008, Ding et al., 2012 and 2015	Perception measured on a 7 point Likert Scale: 1 = strongly disagree; 7 = strongly agree
	We are capable of providing rapid response to customer requests	A2		
	We are capable of arranging a flexible delivery schedule to fit with customer's schedule	A3		
Distribution Support	We are capable of providing widespread or extensive distribution coverage	DS1	Morash et al., 1996; Cho et al., 2008; Qureshi et al., 2008; Ding et al., 2012 and 2015	
	Our transport and distribution network has helped customers achieve cost saving	DS2		
Recruitment and selection	The recruitment and selection processes in this company are unbiased	RS1	Ding et al., 2015; Feng et al., 2011; Islam and Siengthai, 2010	
	Interview panels are usually used during the selection and recruitment process in our company	RS2		
	Our recruitment and selection process fit the candidates with the jobs	RS3		
Training and development	Our company plans the training programs as each job needs	TD1	Delaney and Huselid, 1996; Ding et al., 2015; Kam et al., 2010); Kitchot et al., 2020. Ou et al., 2010	
	Employees are trained in logistic and supply chain management as well as related courses	TD2		
	The company evaluates the success of the training and development program	TD3		
	The company provide career development opportunities to employees	TD4		
Reward management	My organisation relates to compensation system with the level of knowledge and skill acquired by employees.	RM1	Ding et al., 2015; Islam and Siengthai, 2010; Kitchot et al., 20200	
	We offer attractive salaries to employees	RM2		
	We offer attractive welfare packages to employees	RM3		
Control Variables:				
Company size	Number of employees in Indonesia	CS	Wu et al., 2006; Kam et al., 2014	Number
Geographical coverage	Number of cities in Indonesia covered by operations	GC	Bolton and Wei, 2003; Ding et., al 2015; Fung et al., 2005; Qureshi et al., 2008	Number
Logistics experience	Years of experience operating in the Indonesia logistics market	LE	Ding et al., 2015; Hong et al., 2004	Years
ICT resource	Our information systems are sufficiently secure for business transaction	ICT1	Ding et al., 2015; Kam et al., 2010	Perception measured on a 7 point Likert Scale: 1 = strongly disagree; 7 = strongly agree
	Compared to our competitors, we invest more on computer hardware and software	ICT2		

B. Research Hypothesis Development

The hypotheses presented in this study are based on prior research in the field of human resource management and performance, which used logistics and supply chain competencies as determinants of organizational performance in the context of logistics supply chain operations.

Hypothesis 1

Recruitment and selection have been recognized as one of the most challenging problems in the Indonesian logistics industry. Jobs in this sector are unpopular among students and recent graduates, and most employees enter solely by chance [7]. The current study examines agility competency as a firm's ability to meet customer demands in a rapid manner [12]. Past research found in China's logistic sector, that there is a relationship between workforce and organizational agility in order to manage such a dynamic competitive logistic industry. Another study found recruitment and selection positive significant relationship with agility competency [12] [20]. Therefore, the previous research has stated that recruitment and selection has a positive influence on agility competency.

Hypothesis 1a (H1a): Recruitment and selection has a significant positive effect on agility competency for Indonesian LSPs.

Inadequate distribution activities would be a barrier for LSPs embarking on supply chain operations in Indonesia. This situation has a negative impact on companies' competitiveness [4]. This study defines distribution support competency as a company's ability to successfully provide vast spatial reach in freight distribution and delivery. By hiring experienced logistics specialists, they will be able to handle freight transport logistics in a cost-effective manner, which is critical. Past research reported recruitment and selection are important contributors to the growth of distribution support competency [12].

Hypothesis 1b (H1b): Recruitment and selection has a significant positive effect on distribution support competency for Indonesian LSPs.

Hypothesis 2

The need for skilled logisticians highlights the challenge of skills and labor supply in Indonesia's logistics sector. Employers, on the other hand, seek to hire qualified personnel from the open market rather than spend on training [21]. However, training and development are necessary for situations where skilled workers are in low supply. Training enables employees to develop an understanding of companies' logistics operations and serves as a tool for developing capabilities and competencies. Career development should be established so that individuals may advance their careers inside the firm. A lack of professional development opportunities would make it difficult for LSPs to retain their employees. Previous research found a significant positive association between training and development and agility and distribution support competency [12].

Hypothesis 2a (H2a): Training and development has a significant positive effect on agility competency for Indonesian LSPs.

Hypothesis 2b (H2b): Training and development has a significant positive effect on distribution support competency for Indonesian LSPs.

Hypothesis 3

Rewards are important motivators for attracting and retaining highly skilled employees [22]. Companies in the logistics industry should evaluate their market compensation levels on an annual basis to ensure that they are paying market-competitive rates [15]. In comparison to other industries such as information and communication, financial services and insurance, and

power and gas procurement, the average salary paid by Indonesian LSPs is significantly lower. There is a minimum pay level legislation in Indonesia, although this does not indicate that all employees are rewarded in compliance with this guideline [23]. The shortage of qualified workers in Indonesia's fast-growing logistics sector has highlighted the necessity of a competitive compensation and benefits package in recruiting and maintaining top talent. As a result, the author proposes:

Hypothesis 3a (H3a) : Reward management has a significant positive effect on agility competency for Indonesian LSPs.

Hypothesis 3b (H3b) : Reward management has a significant positive effect on distribution support competency for Indonesian LSPs.

C. Data Collection and Sample Profile

The data for this study analysis was obtained from a survey of Indonesian L&SC firms undertaken in 2022 and chosen from the list of ILFA/ALFI's (Indonesian Forwarders and Logistics Service Providers Association). A total of 201 Indonesian logistics companies were identified from information provided by the ALFI database. 126 of the 201 email invitations issued were discovered to be no longer in operation, decreasing the effective sample size to 79 LSPs. A total of 65 completed surveys were received, with an overall response rate of 82%. Four (4) of the returned surveys were eliminated after data verification, leaving a final sample of 61 Indonesian LSPs for this study. The questionnaire was distributed to a key single informant, who is responsible for informing their organization of L&SC competencies and is familiar with the firm's broad range of human resource management practices.

D. Data Analysis

To analyze data in this study, descriptive analysis, reliability tests, validity tests, classical assumption tests of multiple regression, and hierarchical multiple regression were used. The descriptive analysis is used to explain the responding companies' profiles. To check internal consistency and validate all measurement variables, the reliability and validity test is performed. The classical assumptions of multiple regression tests such as linearity, homoscedasticity, normality, independence of the error distribution, outliers, and multicollinearity were checked prior to doing a hierarchical multiple regression analysis to test hypotheses.

III. RESULTS

This section presents the data analysis and findings. The sample profile is presented first as a result of descriptive analysis, followed by a discussion of the validity and reliability tests used to analyze and verify the measurement models, and subsequently a discussion of findings for fulfilling the assumptions testing for multiple regression models in using hierarchical regression analysis. Finally, the results of the hierarchical multiple regression analysis performed to test the hypothesized model are assessed.

A. Descriptive Analysis of Responding Firms

Table 2 - PROFILE OF RESPONDING LSPS

Key informants' position		LSPs annual revenue in 2021	
Vice president or above	41.0%	<Rp500.000.000	3.3%
Senior Manager	27.9%	Rp500.000.000 - Rp 1.000.000.000	8.2%
Junior Manager	31.1%	Rp2.000.000.000 - Rp10.000.000.000	9.8%
		Rp11.000.000.000 - Rp50.000.000.000	16.4%
		Rp51.000.000.000 - Rp100.000.000.000	13.1%
		Rp>100.000.000.000	49.2%
Years of experience in logistics industry		**Ownership**	
3-5	16.4%	Foreign-owned	4.92%
6-10	18.0%	State-owned	13.11%
11-15	14.8%	Private	81.97%
>15	50.8%		
Number of full time employees		**Number of cities covered in Indonesia**	
0-50	31.1%	1-5	23.0%
51-100	16.4%	6-10	11.5%
101-499	31.1%	11-15	4.9%
500-999	8.2%	16-20	6.6%
>1000	13.1%	>20	54.1%
Customer's Industry[a]		**Types of logistics services[a]**	
Automotive	57.4%	Transportation	88.5%
Fast moving consumer goods (FMCG)	57.4%	Warehousing	72.1%
Consumer electronics	49.2%	Distribution	67.2%
Food & beverage	47.5%	Freight forwarding	62.3%
Chemical material	44.3%	Logistics information systems	52.5%
IT and Telecom	31.1%	Value added-services	44.3%
Apparel and textile	29.5%	Inventory replenishment and control	42.6%
Agriculture	21.3%	Others	23.0%
Mining	11.5%		
E-commerce and marketplace	8.2%		
Retail	4.9%		
Medical equipment	3.3%		
Steel	3.3%		
Others	21.3%		

Notes: a: The total percentages in this section do not add up to 100 percent because multiple categories are allowed.

Based on Table 2 above, the majority of participants from the 61 responding LSPs held Vice President or higher levels (41%). This shows that the participants from the responding businesses had adequate knowledge to complete the questionnaire accurately and reliably. Most of the responding LSPs have private ownership (81.97%). More than half (50.8%) of the responding LSPs were in operation more than ten years ago. According to Law No. 20 of 2008, 49.2 percent of LSPs produced more than Rp100.000.000.000 in income, which fell in the major firms (annual sales of more than 50 billion). The percentages for the number of full-time employees are the same, at 31.1 percent for LSPs with 0 to 50 employees and 10-499 employees. Over half of the LSPs in Indonesia (54.1%) operate in more than 20 cities, indicating that the majority of responding LSPs operate on a large scale. Transportation, warehousing, and distribution, are the three major logistics services offered by these firms. These firms primarily serviced consumers in the

automotive, fast-moving consumer goods, and consumer electronics industries.

B. Validity and Reliability Test Results

Validity Test Result

The questionnaire in the form of a Likert scale provides ordinal data for that reason the validity test is performed for each item of the statement using the Spearman's Rank Correlation static technique (Spearman Rho) [24]. The testing is carried out by correlating the item score of each statement item with the total score, and after that interpreting the resulting correlation coefficient; if the correlation of each factor is positive and the magnitude is greater than 0.3, it can be concluded that the instrument has good construction validity [25].

Table 3 - RESULTS OF VALIDITY TEST

Variables	Code	*R*	Critical Value	Conclusion
ICT Resource	ICT1	0.811	0.3	Valid
	ICT2	0.891	0.3	Valid
Recruitment and selection	RS1	0.852	0.3	Valid
	RS2	0.834	0.3	Valid
	RS3	0.716	0.3	Valid
Training and development	TD1	0.887	0.3	Valid
	TD2	0.847	0.3	Valid
	TD3	0.919	0.3	Valid
	TD4	0.718	0.3	Valid
Reward management	RM1	0.845	0.3	Valid
	RM2	0.947	0.3	Valid
	RM3	0.927	0.3	Valid
Agility	A1	0.912	0.3	Valid
	A2	0.907	0.3	Valid
	A3	0.932	0.3	Valid
Distribution support	DS1	0.867	0.3	Valid
	DS2	0.891	0.3	Valid

The validity testing results shown in Table 3 demonstrate that the validity test findings of all research variables were all valid, hence no research variables were eliminated (R > 0.3).

Reliability Test Result

Cronbach's alpha utilizes to measure reliability, noting that a value greater than or equal to 0.70 demonstrates internal consistency among the items.

Table 4 - RESULTS OF RELIABILITY TEST

Variables	Code	Cronbach's α	Critical Value	Conclusion
ICT Resource	ICT1	0.715	0.7	Reliable
	ICT2		0.7	Reliable
Recruitment and selection	RS1	0.711	0.7	Reliable
	RS2		0.7	Reliable
	RS3		0.7	Reliable
Training and development	TD1	0.856	0.7	Reliable
	TD2		0.7	Reliable
	TD3		0.7	Reliable
	TD4		0.7	Reliable
Reward management	RM1	0.892	0.7	Reliable
	RM2		0.7	Reliable
	RM3		0.7	Reliable
Agility	A1	0.911	0.7	Reliable
	A2		0.7	Reliable
	A3		0.7	Reliable
Distribution support	DS1	0.756	0.7	Reliable
	DS2		0.7	Reliable

Table 4 shows the results of the reliability analysis revealing that each item of measurement constructs human resource practices (recruitment and selection, training and development, and reward management), logistics and supply chain competencies (agility and distribution support), and control variable of ICT resources are reliable (> 0.7). As a result, after passing the validity and reliability tests, the data could be processed to perform a hierarchical multiple regression analysis.

C. Assumption of Multiple Regression Test Result

Before conducting the hierarchical regression analysis, all independent variables were tested to ensure that they did not infringe the outlier, multicollinearity, normality, linearity, and homoscedasticity assumptions, as well as the sample-to-independent variable-ratio criteria [26].

The normality of agility and distribution support variables was assessed using the Kolmogorov-Smirnov test, which revealed that both the residual data acquired followed a normal distribution (D = 0.106, 0.139, sig 0.494, 0.192, respectively for each variables sig > 0.05). There were no univariate outliers (standardized residual more than or less than 3.3) and no multivariate outliers according to the value of Mahalanobis distance (critical value ≥ 24.32). The Tolerance and VIF values acquired as part of the regression program were examined for multicollinearity. Tolerance (>0.1) and VIF (<10) values for the three independent variables were all acceptable, showing no indication of multicollinearity or singularity. The Glejser test was used in this study with overall results revealed the data (sig > 0.05) meet the homoscedasticity assumption. A linearity test determined using the ANOVA table revealed a p-value of linearity is less than the significance level of 0.05 indicating there is a linear relationship between independent and dependent variables. A total of 61 responses would result in a ratio of 10.2 observations per

independent variable, above the minimum of 5 observations per independent variable set by [26]. In a conclusion, all of the preceding tests show that the acquired data satisfied the assumptions of regression analysis.

D. Hypothesis Testing

Hierarchical Multiple Regression Result

As all of the preceding assumptions have been fulfilled, then analysis was conducted to evaluate the hypotheses using the hierarchical multiple regression method to test the conceptual model. Hierarchical or sequential multiple regression is another common method of multiple regression, which is applied to test the regression model in an explanatory manner. This methods allows the independent variables enter the equation in an order specified by the researcher. The researcher normally assigns order of entry of variables according to logical or theoretical considerations [27].

In executing a hierarchical multiple regression analysis, all variables in this study models were added in two different blocks/models. The two separate hierarchical regression analyses were conducted to do hypothesis testing by using separately, agility and distribution support as the dependent variables. First, as model 1, the four control variables, company size, geographical coverage, logistics experience, and ICT resources were brought into the regression. According to the resource-based view theory [19], HR practices will be a competitive advantage if they are difficult to imitate. Consequently, large firms may have an advantage when it comes to resources over smaller firms. Therefore, the author included company size, geographical coverage, logistics experience, and ICT resources as the control variables. In model 2, the three independent variables (recruitment and selection, training and development, and reward management) were entered subsequently into the two regression equations.

Table 5 - HIERARCHICAL MULTIPLE REGRESSION MODEL RESULT

	Agility		Distribution Support	
	Block 1	Block 2	Block 1	Block 2
Control variables				
Company size	-0,233*	-0,256**	,149	,143
Geographical coverage	0,139	0,177*	,041	,058
Logistics experience	0,130	0,149	-,086	-,016
ICT resource	0,437***	0,277**	,256*	,083
Independent variables				
Recruitment and Selection		0,252*		-0,001
Training and Development		0,055		,460***
Reward Management		0,278*		,170
R^2	0,270	0,516	0,088	0,395
Adjusted R^2	0,218	0,452	0,023	0,315
R^2 Change	0,270	0,245	0,088	0,307
N	61	61	61	61

Notes: Figures shown are standardised coefficients (i.e. beta values).

*p < 0.10; **p < 0.05; ***p < 0.01.

The results shown in Table 5 indicate while no particular hypotheses were set for the control variables, it was revealed in Block 1 that company size had a negative significant correlation with agility (β = -0,233, p 0.10), and so the independent variables were put into the regression (β = -256, p 0.05) in Block 2. When independent in Block 2 is entered, the geographical coverage (β = 0.177, p < 0.10) exhibits a significant positive relationship with agility. Logistics experience has little bearing on agility and distribution support on either block. ICT resources had significant relationships with agility and distribution support. For Agility, the ICT resource had significant relationship for both of Block 1 (β = 0.437, p < 0.01) and Block 2 (β = 0.277, p < 0.05). However, It is noted that ICT resource has a significant positive effect on distribution support (β = 0.256, p < 0.10) in Block 1 and became insignificant when independent variables were entered in Block 2.

As the independent variables were included in the model in Block 2, the results indicate that only agility (β = 0.252, p < 0.10) has a significant positive effect on recruitment and selection, confirming hypotheses H1a but rejecting hypotheses H1b. According to the findings, recruitment and selection are critical for Indonesian LSPs to establish agility competency. Training and development have a significant positive effect on distribution support (β = 0.460, p < 0.01) but have no effect on agility. As a result, the data support Hypothesis H2b but not Hypothesis H2a. Per the findings, training and development are critical for Indonesian LSPs to achieve distribution competency. The reward management had a significant positive effect on agility (β = 0.278, p 0.10) but did not affect distribution support, indicating that Hypothesis H3a is confirmed but Hypothesis H3b is not. The findings show that reward management is crucial for Indonesian LSPs to develop agility competency.

Table 6 - SUMMARY OF THE RESEARCH HYPOTHESIS RESULTS

Hypothesis	Research Hypothesis	Results	
H1a	Recruitment and selection has a positive effect on agility competency for Indonesian LSPs.	Positive and significant	Support
H1b	Recruitment and selection has a positive effect on distribution support competency for Indonesian LSPs.	Negative and insignificant	Reject
H2a	Training and development has a positive effect on agility competency for Indonesian LSPs.	Positive and insignificant	Reject
H2b	Training and development has a positive effect on distribution support competency for Indonesian LSPs	Positive and significant	Support
H3a	Reward management has a positive effect on agility competency for Indonesian LSPs	Positive and significant	Support
H3b	Reward management has a positive effect on distribution support competency for Indonesian LSPs.	Positive and insignificant	Reject

According to Table 6, only three of the six hypotheses tested had positive and significant results.

IV. DISCUSSION

Control Variable Effects

There are four key findings of the effect of control variables on the dependent variables. First, the study reveals that the influence of company size is statistically significant negative on agility but its effect on distribution support is not significant. This finding reported that the LSP size has no major effect on the strength of distribution competency or the LSPs' ability to offer customer distribution support in Indonesia's logistics operation. On the other hand, the agility competency is affected by the size of the LSPs. This finding is consistent with the findings of [12], who discovered that the larger the firm size of LSPs, the less agile the firm. Larger LSPs are less responsive to changing market conditions or customer demand than smaller sizes LSPs. Smaller LSPs may have a benefit in developing agility competency when compared to larger firms. In terms of operational operations, smaller businesses are easier to manage than larger businesses [28].

Second, the results show geographical coverage has a significant positive effect only on agility competency. It confirms the previous findings [12] [29] [30]. All these studies reveal that having widespread or global distribution coverage is a key to competing in the logistic market. This finding suggests that geographical coverage is vital to the development of L&SC competencies in the Indonesian market. It is an essential element of competing since Indonesia's geographical conditions present possibilities and difficulties for the national logistics system. Geographically, Indonesia has approximately 17,000 islands, making it difficult to deliver the commodity throughout the country.

Third, the findings revealed logistical experience has no significant impact on the development of logistics and supply chain competencies. This finding implies that, in the context of Indonesia's logistics operations, logistics expertise has minimal impact on the strength of its agile competency or its potential to provide distribution assistance to customers. This discovery is consistent with the previous findings [12].

Fourth, the findings revealed that ICT resources have a significant positive effect on agility and distribution support, ICT has become critical for LSPS to respond to market volatility and improve their regular operations. This result supports some of the previous studies [12] [31]. In Indonesia, the extent of ICT platform development to enable tracking and monitoring systems varies amongst logistics service providers (state-owned company and private) contrasted with the global logistics service providers [31].

Human Resource Practices Effects

This study's findings support hypotheses H1a, H2b, and H3a, but reject hypotheses H1b, H2a, and H3b. According to the findings of this hypothesis, present human resource practices in Indonesia's logistics industry have a mixed impact on the development of logistics and supply chain competencies. These findings raise numerous intriguing aspects that are worth further discussion.

First, recruitment and selection have a statistically significant positive effect on agility competency. This result is congruent with the previous findings which found that effective design strategies, policies, and procedures for recruitment and selection will create a unique source of competitive advantage for the LSPs and boost their agility competency [12]. Indonesian LSPs must create effective recruitment and selection procedures and processes capable of creating more competent logistic personnel and expertise. The dynamic of the Indonesian logistics sector's business climate will lead to determining the skills required to employ new employees for the company to provide speedy delivery services, build creative flexible delivery plans, and respond quickly to customer complaints to become an agile organization. The statistically insignificant negative relationship between employee recruitment and selection and distribution support competency in Indonesia could be interpreted as an indication that, rather than carrying out recruitment and selection practices to obtain skilled employees logistics companies can build their distribution linked with a wide area coverage to serve customers, the logistics companies prefer to form partnerships with other companies. Several Indonesian logistics companies have formed a partnership to improve their distribution network such as, PT Kereta Api Indonesia (Persero) worked with PT Bhanda Ghara Reksa on the supply of freight transport by train to support the BGR business, the exploitation of KAI's assets, and the usage of warehousing and depots container of BGR.

Second, training and development practices have a statistically significant positive effect on the distribution support. This study's findings are consistent with those of earlier studies [12] [33] [34]. This finding implies that an effective training and development program, policy, and procedure are more capable of enabling Indonesian LSPs to successfully offer extended geographic reach in freight distribution and delivery in order to assist consumers in distributing their products over a wide geographical location at very competitive rates. The distribution support competency, which is concerned with carrying out operational activities, requires a high level of

individual skill and effort. Individual efforts will be required for both white-collar and blue-collar workers, such as truck drivers, to complete the operational operations of freight distribution to a vast geographical region. Therefore, it is critical that Indonesian LSPs offer training and career development programs for both white and blue-collar personnel to enhance distribution support competency. On the other hand, the statistically insignificant effects of training and development on agility competency in the Indonesian logistics industry may be interpreted as evidence that regular training and development programs are not always effective in boosting LSP performance. This finding is consistent with [15] and [21]. In a survey among LSPs from emerging and developed regions, there is an inclination for some LSPs to perceive training as a cost instead of an investment because the benefits are difficult to measure, despite the fact that training has been shown to be beneficial in both economic and managerial aspects. There is evidence that Indonesian LSPs frequently choose to hire experienced personnel from the open market rather than spend on training [15].

Third, the notable findings of this study is reward management has a statistically positive and significant effect on agility competency. This finding is consistent with the majority of previous studies, which found a positive and significant relationship between reward management practices and organizational performance [34] [35] [36] [37] [38] [39]. According to this finding, reward management conducted by Indonesian LSPs appears to be focused directly on individuals rather than teams, but still, has a major influence on agility despite being regarded as team-based competency. This was aligned with the business service levels provided by Indonesian LSP which, according to [7], primarily offered basic logistics services. Only a small number of these LSPs have offered value-added services. This highlights logistics companies in Indonesia tend to be dominated by basic services instead of value-added services that need strong employee teamwork. For that reason, this indicates that in Indonesia, logistics companies take a greater concept of individual reward management rather than team reward management since their level of services is still based on individual effort, which necessitates effective and appealing individual reward management rather than team-based reward management. In contrast, the insignificant effect of reward management on distribution competency may interpret as LSP's ability to successfully distribute goods across a large geographical area is heavily influenced by the distribution system [40]. According to a [41] assessment, the overall length of Indonesia's categorized road network in 2017 was stated to be 532,837.9 km, with the majority of it handled at the district (80.5 percent) and provincial levels (10.5 percent). Only 60% of these subnational roads are concrete, and a considerable portion is not in excellent shape. The national road network has not kept up with rising demand, resulting in a capacity backlog. As a result of weak connectivity and high transportation costs, Indonesia's productivity and competitiveness have suffered. On worldwide indexes of transportation infrastructure and logistics performance, Indonesia falls below regional peers. In the 2018 Global Competitiveness Index, Indonesia ranks 75th out of 140 nations in terms of road quality, after Malaysia (20), China (42), India (51), and Thailand (55). Therefore, even though there is an attractive salary, benefits, and welfare package, the Indonesian LSPs will continue to face challenges to deliver the product into a wide geographical area due to various issues such as logistics infrastructure, regulations, policies, and logistics costs.

V. CONCLUSION

In order to tackle the problem of shortage of logisticians in terms of quality and quantity in the Indonesian logistics industry, this research intends to examine the impact of human resource management practices on agility and distribution support competencies in the Indonesian logistics industry. This research explores whether and how human resource practices contribute to enhancing the logistics and supply chain competencies as the indicator of organizational performance in the context of logistics and supply chain operations.

This study discovered that recruitment and selection, as well as reward management, appear to be critical practices for developing agility competency [12] [34] [35] [36] [37] [38] [39 [42]. While training and development appear to be reinforcing the development of Indonesian LSPs' distribution support competency [12] [33] [34]. It was concluded that effective recruitment and selection strategies will eliminate skills gaps or skill mismatches, giving the logistics organization a greater chance of hiring competent talent personnel, which is required to enhance agility competency. The findings also showed that reward management can benefit Indonesian LSPs in developing agility competency. Being an agile organization is dependent on the organization's competent workforce. The training and development program related to the core of the logistics and supply chain such as distribution and transportation, warehousing, and inventory management in upgrading of workforce skills as to give a better opportunities to develop their career, thus lead to the increase of distribution support competency.

Managerial Implications

The present study enablers managers to enhance the organizational performance through the use of human resource practices in order to solve the shortage of logistics employee and skilled or expertise logistics

employees in Indonesia logistics sector. The positive effects of recruitment and selection on agility imply the manager must develop effective recruitment and selection policies, and methods because in order to develop agility depends on how many the skilled talent the logistics company have.

The positive effects of training and development on distribution support suggest the managers to ensuring that the training program is attributed to the core of logistics and supply chain, as well as assure that the activities of the training program are based on the training analysis need and meet the needs of both white-collar and blue-collar employees, and providing career opportunities for all level of job levels.

Reward management systems appear to reinforce the growth of agility competency, this implies that the managers should able to offer a fair, competitive, and attractive salary and welfare package for individual reward management because it helps Indonesian LSPs to recruit the skilled and expertise employees.

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