

Branch Level Courier Employee Performance Measurement Using the Human Resource Scorecard and Analytical Hierarchy Process: Evidence from a Bangkok Logistics Branch

Kanyarat Phasukchai¹, Chalita Boonmee², Suphaporn Minambue³

Thammasat University, Bangkok, Thailand

Email: chalita.Boonmee@tu.ac.th



ABSTRACT

This study evaluates courier employee performance at a Bangkok branch of a Thai logistics company by integrating the Human Resource Scorecard (HRSC) and the Analytical Hierarchy Process (AHP). The study is designed as a descriptive evaluative case study rather than a causal test of company wide organizational performance. Employee data were obtained from 40 active couriers through a structured questionnaire and operational performance records, while priority judgments were obtained from three managerial experts who were directly involved in branch human resource and courier operations. The HRSC framework was used to classify performance indicators into financial, customer, internal business process, and learning and growth perspectives. AHP was used to assign relative managerial priority weights through pairwise comparison, not to test statistical influence. After correcting the normalization of the reported priority vector, learning and growth received the highest priority, followed by financial, customer, and internal business process perspectives. Performance achievement was then evaluated by combining capped achievement scores with global AHP weights. The measurable KPI composite score was 96.16, indicating green branch level performance based on the revised threshold of Green ≥ 90 , Yellow ≥ 70 and < 90 , and Red < 70 . The findings suggest that learning, digital capability, career development, attendance discipline, service reliability, and internal communication should be treated as managerial priorities for branch improvement. The results are limited to the selected branch, cross sectional observations, a small expert panel, and self reported employee measures. Therefore, broader relevance to logistics firms in Thailand or ASEAN should be interpreted cautiously and requires external validation.

Keywords: Human Resource Scorecard, Analytical Hierarchy Process, Courier Employee Performance, Logistics Management, Branch Level Performance Measurement.

INTRODUCTION

The logistics industry in Thailand continues to face increasing operational pressure from e-commerce growth, digital retail channels, and rising customer expectations for fast and reliable last mile delivery. Official logistics reporting indicates that the value added of Thailand logistics businesses in 2024 was estimated at 556.5 billion baht, an increase from the previous year. In parallel, the Thailand e-commerce market has been reported at USD 21.83 billion in 2024, with continued growth expected in 2025. These conditions make courier performance an important operational issue because service quality in last mile delivery depends not only on routing technology and tracking systems but also on employee discipline, communication, safety, and capability.

Human resources are especially important in courier operations because front line employees translate logistics strategy into daily service outcomes. Attendance, route discipline, customer interaction, parcel security, and coordination with supervisors directly affect delivery reliability. However, the relationship between human resource practices and operational outcomes should be interpreted carefully. A branch level performance evaluation can identify priority areas for managerial action, but it cannot by itself establish company wide organizational performance, profitability, customer retention, or long term competitiveness.

Preliminary managerial observations at the selected Bangkok branch indicated concerns related to attendance discipline, coordination during high volume delivery periods, work pressure, and career progression. These observations were treated as contextual starting points rather than verified evidence of severe organizational underperformance. For that reason, this study uses a restrained evidence based approach by combining employee questionnaire data, available performance records, and managerial expert judgments.

Human Resource Scorecard (HRSC) provides a structured framework for aligning human resource indicators with strategic perspectives, while the Analytical Hierarchy Process (AHP) provides a transparent method for assigning relative priority weights to criteria through expert judgment. In this study, AHP is used for priority weighting only. It does not test causal influence, mediation, or statistical prediction.

The objective of this study is to develop a branch level courier employee performance measurement framework by integrating HRSC and AHP, to identify the highest managerial priority areas, and to calculate a weighted performance score for measurable operational indicators. The scope is limited to 40 couriers and three managerial experts at one Bangkok branch. Therefore, the findings should not be generalized to all branches of the company or to the Thai logistics sector without further validation.

The Human Resource Scorecard links human resource activities with strategy by translating people related objectives into measurable indicators. It extends the balanced performance logic by emphasizing that employee capability, motivation, and alignment can support operational outcomes. In this study, HRSC is used as a classification and measurement framework. Four perspectives are used: financial, customer, internal business process, and learning and growth. The financial perspective captures cost related and productivity related outcomes at branch level; the customer perspective captures service reliability and customer facing outcomes; the internal business process perspective captures coordination and supervisory processes; and the learning and growth perspective captures capability development and career readiness.

The Analytical Hierarchy Process is a multi criteria decision making method that converts pairwise comparison judgments into priority weights. Experts compare elements at the same hierarchy level using Saaty scale values, and the resulting matrix is checked for logical consistency. AHP is suitable for this study because courier performance includes multiple criteria that are difficult to prioritize using a single metric. However, AHP weights should be interpreted as expert based priority weights. They do not indicate statistical effect size or causal influence.

Valuable organizational resources when they are aligned with operational needs. In logistics services, recent ASEAN evidence also suggests that human capability, job satisfaction, employee engagement, work environment, and logistics management competence are relevant to employee and logistics performance. For example, a Vietnam based logistics study emphasized the role of managerial competence, individual performance, education, and experience in logistics performance, while a Malaysia based logistics study identified job satisfaction, engagement, and work environment as important predictors of employee performance. These studies support the relevance of human capital in logistics, but they differ from the present study in sample, unit of analysis, and method. Therefore, they are used as comparative literature rather than as direct validation of this branch level case.

METHODS

Research Design and Scope

This study used a descriptive evaluative case study design. It measured and prioritized courier employee performance indicators at one Bangkok branch of a Thai logistics company using HRSC and AHP. The study did not use hypothesis testing, regression, structural equation modeling, or causal analysis. Therefore, the results are interpreted as branch level performance evaluation and managerial priority assessment.

Research Setting, Participants, and Period

The employee population consisted of all active courier employees at the selected Bangkok branch during the research period. A branch level census participation approach was used because the population was small, and all 40 active couriers were invited to complete the questionnaire. This approach improves coverage of the selected branch population but does not eliminate response bias, measurement bias, or limited external generalizability. Three managerial experts, consisting of a human resource manager, an operations coordinator, and a branch supervisor, provided AHP pairwise comparison judgments. Experts were selected based on their direct involvement in courier supervision, performance evaluation, and branch operations. The research period should be reported as the exact month and year in the final production file based on the fieldwork log.

Research Ethics, Consent, and Organizational Permission

Before data collection, organizational permission was obtained from the relevant branch authority. Respondents and experts were informed about the study purpose, voluntary participation, confidentiality protection, and the use of data for academic purposes. Informed consent was obtained before questionnaire

completion or expert judgment submission. Employee identities were anonymized using respondent codes, and individual level responses were not disclosed to management or reported in the manuscript.

Indicator Development

The HRSC indicators were developed from the literature review, preliminary managerial observations, available operational performance records, and limited interviews. Interview and observation notes were coded by identifying recurring themes related to attendance, delivery reliability, communication, training, and career development. These themes were compared with HRSC perspectives and used to refine the final measurement framework. The qualitative component supported indicator development only and was not analyzed as an independent qualitative study.

Table 1. HRSC measurement framework and indicator structure

Perspective	Strategic objective	Indicator code	Indicator	Data source	Indicator type
Financial	Improve discipline and cost related productivity	F1	Attendance and discipline	Attendance record and questionnaire	Benefit
Financial	Optimize delivery process efficiency	F2	Operational efficiency	Branch performance record	Benefit
Financial	Strengthen welfare support	F3	Employee welfare	Questionnaire and HR record	Benefit
Customer	Improve delivery reliability	C1	Delivery reliability	Branch performance record	Benefit
Customer	Improve customer service perception	C2	Customer satisfaction index	Customer feedback record	Benefit
Customer	Protect goods during delivery	C3	Parcel safety rate	Complaint and damage record	Benefit
Internal Business Process	Improve communication flow	I1	Team communication	Questionnaire and meeting record	Benefit
Internal Business Process	Strengthen supervision quality	I2	Supervisor leadership	Questionnaire	Benefit
Internal Business Process	Improve collaborative execution	I3	Team collaboration	Questionnaire	Benefit
Learning and Growth	Improve formal learning participation	L1	Training participation	Training record	Benefit
Learning and Growth	Improve digital work capability	L2	Digital skills	Questionnaire and training record	Benefit
Learning and Growth	Support career continuity	L3	Career advancement	HR record	Benefit

Questionnaire and Validity Procedure

The questionnaire used a five point Likert scale, where 1 means strongly disagree and 5 means strongly agree. The instrument measured employee perceptions that supported the HRSC indicators. Item validity was assessed using corrected item total correlation and significance values. This test was treated as item validity rather than full construct validity. Reliability was evaluated using Cronbach alpha. When the instrument is interpreted as multidimensional, reliability should be reported separately for each HRSC perspective. If construct validity is claimed, factor analysis should also be reported through KMO, Bartlett test, and factor loading values.

AHP Hierarchy and Pairwise Comparison

The AHP hierarchy consisted of three levels. Level 1 was the goal: branch level courier employee performance evaluation. Level 2 consisted of four HRSC perspectives: financial, customer, internal business process, and learning and growth. Level 3 consisted of the indicators under each perspective. Experts compared criteria using Saaty scale values: 1 for equal importance, 3 for moderate importance, 5 for strong importance, 7 for very strong importance, and 9 for extreme importance. Reciprocal values were used when the second criterion was judged more important than the first.

The individual expert matrices were aggregated using the geometric mean formula: $a_{ij} = (a_{ij1} \times a_{ij2} \times \dots \times a_{ijm})^{1/m}$, where a_{ij} is the aggregated comparison value between criteria i and j , a_{ijk} is the judgment of expert k , and m is the number of experts. The priority vector was then calculated through matrix normalization. Consistency was assessed using λ_{max} , $CI = (\lambda_{max} - n)/(n - 1)$, and $CR = CI/RI$. CR values below 0.10 were interpreted as acceptable.

Because the submitted manuscript reported perspective level weights that summed to 1.200, the priority vector was corrected through normalization by the total reported score. This correction preserved the original ranking but produced valid normalized weights that sum to 1.000. The original aggregated pairwise comparison matrix and Expert Choice output should be retained in the author data file for auditability.

Performance Achievement and Weighted Score

For benefit indicators, achievement was calculated as $Achievement = (Actual\ value / Target\ value) \times 100$. For cost indicators, achievement should be calculated as $Achievement = (Target\ value / Actual\ value) \times 100$. Because the indicators in this study were treated as benefit indicators, the first formula was applied. To prevent overachievement from inflating the composite score, achievement values above 100 percent were capped at 100 percent. The global weight of each indicator was calculated as $Global\ weight = Perspective\ weight \times Local\ indicator\ weight$. Because the available pairwise comparison was conducted at perspective level only, indicators within each perspective were treated as equally weighted. The weighted contribution was calculated as $Global\ weight \times Capped\ achievement$. The measurable KPI composite was calculated by dividing the sum of weighted contributions by the sum of available global weights.

The revised traffic light thresholds were defined as follows: Green for achievement ≥ 90 , Yellow for achievement ≥ 70 and < 90 , and Red for achievement < 70 . This definition removes ambiguity at exactly 90 percent and ensures that achievement values of 90.0 percent, 90.6 percent, and 92.6 percent are categorized consistently as Green.

RESULTS AND DISCUSSION

Item Validity and Reliability

The instrument testing in the submitted dataset reported item total correlations ranging from 0.62 to 0.88 and an overall Cronbach alpha of 0.931. These results indicate acceptable internal consistency for the total instrument. However, because the instrument is organized into four HRSC perspectives, the final data report should also preserve dimension level reliability values and the full item validity table. In this revised manuscript, the validity result is interpreted cautiously as item validity rather than complete construct validity.

Table 2. Minimum reporting structure for item validity and reliability

Test component	Reported result in revised manuscript	Interpretation	Required audit evidence
Item validity	Corrected item total correlation range = 0.62 to 0.88	All retained items exceed the minimum reported criterion	SPSS item table with item code, r value, p value, and decision

Overall reliability	Cronbach alpha = 0.931	Strong internal consistency for the full instrument	SPSS reliability output
Dimension reliability	To be retained from the SPSS dimension output	Needed because HRSC is multidimensional	Cronbach alpha for financial, customer, internal process, learning and growth
Construct validity	Not claimed from Pearson correlation alone	Pearson item total correlation does not establish full construct validity	KMO, Bartlett test, and factor loading if factor analysis is used

Corrected AHP Perspective Weights

The submitted manuscript reported the following perspective weights: learning and growth = 0.358, financial = 0.312, customer = 0.284, and internal business process = 0.246. Their sum was 1.200 and therefore mathematically invalid as normalized AHP weights. After proportional normalization, the corrected perspective weights sum to 1.000. The ranking remains unchanged.

Table 3. AHP Weights of HRSC Perspectives After Corrected Normalization

HRSC perspective	Reported value	Corrected normalized weight	Rank	Interpretation
Learning and Growth	0.358	0.298	1	Highest managerial priority
Financial	0.312	0.260	2	Second managerial priority
Customer	0.284	0.237	3	Third managerial priority
Internal Business Process	0.246	0.205	4	Fourth managerial priority
Total	1.200	1.000		Valid normalized total

The consistency ratio reported in the submitted manuscript was CR = 0.081, which is below the 0.10 threshold. In the final audit file, this value should be supported by the aggregated pairwise comparison matrix, lambda_max, CI, RI, and Expert Choice output. The results should be interpreted as expert priority judgments rather than evidence that one perspective statistically influences another.

Table 4. Local And Global Indicator Weights

HRSC perspective	Reported value	Corrected normalized weight	Rank	Interpretation
Learning and Growth	0.358	0.298	1	Highest managerial priority
Financial	0.312	0.260	2	Second managerial priority
Customer	0.284	0.237	3	Third managerial priority
Internal Business Process	0.246	0.205	4	Fourth managerial priority
Total	1.200	1.000		Valid normalized total

Weighted Performance Evaluation

Operational target and actual values were available for nine measurable KPIs. Three indicators, namely delivery reliability, team collaboration, and digital skills, were retained in the framework but were not included

in the current composite score because verified target and actual values were not available in the submitted manuscript. Therefore, the composite score below is a measurable KPI composite, not a full strategic HRSC score for all twelve indicators.

Table 5. Weighted Performance Evaluation Using Corrected HRSC and AHP weights

Perspective	Code	Indicator	Target	Actual	Achievement %	Capped achievement %	Global weight	Weighted contribution	Category
Financial	F1	Attendance and discipline	95%	88%	92.6	92.6	0.087	8.025	Green
Financial	F2	Operational efficiency	45,000 packages	40,800 packages	90.6	90.6	0.087	7.852	Green
Financial	F3	Employee welfare	100%	100%	100.0	100.0	0.087	8.667	Green
Customer	C2	Customer satisfaction index	>= 4.0	4.3	107.5	100.0	0.079	7.900	Green
Customer	C3	Parcel safety rate	100%	99.70%	99.7	99.7	0.079	7.876	Green
Internal Business Process	I1	Team communication	2 meetings/month	1.8 meetings/month	90.0	90.0	0.068	6.150	Green
Internal Business Process	I2	Supervisor leadership	>= 4.0	3.9	97.5	97.5	0.068	6.662	Green
Learning and Growth	L1	Training participation	>= 90%	85%	94.4	94.4	0.099	9.377	Green
Learning and Growth	L3	Career advancement	>= 2 staff/year	2 staff/year	100.0	100.0	0.099	9.933	Green

The sum of available global weights was 0.753. The sum of weighted contributions was 72.443. After normalization by the available global weight, the measurable KPI composite score was 96.16, which falls into the Green category. This result means that the measured branch level KPIs generally met or exceeded the revised threshold. It does not prove company wide organizational excellence or long term competitiveness.

Table 6. Summary of branch level performance categories

Category	Threshold	Number of measurable KPIs	Interpretation
Green	>= 90	9	Targets met or exceeded based on the revised threshold
Yellow	>= 70 and < 90	0	No measured KPI fell into this category after threshold correction

Red	< 70	0	No measured KPI fell into this category
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Proposed HRSC Strategic Map

Figure 1 presents the revised HRSC strategic map. It is labeled as a proposed conceptual map because the study does not test causal paths. The map aligns all constructs with the measurement framework in Table 1. Learning and growth indicators are positioned as capability foundations, internal business process indicators as coordination mechanisms, customer indicators as service outcomes, and financial indicators as branch level operational outcomes.

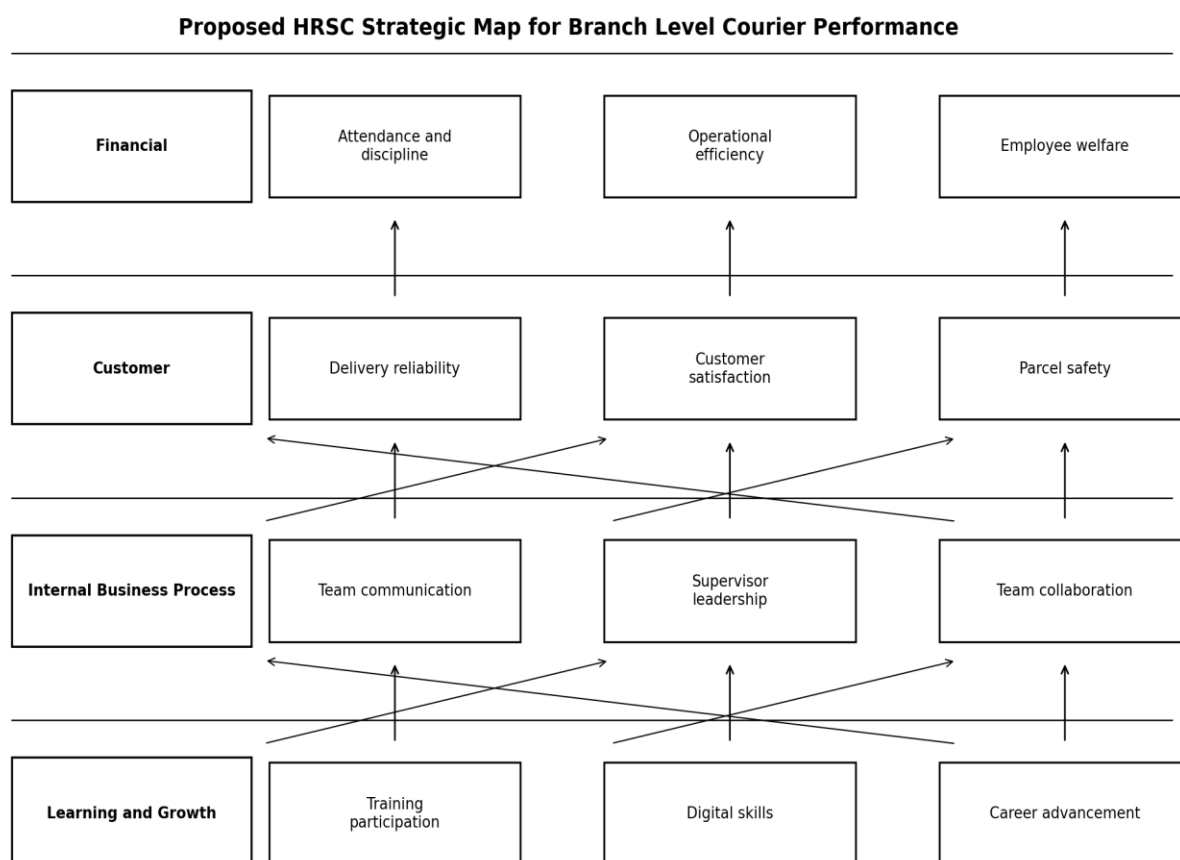


Figure 1. The Revised HRSC Strategic Map

DISCUSSION

The corrected AHP results indicate that learning and growth is the highest managerial priority in the selected branch. This finding should be interpreted as an expert based priority judgment rather than statistical evidence that learning and growth causes performance improvement. In practical terms, experts considered training participation, digital skills, and career advancement to be important because courier work increasingly requires route system use, customer interaction, safety awareness, and adaptation to digital logistics platforms. The financial perspective ranked second after normalization. This does not mean that financial outcomes are unimportant. Rather, it indicates that branch managers prioritized employee capability as a key managerial lever before cost related and productivity related outcomes. Attendance discipline, operational efficiency, and welfare support remain relevant because they are directly linked to daily courier productivity and service continuity.

The customer perspective ranked third. Customer satisfaction and parcel safety achieved green performance in the measurable KPI table. However, these results should be interpreted carefully because the study does not include independent customer retention, complaint trend, or longitudinal service quality data. The customer perspective should therefore be understood as branch level service performance evidence rather than a complete test of customer loyalty or market performance.

The internal business process perspective ranked fourth. This lower weight does not prove that the branch has already institutionalized effective processes. It only shows that the three experts assigned it a lower relative priority compared with the other perspectives. Team communication and supervisory leadership achieved green performance under the revised threshold, but the limited data do not justify a mediation claim. Internal business process should be described as a conceptual linkage between capability development and service delivery, not as a statistically tested mediating mechanism.

Compared with recent studies in ASEAN logistics contexts, the emphasis on learning, engagement, and work environment is consistent with the broader literature. Nevertheless, the present study differs from studies that use regression, PLS SEM, or broader organizational samples. Therefore, its contribution lies in providing a transparent branch level HRSC and AHP measurement framework rather than in establishing a causal model of organizational performance.

Several potential biases should be considered. First, expert judgments may reflect managerial perception and may not fully represent courier experience. Second, employee questionnaire responses may be affected by social desirability or fear of evaluation, even though anonymity was applied. Third, operational records may vary in accuracy depending on how the branch defines targets and actual values. Fourth, the single branch scope limits transferability to other branches and companies.

CONCLUSION

This study developed a branch level courier employee performance measurement framework by integrating the Human Resource Scorecard and the Analytical Hierarchy Process. The revised manuscript corrects the AHP normalization problem by ensuring that perspective weights sum to 1.000. Learning and growth was identified as the highest managerial priority, followed by financial, customer, and internal business process perspectives. The measurable KPI composite score was 96.16, which indicates green performance for the available branch level indicators under the revised threshold system.

The findings suggest that the selected branch should continue strengthening training participation, digital work capability, career development, attendance discipline, customer service reliability, parcel safety, communication, and supervisory support. These findings are useful for managerial prioritization but should not be interpreted as evidence of causal influence, mediation, company wide organizational performance, or sustainable competitiveness.

This study has several limitations. First, the analysis is limited to one Bangkok branch and therefore cannot be generalized to all branches of the company or to the Thai logistics sector. Second, the study uses cross sectional data, so performance changes over time cannot be evaluated. Third, the AHP judgments were obtained from a small expert panel, which may reflect managerial priorities rather than objective organizational priorities. Fourth, employee data were partly based on self reported questionnaires, which may contain response bias. Fifth, the proposed strategic map is conceptual and should not be interpreted as an empirically validated causal or mediation model. Future studies should include multiple branches, larger expert panels, longitudinal performance data, customer level indicators, and statistical validation of the proposed HRSC structure.

REFERENCES

- Abidi, H., Dullaert, W., de Leeuw, S., Lysko, D., & Klumpp, M. (2019). Strategic partner evaluation criteria for logistics service provider networks. *International Journal of Logistics Management*, 30(2), 438–466. <https://doi.org/10.1108/IJLM-07-2017-0178>
- Agatz, N., Bouman, P., & Schmidt, M. (2018). Optimization approaches for the traveling salesman problem with drone. *Transportation Science*, 52(4), 965–981. <https://doi.org/10.1287/trsc.2017.0791>
- Agyabeng-Mensah, Y., Ahenkorah, E., Afum, E., Dacosta, E., & Tian, Z. (2020). Green warehousing, logistics optimization, social values and ethics and economic performance: The role of supply chain sustainability. *International Journal of Logistics Management*, 31(3), 549–574. <https://doi.org/10.1108/IJLM-10-2019-0275>
- Aharonovitz, M. C. S., Vieira, J. G. V., & Suyama, S. S. (2018). How logistics performance is affected by supply chain relationships. *International Journal of Logistics Management*, 29(1), 284–307. <https://doi.org/10.1108/IJLM-09-2016-0204>

- Allen, J., Piecyk, M., Piotrowska, M., McLeod, F., Cherrett, T., Ghali, K., Nguyen, T., Bektas, T., Bates, O., Friday, A., Wise, S., & Austwick, M. (2018). Understanding the impact of e-commerce on last-mile light goods vehicle activity in urban areas: The case of London. *Transportation Research Part D: Transport and Environment*, 61, 325–338. <https://doi.org/10.1016/j.trd.2017.07.020>
- Alora, A., & Barua, M. K. (2022). Development of a supply chain risk index for manufacturing supply chains. *International Journal of Productivity and Performance Management*, 71(2), 477–503. <https://doi.org/10.1108/IJPPM-11-2018-0422>
- Anjomshoe, A., Hassan, A., & Wong, K. Y. (2019). An integrated AHP-based scheme for performance measurement in humanitarian supply chains. *International Journal of Productivity and Performance Management*, 68(5), 938–957. <https://doi.org/10.1108/IJPPM-04-2018-0132>
- Boudlaie, H., Amoozad Mahdiraji, H., Shamsi, S., Jafari-Sadeghi, V., & Garcia-Perez, A. (2020). Designing a human resource scorecard: An empirical stakeholder-based study with a company culture perspective. *Journal of Entrepreneurship, Management and Innovation*, 16(4), 113–147. <https://doi.org/10.7341/20201644>
- Boysen, N., Fedtke, S., & Schwerdfeger, S. (2021). Last-mile delivery concepts: A survey from an operational research perspective. *OR Spectrum*, 43(1), 1–58. <https://doi.org/10.1007/s00291-020-00607-8>
- Brunetto, Y., & Beattie, R. (2020). Changing role of HRM in the public sector. *Public Management Review*, 22(1), 1–5. <https://doi.org/10.1080/14719037.2019.1645876>
- Büyüközkan, G., & Göçer, F. (2018). Digital supply chain: Literature review and a proposed framework for future research. *Computers in Industry*, 97, 157–177. <https://doi.org/10.1016/j.compind.2018.02.010>
- Çalık, A. (2021). A novel Pythagorean fuzzy AHP and fuzzy TOPSIS methodology for green supplier selection in the Industry 4.0 era. *Soft Computing*, 25, 2253–2265. <https://doi.org/10.1007/s00500-020-05294-9>
- Chowdhury, M., Quaddus, M., & Agarwal, R. (2019). Supply chain resilience for performance: Role of relational practices and network complexities. *Supply Chain Management: An International Journal*, 24(5), 659–676. <https://doi.org/10.1108/SCM-09-2018-0332>
- Conaty, F., & Robbins, G. (2021). A stakeholder salience perspective on performance and management control systems in non-profit organisations. *Critical Perspectives on Accounting*, 80, Article 102052. <https://doi.org/10.1016/j.cpa.2018.07.001>
- Curchod, C., Patriotta, G., Cohen, L., & Neysen, N. (2020). Working for an algorithm: Power asymmetries and agency in online work settings. *Administrative Science Quarterly*, 65(3), 644–676. <https://doi.org/10.1177/0001839219867024>
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. *Human Resource Management Journal*, 30(1), 114–132. <https://doi.org/10.1111/1748-8583.12258>
- Ecer, F. (2018). Third-party logistics (3PLs) provider selection via fuzzy AHP and EDAS integrated model. *Technological and Economic Development of Economy*, 24(2), 615–634. <https://doi.org/10.3846/20294913.2016.1213207>
- Fatorachian, H., & Kazemi, H. (2021). Impact of Industry 4.0 on supply chain performance. *Production Planning & Control*, 32(1), 63–81. <https://doi.org/10.1080/09537287.2020.1712487>
- Gligor, D., Gligor, N., Holcomb, M., & Bozkurt, S. (2019). Distinguishing between the concepts of supply chain agility and resilience. *International Journal of Logistics Management*, 30(2), 467–487. <https://doi.org/10.1108/IJLM-10-2017-0259>
- Goods, C., Veen, A., & Barratt, T. (2019). Is your gig any good? Analysing job quality in the Australian platform-based food-delivery sector. *Journal of Industrial Relations*, 61(4), 502–527. <https://doi.org/10.1177/0022185618817069>
- He, Z. (2020). The challenges in sustainability of urban freight network design and distribution innovations: A systematic literature review. *International Journal of Physical Distribution & Logistics Management*, 50(6), 601–640. <https://doi.org/10.1108/IJPDLM-05-2019-0154>

- Irfani, D. P., Wibisono, D., & Basri, M. H. (2019). Logistics performance measurement framework for companies with multiple roles. *Measuring Business Excellence*, 23(2), 93–109. <https://doi.org/10.1108/MBE-11-2018-0091>
- Irfani, D. P., Wibisono, D., & Basri, M. H. (2020). Integrating performance measurement, system dynamics, and problem-solving methods. *International Journal of Productivity and Performance Management*, 69(5), 939–961. <https://doi.org/10.1108/IJPPM-12-2018-0456>
- Ivanov, D., Dolgui, A., & Sokolov, B. (2019). The impact of digital technology and Industry 4.0 on the ripple effect and supply chain risk analytics. *International Journal of Production Research*, 57(3), 829–846. <https://doi.org/10.1080/00207543.2018.1488086>
- Janjevic, M., & Winkenbach, M. (2020). Characterizing urban last-mile distribution strategies in mature and emerging e-commerce markets. *Transportation Research Part A: Policy and Practice*, 133, 164–196. <https://doi.org/10.1016/j.tra.2020.01.003>
- Kawa, A., & Światowiec-Szczepańska, J. (2021). Logistics as a value in e-commerce and its influence on satisfaction in industries: A multilevel analysis. *Journal of Business & Industrial Marketing*, 36(13), 220–235. <https://doi.org/10.1108/JBIM-09-2020-0429>
- Li, C., Wong, C. W. Y., Yang, C.-C., Shang, K.-C., & Lirn, T.-C. (2019). Value of supply chain resilience: Roles of culture, flexibility, and integration. *International Journal of Physical Distribution & Logistics Management*, 50(1), 80–100. <https://doi.org/10.1108/IJPDLM-02-2019-0041>
- Lohana, S., Abidi, N. A., Sahoo, N., Sameer Babu, M., Pallathadka, H., & Singh, U. S. (2021). Performance measurement of human resource by design a human resource scorecard. *Materials Today: Proceedings*, 51, 677–681. <https://doi.org/10.1016/j.matpr.2021.06.203>
- Mangiaracina, R., Perego, A., Seghezzi, A., & Tumino, A. (2019). Innovative solutions to increase last-mile delivery efficiency in B2C e-commerce: A literature review. *International Journal of Physical Distribution & Logistics Management*, 49(9), 901–920. <https://doi.org/10.1108/IJPDLM-02-2019-0048>
- Maran, L., Bracci, E., & Inglis, R. (2018). Performance management systems' stability: Unfolding the human factor—A case from the Italian public sector. *The British Accounting Review*, 50(3), 324–339. <https://doi.org/10.1016/j.bar.2018.01.002>
- Margherita, A. (2022). Human resources analytics: A systematization of research topics and directions for future research. *Human Resource Management Review*, 32(2), Article 100795. <https://doi.org/10.1016/j.hrmr.2020.100795>
- Messeghem, K., Bakkali, C., Sammut, S., & Swalhi, A. (2018). Measuring nonprofit incubator performance: Toward an adapted balanced scorecard approach. *Journal of Small Business Management*, 56(4), 658–680. <https://doi.org/10.1111/jsbm.12317>
- Minbaeva, D. (2018). Building credible human capital analytics for organizational competitive advantage. *Human Resource Management*, 57(3), 701–713. <https://doi.org/10.1002/hrm.21848>
- Moncef, B., & Dupuy, M. (2021). Last-mile logistics in the sharing economy: Sustainability paradoxes. *International Journal of Physical Distribution & Logistics Management*, 51(5), 508–527. <https://doi.org/10.1108/IJPDLM-10-2019-0328>
- Qi, W., Li, L., Liu, S., & Shen, Z.-J. M. (2018). Shared mobility for last-mile delivery: Design, operational prescriptions, and environmental impact. *Manufacturing & Service Operations Management*, 20(4), 737–751. <https://doi.org/10.1287/msom.2017.0683>
- Ranieri, L., Digiesi, S., Silvestri, B., & Roccotelli, M. (2018). A review of last mile logistics innovations in an externalities cost reduction vision. *Sustainability*, 10(3), Article 782. <https://doi.org/10.3390/su10030782>
- Soyas, I. B., Jayamaha, N. P., & Grigg, N. P. (2019). Validating the balanced scorecard framework for nonprofit organisations: An empirical study involving Australasian healthcare. *Total Quality Management & Business Excellence*, 30(9–10), 1005–1025. <https://doi.org/10.1080/14783363.2017.1345620>

- Veen, A., Barratt, T., & Goods, C. (2020). Platform-capital's 'app-etite' for control: A labour process analysis of food-delivery work in Australia. *Work, Employment and Society*, 34(3), 388–406. <https://doi.org/10.1177/0950017019836911>
- Wang, M., Zhu, C. J., Mayson, S., & Chen, W. (2019). Contextualizing performance appraisal practices in Chinese public sector organizations: The importance of context and areas for future study. *The International Journal of Human Resource Management*, 30(5), 902–919. <https://doi.org/10.1080/09585192.2017.1292537>
- Zheng, Y., Wang, W., Liu, W., & Mingers, J. (2019). A performance management framework for the public sector: The balanced stakeholder model. *Journal of the Operational Research Society*, 70(4), 568–580. <https://doi.org/10.1080/01605682.2018.1448247>