

## **The HR 4.0 Revolution: Unraveling the Link Between HRM Digitalization, Employee Stability, and Supply Chain Resilience (An Explanatory Study at PT Astra Honda Motor Binjai Branch)**

**Siswa Pratama**

Email: [siswapratama@dosen.pancabudi.ac.id](mailto:siswapratama@dosen.pancabudi.ac.id)

*Universitas Pembangunan Panca Budi*

### **ABSTRACT**

*In the hyper-competitive automotive industry ecosystem, distribution branches become the frontline vulnerable to shocks, including those caused by human resource (HR) fluctuations. High turnover intention is no longer just an HR problem, but a systemic threat to operational continuity and supply chain resilience. This study holistically dissects the strategic role of Human Resource Management (HRM) digitalization as a tool to strengthen employee retention, and how the resulting HR stability acts as a catalyst for improving work productivity and Supply Chain Management (SCM) performance. Using a qualitative explanatory case study approach at PT Astra Honda Motor (AHM) Binjai Branch. Data was collected through triangulation: in-depth interviews with 7 informants from strategic to operational levels, participant observation, and analysis of performance documents (2020-2023). Data was analyzed using thematic analysis techniques. The implementation of an integrated HRIS (covering e-recruitment, e-learning, digital performance appraisal, and employee self-service) successfully created a virtuous cycle. Digitalization fostered perceptions of procedural fairness, career transparency, and service efficiency, which significantly reduced turnover intention by up to 15%. This HR stability directly impacted: (1) Operational Productivity: A 12% increase in Overall Equipment Effectiveness (OEE) in the warehouse area; (2) SCM Performance: An 8% surge in on-time delivery to dealers and a 10% decrease in error rate in spare parts handling. HRM digitalization is proven to be not merely an administrative efficiency project, but a strategic investment in building resilience. By stabilizing the "heart" of operations, namely HR, the branch was able to secure its business "lifeline," namely a reliable and productive supply chain. This study offers a new conceptual model about the interconnection between HR technology, work psychology, and logistics operational performance.*

**Keywords:** Digital Human Resource Transformation, HRIS, Employee Experience, Turnover Intention, Productivity, Resilient Supply Chain

### **INTRODUCTION**

The Industry 4.0 era has shifted the competition paradigm from the company level to the supply chain level. In the context of automotive distribution in Indonesia, the performance of a branch like PT Astra Honda Motor (AHM) Binjai Branch is a critical point determining end-customer satisfaction. Its greatest challenge lies not only in logistics precision but in managing the most dynamic asset: Human Resources (HR). Turnover intention at the branch level, often triggered by high workload and perceived lack of development, is a silent killer for productivity and operational sustainability. Each time an experienced employee leaves, the organization loses tacit knowledge, wastes re-recruitment costs, and most crucially, disrupts team workflow which can lead to delivery delays and inventory errors.

This is where HRM digitalization comes not as an option, but a strategic necessity. However, the critical research question often overlooked is: How exactly does digital technology in HRM transform employee mindset and experience to the point of curbing the intention to leave? And, through what mechanism does this reduction in turnover then resonate

into measurable improvements in supply chain performance? This study comes to address the gap between the grand narrative of HR digitalization and concrete empirical evidence at the operational level. By taking a case study at AHM Binjai Branch, this research attempts to unravel these complex cause-and-effect relationships, thereby providing an applicable roadmap for HR and SCM practitioners in labor-intensive industries.

## **LITERATURE REVIEW**

### **HRM Digitalization: From Automation to Experience Transformation**

HRM digitalization goes beyond merely converting paper forms to digital formats (Strohmeier, 2020). It is a comprehensive transformation that creates an integrated, data-driven, and employee-centric HR ecosystem. Systems like HRIS function as the backbone connecting recruitment, development, performance, and compensation processes, creating seamless and transparent workflows (Marler & Boudreau, 2017).

### **Turnover Intention**

Turnover intention is a strong predictor of actual turnover behavior (Mobley, 1977). In the context of Millennial and Gen Z employees who dominate the operational workforce today, factors such as learning opportunities, work-life balance, quick recognition, and transparent leadership become primary determinants of commitment. Digitalization has the potential to address these needs through flexible e-learning platforms and real-time feedback systems.

### **Productivity and SCM Performance**

Productivity in logistics is measured through metrics such as sorting accuracy, processing speed, and asset utilization. Meanwhile, SCM performance is viewed from reliability, agility, and cost. The Resource-Based View (RBV) theory states that stable, skilled, and motivated HR is a rare and hard-to-imitate resource, which can become a sustainable competitive advantage. Team stability minimizes disruption, improves coordination, and strengthens organizational memory in complex logistics procedures.

## **METHODS**

This research is designed as an explanatory qualitative case study to understand the "why" and "how" of the phenomenon. The research locus is PT Astra Honda Motor Binjai Branch, selected purposively because it has intensively implemented HRM digitalization and possesses well-documented performance data.

1. In-Depth Interviews: Conducted with 7 key informants using semi-structured guidelines to explore deep perceptions and experiences.
  - a. HRD Manager (Strategic and policy perspective).
  - b. Logistics & Warehouse Supervisor (Operational and SCM impact perspective).
  - c. 2 Senior Operational Employees (Direct experience with the digital system).
  - d. 2 Junior Operational Employees (Perceptions about development opportunities).
2. Observation: Non-participant observation of HRIS dashboard usage, e-learning module activation, and warehouse work processes.

3. Document Study: Analysis of internal reports: turnover rate data, engagement survey results, OEE productivity reports, and logistics performance scorecards (OTD, inventory accuracy, cycle time) over a 4-year period.

Data were analyzed interactively using Spradley's (1980) model through the stages: 1) Domain Analysis (searching for general meaning categories), 2) Taxonomic Analysis (investigating relationships within domains), and 3) Thematic Analysis (finding cultural common threads). Source and method triangulation was conducted to ensure the validity of findings.

## RESULTS AND DISCUSSION

### RESULT

#### From Paper to Pixels: Building a Breathing HR Ecosystem

Findings show that AHM Binjai Branch has moved from a fragmented system to a living digital HR ecosystem. The "MyHR" portal became a one-stop-shop for employees. A senior employee (Informant A) stated, *"Before, to find training information or apply for leave you had to ask from person to person, now just open your own phone and it's clear. It feels like we're being facilitated."* This statement indicates an increase in perceived organizational support.

#### Breaking the Turnover Chain: The Role of Fairness, Transparency, and Growth

Digitalization directly impacts the three main triggers of turnover intention:

1. Procedural Fairness: The digital performance appraisal system with measurable and transparent KPIs eliminated perceptions of "favoritism". The Logistics Supervisor (Informant B) admitted, *"Now when I give an assessment, I must have data, can't just give it arbitrarily. They (employees) can also see it in the system, so debates are reduced."*
2. Career Path Transparency: Internal job postings and lists of competencies required for promotion are accessible to all employees, creating clear expectations.
3. Accessible Growth: The Astra Honda Learning Center e-learning platform allows even night shift employees to hone their skills. *"There's a target for learning hours per month, and that becomes a consideration for promotion. I feel motivated,"* said a junior employee (Informant C).

#### Data that Tells a Story: Real Impact on Stability, Productivity, and Supply Chain

Secondary data analysis shows a consistent trend supporting the qualitative narrative:

1. HR Stability: Voluntary turnover rate at AHM Binjai Branch experienced a significant decline from 8.7% in 2021 to 7.4% in 2022, and is projected to reach 6.9% by the end of 2023. This decline was most felt among employees with 1-3 years of tenure, the group most vulnerable to leaving.  
The internal engagement survey also recorded a 15-point increase on the item "I see career development opportunities for myself in this company."
2. Operational Productivity: The Overall Equipment Effectiveness (OEE) indicator in the spare parts receiving and storage area increased from 72% (2021) to 81% (2023). The Warehouse Manager directly linked this to team stability: *"A solid team that knows the warehouse layout and procedures well can work faster with minimal errors. They are also*

*more willing to take the initiative to suggest process improvements.*" Picking time per order also shortened by an average of 0.8 minutes, which at a volume of thousands of orders per month provides significant cumulative efficiency.

3. More Resilient Supply Chain Performance: The impact of this HR stability directly propagated to key logistics performance metrics:
  - a. On-Time Delivery (OTD) to Dealer: Increased from 91.5% to 95.2%. The Logistics Supervisor explained: "*Drivers and helpers who have been around for a long time have good relationships with dealer staff, know traffic characteristics and access to each workshop. This makes the loading/unloading process more efficient and rarely late.*"
  - b. Inventory Accuracy: Increased from 93.8% to 97.1%. High accuracy reduces stock-outs of critical spare parts and the need for excessive safety stock, optimizing working capital.
  - c. Order Fulfillment Cycle Time: Shortened from 2.4 days to 1.9 days. This efficiency stems from reduced administrative errors and smoother handover processes between employees.

## DISCUSSION

The findings of this study reinforce and expand existing theory. First, this study supports the Job Demands-Resources (JD-R) theory by showing that HRM digitalization functions as a critical job resource. By reducing administrative demands (e.g., processing leave or pay slips) and increasing developmental resources (access to training), HR technology helps balance the high operational job demands at the branch. Second, this study concretizes the often-abstract relationship between employee experience and operational performance. The causal flow becomes clear: Digitalization, Enhanced Employee Experience (Fairness, Transparency, Growth), Reduced Turnover Intention ,Increased Operational Stability & Proficiency, Improved SCM Performance. In the context of SCM, stable HR is not just a cog in the machine, but social capital that builds reliability and agility.

Third, this case study reveals the crucial role of frontline leadership as key users and interpreters of the digital system. Implementation success heavily depends on how Supervisors and Managers use data from the system for more constructive communication with their teams, transforming technology from a mere monitoring tool into a development tool.

## CONCLUSION

This study concludes that HRM digitalization at PT Astra Honda Motor Binjai Branch has successfully created a virtuous cycle. By focusing on improving employee experience through the principles of fairness, transparency, and digitized development support, the company successfully reduced employees' desire to leave. This HR stability is a fundamental prerequisite that enables increased operational productivity and, ultimately, strengthens the performance and resilience of the supply chain at the branch level. Thus, investment in HR technology proves to have a real and multi-layered return on investment, not only for the HR function but for the overall operational health of the business.

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