Paper Summary

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Title: Human Resources-Based Organizational Data Mining (HRODM): Themes, Trends, Focus, Future

Authors: Hila Chalutz-Ben Gal

DOI: 10.1007/978-3-031-24628-9_36

Year: 2023

Publication Type: Book Chapter

Discipline/Domain: Human Resource Management, Data Science

Subdomain/Topic: Human Resources Analytics, Organizational Data Mining, ROI-based Analysis

Eligibility: Eligible

Overall Relevance Score: 92

Operationalization Score: 95

Contains Definition of Actionability: Yes (implicit via "actionable knowledge" definition in ODM/HRODM co

Contains Systematic Features/Dimensions: Yes

Contains Explainability: Yes

Contains Interpretability: Yes (e.g., interpretable actionable insights in recruitment model)

Contains Framework/Model: Yes (ROI-based approach, LAMP framework)

Operationalization Present: Yes (ROI-based HRODM process, tool-based implementation examples)

Primary Methodology: Systematic Literature Review and Synthesis (with conceptual and empirical analys

Study Context: Organizational decision-making in HR using data mining and analytics, ROI lens

Geographic/Institutional Context: Global, with shift of research focus from Europe to North America

Target Users/Stakeholders: HR managers, organizational decision-makers, data scientists, researchers

Primary Contribution Type: Theoretical framework, synthesis, practical implementation guidance

CL: Yes – clarity/understandability explicitly linked to actionable insight via "meaningful managerial insigh

CR: Yes – contextual relevance linked to ROI-based adoption decisions

FE: Yes – feasibility linked to adoption justification and ROI-driven prioritization

TI: Yes – timeliness implicit in proactive vs. reactive HRODM application

EX: Yes – explainability emphasized in interpretable recruitment decision model

GA: Yes – goal alignment via strategic management tool framing

Reason if Not Eligible: N/A

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Human Resources-Based Organizational Data Mining (HRODM): Themes, Trends, Focus, Future

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Subdomain/Topic:

Human Resources Analytics, Organizational Data Mining, ROI-based Analysis

Contextual Background:

The chapter explores the use of data mining and analytics in human resources (HRODM), situating it with

Geographic/Institutional Context:

Global; review shows an increasing North American research dominance post-2011.

Target Users/Stakeholders:

HR professionals, executives, data scientists, management scholars, organizational strategists.

Primary Methodology:

Systematic literature review, conceptual synthesis, and ROI-based framework application.

Primary Contribution Type:

Theoretical framework and applied guidance for HRODM adoption and implementation.

General Summary of the Paper

This chapter reviews and synthesizes the literature on Human Resources-Based Organizational Data Mi

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Eligibility

Eligible for inclusion: **Yes**

How Actionability is Understood

Actionability is framed as the transformation of HR data into "valuable and actionable knowledge" to impro

> "ODM is defined as leveraging… tools… to transform data into valuable and actionable knowledge to g…

> HRODM aims "to provide an organization with insights for effectively managing employees… to achieve…

What Makes Something Actionable

- Insights must be relevant to organizational strategy (goal alignment).

- They must be derived from structured analytics (LAMP components).

- ROI must be demonstrable to justify adoption.

- Outputs must be interpretable and implementable by practitioners.

- Contextual fit between analytics tools and organizational challenges.

How Actionability is Achieved / Operationalized

- **Framework/Approach Name(s):** ROI-based approach, LAMP framework (Logic, Analytics, Measuren…

- **Methods/Levers:** Systematic literature review; classification of studies; mapping ROI levels to resear…

- **Operational Steps / Workflow:** Identify HR challenge → select analytics tools → conduct analysis → …

- **Data & Measures:** HR metrics, organizational KPIs, turnover data, satisfaction scores, recruitment su…

- **Implementation Context:** Strategic HRM, talent management, workforce planning, recruitment, reten…

> "The ROI-based approach… provides a robust tool to compare and contrast different dilemmas and as…

> "Extraction of interpretable and actionable insights" in recruitment decisions (p. 859).

Dimensions and Attributes of Actionability (Authors' Perspective)

- **CL:** Yes — "meaningful managerial insights" and "clear connection between analytics investment an…

- **CR:** Yes — contextual fit between analytics approach and organizational challenge (p. 848).

- **FE:** Yes — ROI as a feasibility test for adoption (p. 834, 847).

- **TI:** Yes — proactive vs. reactive application influences timeliness (p. 847).

- **EX:** Yes — interpretable recruitment models explicitly mentioned (p. 859).

- **GA:** Yes — strategic management tool framing and KPI alignment (p. 842).

- **Other Dimensions Named by Authors:** Evidence-based approach, process efficiency.

Theoretical or Conceptual Foundations

- LAMP framework (Boudreau & Ramstad, 2006).

- Contextual approach in organizational research (Johns, 2006, 2018).

- Strategic HRM and ROI literature.

Indicators or Metrics for Actionability

- ROI percentage/ratio.

- Turnover rates and causes.

- Recruitment success probability.

- Training ROI.

- KPI performance changes post-implementation.

Barriers and Enablers to Actionability

- **Barriers:** Limited empirical evidence; lack of structured adoption methods; reactive data use; low RO

- **Enablers:** ROI-based decision framework; integration of LAMP; predictive analytics tools; alignment

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Relation to Existing Literature

Builds on HR analytics, organizational data mining, and ROI literature; integrates managerial and technic

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Summary

The chapter positions HRODM as a high-impact approach for transforming HR data into actionable organ

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Scores

- **Overall Relevance Score:** 92 — Clear implicit definition of actionability, strong linkage to dimensions

- **Operationalization Score:** 95 — Detailed step-by-step operationalization with ROI metrics, applied to

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Supporting Quotes from the Paper

- "ODM is defined as… transforming data into valuable and actionable knowledge to gain a strategic com

- "To provide an organization with insights for effectively managing employees… to achieve business goa

- "The ROI-based approach… provides a robust tool to compare and contrast different dilemmas and ass

- "Extraction of interpretable and actionable insights" (p. 859).

Actionability References to Other Papers

- Boudreau & Ramstad (2006) – LAMP framework.

- Rasmussen & Ulrich (2015) – Adoption challenges and ROI focus.

- Levenson (2005, 2015) – Strategic HR analytics for goal alignment.

- Pessach et al. (2020) – Interpretable recruitment decision-making tool.