HR Analytics in Context

WIRTSCHAFTS UNIVERSITÄT WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

Research Report for Interviewees

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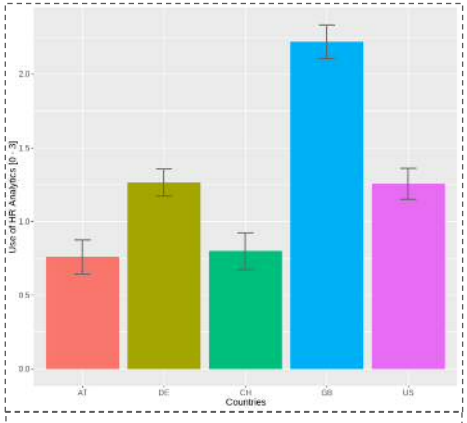
Executive Summary: This is where we stand…

… in **figures**…



Use of HR Analytics from 0 (none) to 3 (intensive use)

Use HR analytics scarcely

Are at the forefront

→ Culture and national regulation are key drivers of these differences

- Characteristics associated with intensive HR Analytics use:
  - **Size** and **multinationalism** of organisations
  - Strong strategic position of HRM (e.g., CHRO on the executive board)
  - Specific industries: Telecommunications and financial industries are in the vanguard

… and in **practice**.

- HR analytics is mainly used for data visualisations in the form of dashboards. However, more advanced use-cases gain momentum (for example predictive attrition or text mining).

- More thorough, in-depth analyses are carried out at an ad hoc basis. These should be closely aligned with business needs.
  - The more complex the issue in question, the more important it is to contextualize data and involve key stakeholders.

- Successful developments of HR analytics capabilities often follow an iterative process. Practitioners can demonstrate the value of HR analytics through initial low-threshold projects to generate buy in from key stakeholders.
  - Cases in which organisations engaged in a pre-planned and thorough implementation of HR analytics tools and processes are rare.

Major Use Cases

Visualizations of KPIs, particular in multinational organisations

For example: Tracing recruitment KPIs, such as time to offer, job offer acceptance rate, or composite risk indices (e.g. turnover) through dashboards, including filtering for country or org unit.

Prognosis and scenario planning

For example: Predictive fluctuation models to anticipate staffing needs under specific scenarios.

Assessment of organizational climate and culture using text data

For example: Using machine learning algorithms to identify recurring themes in written internal documents, thus gaining insight into the actual lived culture.

Questionnaires and their evaluation (i.e., employee surveys)

For example: Linking employee survey data with customer satisfaction and financial data to evaluate the strategic role of employee engagement.

Major Obstacles & Good Practices

Major Obstacles

- Coordination with works councils (particular in Germany and Austria)
- Data quality and different data structures across subsidiaries
- Rendering the results relevant to important stakeholders
- Lack of resources and expensive software suits in particular
- Lack of expertise and adequate education for HRM practitioners and works councillors
- Path dependency when it comes to major software suits (e.g. SAP)

Good Practices

- Formal agreements with work councillors and good conduct guidelines can:
  - Foster trust amongst employees and other stakeholders
  - Streamline HRA projects by demarcating what can and should not be done
  - Create a shared understanding of HRA benefits and risks
- Data literacy workshops for peers:
  - Can increase grass roots demand for HRA solutions
- Identify and mobilize potential sponsors amongst key stakeholders
  - These sponsors can also help identifying important topics for analyses that align with business needs

Drivers of higher HR Analytics use

Quantitative Analysis & Findings

Based on data from the Cranet network, we analysed how organisational characteristics and country-level factors shape the use of HR analytics (measured from 0: "not at all" – 3: "to a large extent") in 6,559 organizations across 38 countries.

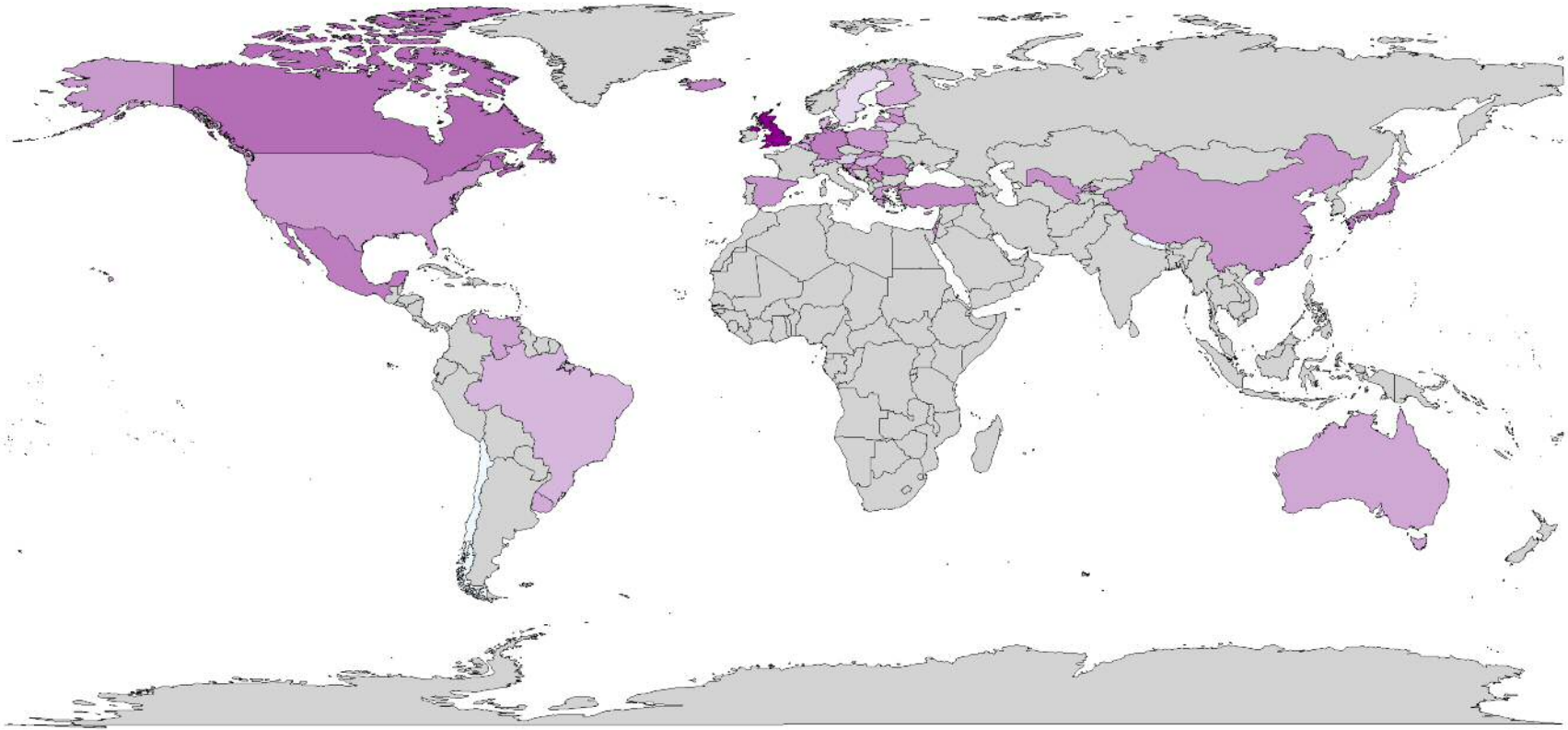
- **Organisational characteristics** influencing a higher use of HR Analytics:
  - Organisations with **more employees** use HR analytics to larger extents.
  - **Multinational organisations**, compared to domestic organisations
  - **Industry** differences appear to exist: While the construction industry and public administration lack behind telecommunications and financial and IT-services are at the forefront.

- **Relational characteristics** associated with larger extents of HR Analytics use:
  - **Strategically embedded HRM departments** that are included in the strategy formulation process and represented on the highest hierarchy level
  - **Trade union strength**, i.e. organisations where the HR representative perceive that trade unions exert a lot of influence

- **National characteristics** influencing HR Analytics use:
  - On average, organisations in Anglo-Saxon countries and Eastern Europe report higher levels of HR analytics use compared to the DACH-region and the Nordics (i.e., Finland, Denmark, and Sweden).
  - This difference might be partially explained by differences in the regulation as well as cultural differences such as higher levels of uncertainty avoidance, broadly defined as a culture's tolerance of unpredictability.

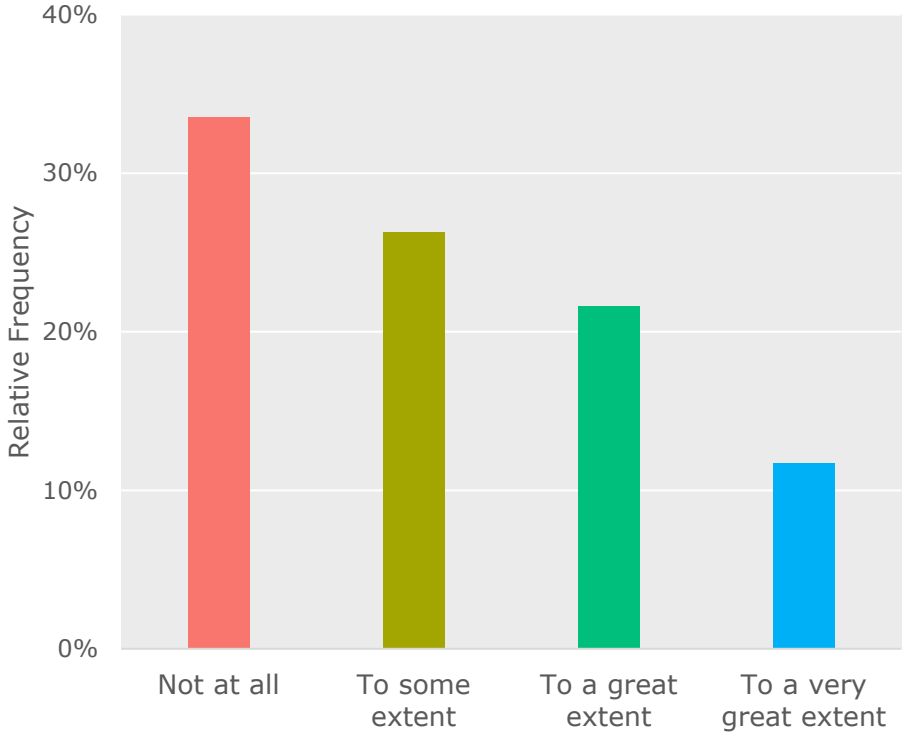
Appendix

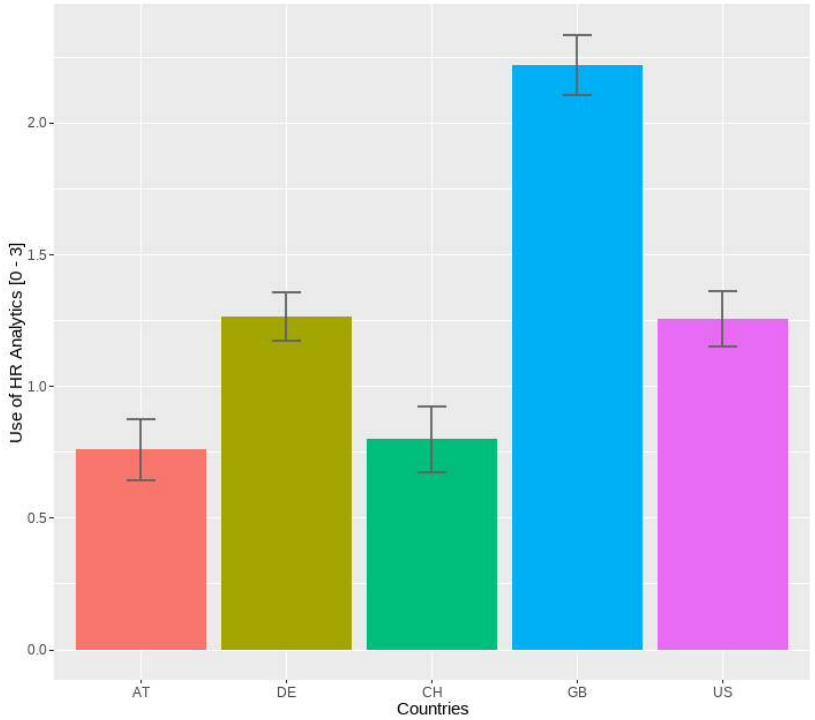
Appendix A: Visualizations – World Map



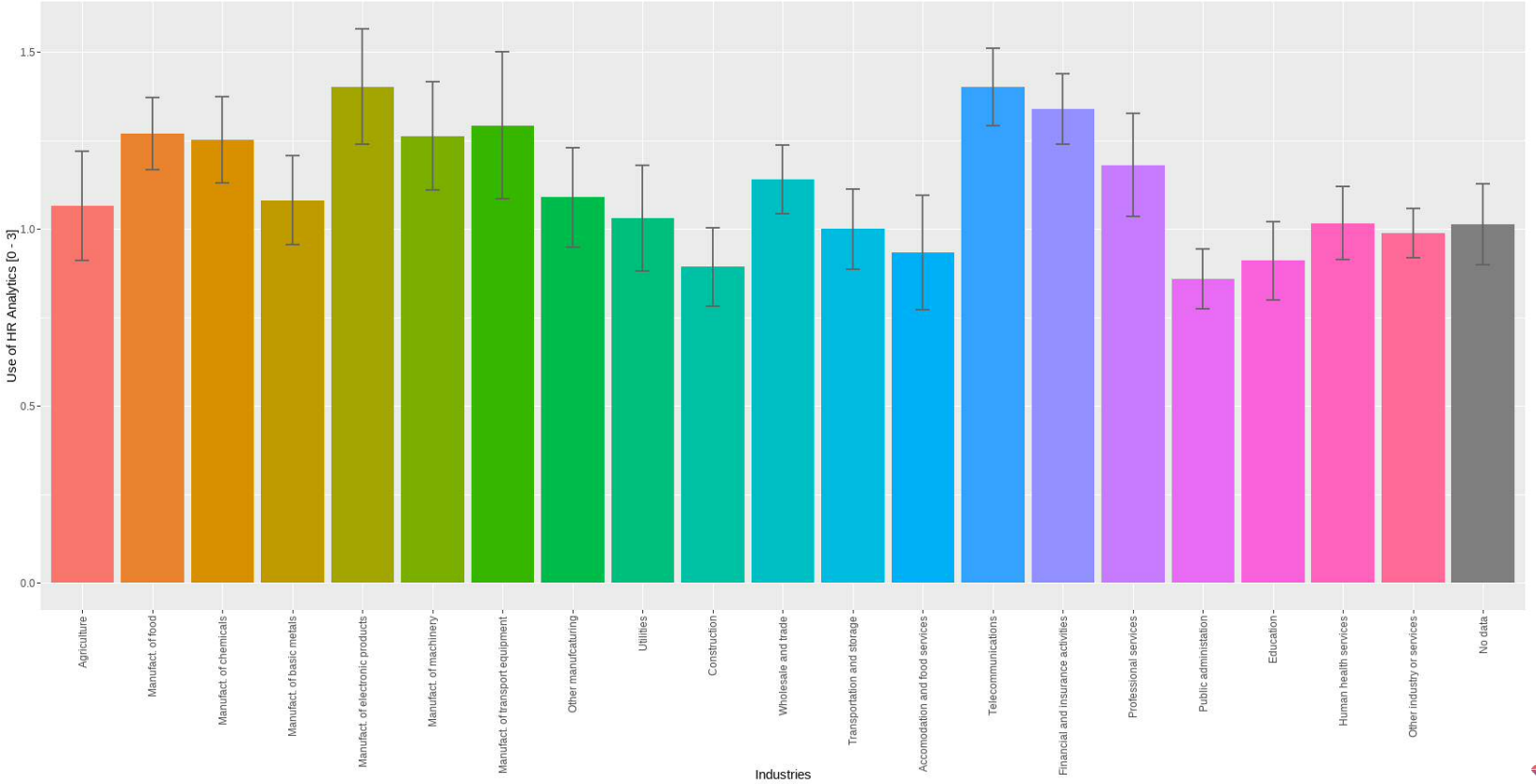
NB: Darker colours indicate a higher average use of HR analytics

Appendix A: Visualizations





Appendix A: Visualizations cont'd



Appendix B: Interviewees (1)

#	Role	Relation to HRA	Country	Sector	Interview length (*n* = minutes)
1	Works councillor	Involved in HRA implementation	Germany	Manufacturing	53
2	HR practitioner	Involved in HRA implementation	Germany	Manufacturing	57
3	Trade union representative	Advices works councillors on HRA	Austria	Public Sector	64
4	Trade union representative	Advices works councillors on HRA	Austria	Public Sector	38
5	Consultant	Advises businesses on HRA	Austria	Services	50
6	HR controller, Head of HR strategy, & Head of HR	HRA sceptics	Austria	Trade union	41
7	Head of HR analytics	Oversees HRA projects	Switzerland	Banking	44
8	Project lead HR analytics	Involved in the implementation	Switzerland	Retail	46
9	Consultant	Advice on Data-Ethics	Switzerland	Services	57
10	Consultant	Involved in HRA implementation	Austria	Services	59
11	Head of HR	User of HRA	Austria	Software	50
12	Head of HR	Involved in HRA implementation	DACH-region	Software	48
13	HR executive	User of HRA	Germany	Software	48
14	HR executive	User of HRA	DACH-region	Software	38
15	HR executive	Involved in HRA implementation	Germany	Manufacturing	77

Appendix B: Interviewees (2)

#	Role	Relation to HRA	Country	Sector	Interview length (*n* = minutes)
16	Consultant	Advises works councillors on HRA	Austria	Research	53
17	HR controller	Involved in HRA implementation	Austria	Utilities	48
18	HR executive & Head of HR	Involved in HRA implementation	Austria	Manufacturing	44
19	Head of HR	User of HRA	Austria	Retail	28
20	Works councillor	Involved in HRA implementation	Austria	Retail	55
21	Head of HR	Involved in HRA implementation	Switzerland	Telecommunications	50
22	Senior Manager & Senior Consultant	Advises businesses on HRA	Switzerland	Services	38
23	Head of HR	Involved in HRA implementation	Austria	Gambling	59
24	Project lead HR analytics	Involved in HRA implementation	Germany	Automotives	56
25	Consultant	Advice on Data-Ethics	DACH-region	Services	47
26	Consultant	Advises businesses on HRA	Germany	Services	44
27	HR executive	User of HRA	Switzerland	Retail	52
28	Trade union representative	Advices works councillors on HRA	Austria	Trade Union	55
29	HR analytics professional	Advises businesses on HRA	Germany	Education	44
30	HR controller	Involved in HRA implementation	Austria	Transportation	43

Appendix B: Interviewees (3)

#	Role	Relation to HRA	Country	Sector	Interview length (*n* = minutes)
31	Project lead HR analytics	Involved in HRA implementation	Germany	Pharmaceuticals	46
32	Project lead HR analytics	User of HRA	Germany	Telecommunications	38
33	Head of sales consulting	Sells HRA solutions	Germany	Software	38
34	HR analyst	User of HRA	Germany	Software	46
35	Consultant	Advises businesses on HRA	Austria	Professional services	40

Appendix C: Statistical models

	Use of HR analytics			
	Model 1	Model 2	Model 3	Model 4
Intercept	0.216	0.461•	0.006	−3.380
	(−0.158, 0.589)	(−0.001, 0.923)	(−2.271, 2.283)	(−14.514, 7.755)
Size (log)	0.221•••	0.182•••	0.182•••	0.139•••
	(0.193, 0.249)	(0.148, 0.215)	(0.148, 0.216)	(0.093, 0.184)
Public sector (dummy)	0.085	0.039	0.043	0.162
	(−0.031, 0.201)	(−0.098, 0.177)	(−0.095, 0.180)	(−0.055, 0.378)
MNE (dummy)	0.368•••	0.299•••	0.301•••	0.473•••
	(0.275, 0.461)	(0.190, 0.408)	(0.192, 0.410)	(0.298, 0.648)
Strategic integration		0.361•••	0.358•••	0.426•••
		(0.271, 0.450)	(0.268, 0.448)	(0.273, 0.578)
Trade unions' influence		0.124•••	0.127•••	0.253•••
		(0.082, 0.166)	(0.085, 0.169)	(0.189, 0.318)
Formal institutions			0.007	0.019
			(−0.025, 0.039)	(−0.045, 0.084)
Informal institutions				0.409
				(−0.582, 1.400)
Technological infrastructure				−0.001
				(−0.035, 0.033)
Industry dummies	included	included	included	included
Observations	5512	4006	3989	1887
Log Likelihood	−10363.050	−7490.917	−7461.257	−3681.711
AIC	20776.090	15035.830	14978.510	7423.421
BIC	20941.460	15205.810	15154.670	7589.704

•p < .1; ••p < .05; •••p < .01

Further Readings

Scientific literature:

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- Loscher, G., & Bader, V. 2022. Augmenting a Profession: How Data Analytics is Transforming Human Resource Management. In T. Gegenhuber, D. Logue, C. R. (Bob) Hinings, & M. Barrett (Eds.), ***Digital Transformation and Institutional Theory***, 83: 87–110. Emerald Publishing Limited. https://www.emerald.com/insight/content/doi/10.1108/S0733-558X20220000083004/full/html

Practitioners' literature:

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- Gmyrek, P., Berg, J., & Bescond, D. 2023. ***Generative AI and Jobs: A global analysis of potential effects on job quantity and quality***. Geneva, Switzerland: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_890761.pdf.
- Rapp, M. L., Diefenhardt, F., & Mayrhofer, W. 2022. HR Analytics: Hypes um Bytes*?* ***personal manager***, 6: 38-41.

Guidelines:

- Ethikbeirat HR Tech. 2021. ***Richtlinien für den verantwortungsvollen Einsatz von KI in der Personalarbeit*****.** Retrieved from https://www.ethikbeirat-hrtech.de/wp-content/uploads/2022/10/Ethikbeirat_und_Richtlinien_2021.pdf

Follow-up questions? Feel free to reach out!

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