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Mapping the Literature of Remote and Hybrid Work Since the Pandemic: A Bibliometric and BERTopic Thematic Analysis

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Abstract- The pandemic induced disruption produced a fragmented body of knowledge spanning from human resource management, organisational behaviour, information technology, cybersecurity to the latest integration of artificial intelligence (AI) into workplaces around the remote-hybrid work shift. Initially, quantitative bibliometric analysis was used to map the performance of existing literature by means of Biblioshiny interface of Bibliometrix R package followed by a computational thematic analysis. A peer-reviewed Scopus corpus of 453 articles was funnelled down using PRISMA inclusion-exclusion approach. The performance analysis showed a steep growth in publication during the peak of pandemic transitions in 2023 and 2024; articles were scattered across journals while older articles gained more citations for being early in the lane. The complementary thematic analysis used the title-and-abstract Scopus metadata using topic modelling technique of BERTopic that combined document embeddings, dimensionality reduction using UMAP and density-based clustering using HDBSCAN. The 23 coherent clusters identified were narrowed down to six broad meta-themes, (1) organizational practices, management, and control (2) employee well-being and psychological outcomes (3) technology, knowledge work, and collaboration, (4) spatial and mobility dimensions, (5) risk, security, and productivity and (6) methodological and review contributions. An intertopic distance map was used to study the weight and relative distance of clusters. The triangulation of thematic layers recovered from full title-and-abstract concatenation against standard bibliometric performance indicators, offers a novel keyword-independent literature mapping method and a conceptual framework to reveal underexplored theoretical gaps that have evolved in isolation from one another. Practically, organisational decision-makers have narrow economic evidence for hybrid work rather than employee-experience effects, underscoring the need for empirical future research with unified study design, ideally replicated with transformer-based embeddings and multi-database corpora.

Keywords- Hybrid Work, Remote Work, BERTopic, Bibliometric, Thematic, Clustering

I. Introduction

Organisations, all of a sudden struggled with agile work models since the pandemic that drastically reconfigured workplaces across sectors (Amankwah-Amoah et al., 2021). As the work settings evolved, new arena of opportunities, challenges and innovations took the center stage for the future of work. The business continuity measures of the pandemic changed the very existence of organisational designs that inquisitively caught the academic interest in multiple disciplines. Studies ranged from digital collaboration (Waizenegger et al., 2020) to work-family conflicts, employee well-being (Irawanto et al., 2021), managerial surveillance, monitoring and control measure (van der Lippe & Lippényi, 2020) and the changing urban space (Delventhal et al., 2022).

Owing to the broad spectrum of the field, the academic fraternity remains scattered across journals, methodological interventions and disciplines. A manual literature review may not provide a precise, accurate and a comprehensive view of the trends, patterns or the themes as it becomes difficult to engross the entire literature simultaneously. The traditional systematic literature review methodology may somewhat overcome these shortcomings (Shirmohammadi et al., 2022), but it becomes a tedious and time-consuming process, themes may cover limited number of practically reviewed papers and may be subject to interpretative biasness of the reviewer.

Bibliometric analysis is an established, reproducible and systematic method of quantifying performance of extant literature like publication trajectory, citation impacts and identifying core journals (Bradford, 1934). However, it cannot answer complementary question of what the literature is all about, what are the recurring themes, the strength of the themes and their consecutive relationships. Keyword co-occurrence mapping bibliometric software is dependent on author keywords which may be often insufficient, missing from the metadata retrieved from databases and many times inconsistent. The present corpus had 21 records missing author keywords.

Therefore, this study first used a standard performance analysis using bibliometric indicators followed by a thematic analysis conducted on the titles and abstracts of all the 453 records directly, using BERTopic (Grootendorst, 2022). Further, topic modelling technique was used based on transformer embedding that does not require author keywords. The 23 granular distinct clusters identified can be empirically recovered and can be directly visualised for their structures in semantic space. Manually coding 453 papers would have been difficult to arrive at consensus of themes and may not be replicable. This paper tries to answer the following two research questions:

- What has been the extant state of literature of hybrid work and its variants covering the period of COVID-19 pandemic?

- What are the various evolving areas of remote-hybrid work themes that requires exploration in future research to advance these trajectories?

The paper further elaborates the methodology in section II, bibliometric and thematic analysis results in section III followed by discussion in section IV and conclusion in section V.

II. Research Methodology

1. Research Design

An initial quantitative bibliometric analysis of Scopus metadata was performed to provide a descriptive summary of the extant literature. Further, BERTopic-based thematic analysis was done to identify the most evolving themes from available metadata literature.

2. Database Extraction

A metadata consisting of 1647 records was extracted from the secondary database source Scopus on September 21, 2024.

3. Inclusion and Exclusion Criteria

Table 1. PRISMA Flowchart showing exclusion-inclusion criteria

IDENTIFICATION	Data Collection Criteria: Date: September 21, 2024 Data Source: Scopus database Publication Time Span: No Time Limit Search Field: TITLE-ABS-KEY Search String: TITLE-ABS-KEY (“hybrid work”) OR (“remote work”) OR (“future of work”) OR (“return to office”) OR (“work from *”) OR (“telework”) Subject Area: Computer Science; Business, management and accounting; Economics, econometrics & finance; Decision sciences Document Type: Articles, Final Publications Language: English Total Metadata Identified: n = 1647
SCREENING	Manual Filtration: Removal of duplicates, missing abstract, Unsuitable titles and abstract Retrieved: n = 601 Excluded: n = 1046
ELIGIBILITY	Screening for studies not based on human resource/ employees in hybrid/ remote work setting, specific sectors like education and government organisations if mentioned in title or abstract excluded, data not studied during or after the COVID-19 pandemic (2019 – 2024), studies from 1984 to 2018 excluded Retrieved: n = 453 Excluded: n = 148
INCLUDED	Full Title and Abstract Available Retrieved: n = 453

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) (Moher et al., 2009), inclusion-exclusion framework was used to prepare the metadata for analysis. The entire iterative PRISMA process has been presented in Table 1. A

total of 453 records passed the exclusion-inclusion test and qualify for the bibliometric and thematic analysis.

Statistical Methods Used

Bibliometric analysis on 453 records was conducted to map the health of extant literature using the Biblioshiny interface of R Package (Aria & Cuccurullo, 2017). Thematic analysis was performed using BERTopic (Grootendorst, 2022), topic modelling with Python.

Text Preparation: Title and abstract of each record were concatenated, publisher copyright boilerplates were removed before vectorization.

Document representation: Term Frequency Inverse-Document Frequency (TF-IDF) was used for vectorization of documents by weighting over unigrams and bigrams (stopwords removed, document frequency minimum=3, maximum=70 per cent of corpus, term frequency scaling=sublinear). The sparse matrix retrieved was reduced to 150 dense dimensions through Truncated Singular Value Decomposition and L2 normalised. This served as document embedding for BERTopic input.

Dimensionality reduction and clustering: UMAP (McInnes et al., 2018), that preserves semantic relationships, was applied to reduce 150-dimensional document embeddings to 5 dimensions while simplifying the data for clustering. The UMAP parameters were optimised through grid search using the final configuration of n_neighbors = 8, cosine distance, and min_dist = 0.0. Further, HDBSCAN (Campello et al., 2013), was used to reduce the embeddings into clusters. HDBSCAN automatically identifies clusters that does not require predefined topics of label documents that do not fit any cluster and remain as outliers.

Topic Representation: The representative terms for each cluster were extracted using BERTopic's class-based TF-IDF (c-TF-IDF), that identifies words and clusters distinct to a cluster in comparison to other clusters, including unigrams and bigrams (stopwords removed and minimum document frequency set to 2). The resulting keywords were representative and effectively described the topic.

Intertopic Distance Map: To visualise the identified clusters relative distance in semantic space, topic embedding was projected to two dimensions by re-running UMAP reduction where the bubble size was set to the number of papers in the respective cluster. One outlier topic was excluded.

III. Results

1. Annual Publications and Average Citations

From Table 2, it can be noted that from the 453 metadata analysed, most of the publications have taken pace during the height of the pandemic driven hybrid work

reforms. It can be interpreted from the data that there has been a surge in academic research with a focus on remote and hybrid work. In the contrary, the mean total citations per year have been the highest (19.46) in 2019 with 7 citable years and dipping to 0.48 on 2024 with 2 citable years. As the citable years of publications in the later years are very less, the chance of an article to be referenced is low.

Table 2: Frequency of Annual Scientific Publications and Average Citations

Year	N	MTCPA	MTCPY	CY
2019	3	155.67	19.46	7
2020	20	86.35	12.34	6
2021	46	51.89	8.65	5
2022	95	20.24	4.05	4
2023	153	7.28	1.82	3
2024	136	1.45	0.48	2

Most Popular Global Articles

Table 3. provides a list of the top 15 most cited global articles where most of the top cited articles are from 2019 to 2022 as these articles are older and had more chances of being cited. Articles from 2023 and 2024 missed the top hierarchy due to less citable years. Also, some specific fields with a few popular articles also get more chances of citation (Moed, 2005; Waltman et al., 2011).

Table 3: Most Cited Global Articles

Paper	TC	TCPY	NTC
Waizenegger L, 2020, Eur. J. Inf. Syst.	430	61.43	4.98
Amankwah-Amoah J, 2021, J. Bus. Res.	422	70.33	8.13
Charalampous M, 2019, Eur. J. Work. Organ. Psychol.	351	43.88	2.25
Feng Z, 2020, Gend. Manag.	214	30.57	2.48
Bartsch S, 2021, J. Serv. Manag.	208	34.67	4.01
Choudhury P, 2021, Strateg. Manag. J.	193	32.17	3.72
Hamouche S, 2021, J. Manag. Organ.	155	25.83	2.99
Bhaduri E, 2020, Transp. Res. Interdiscip. Perspect.	149	21.29	1.73
Van Der Lippe T, 2020, New Technol. Work. Employ.	148	21.14	1.71
Irawanto DW, 2021, Economies	148	24.67	2.85
Saura JR, 2022, J. Bus. Res.	126	25.20	6.22
Tønnessen Ø, 2021, Technol. Forecast. Soc. Chang.	124	20.67	2.39
Lee H, 2021, J. Organ. Eff.	115	19.17	2.22
Diab-Bahman R, 2020, Int. J. Sociol. Soc. Policy	114	16.29	1.32
Aroles J, 2019, New Technol. Work. Employ.	109	13.63	0.70

Bradford's Law for Top 10 Journals in Zone 1

The most significant sources were extracted using Bradford's law of journal clustering in zones and ranking (See figure 1) that shows how these sources contribute by

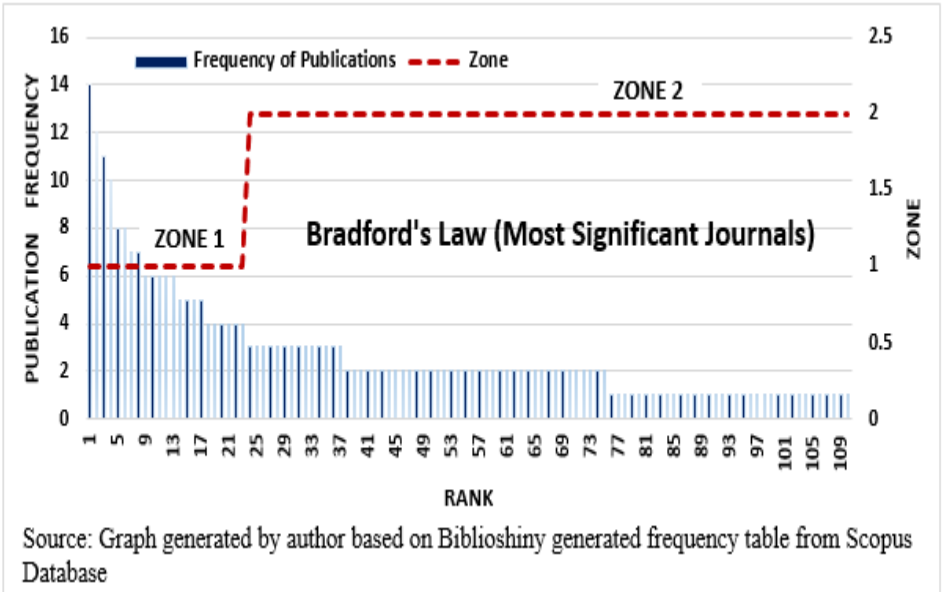
publishing the maximum articles on the selected area of interest (Yan et. al., 2024). The top ten journal from zone 1 has been presented in table 4. International Journal of Manpower of Taylor & Francis topped the list with a total of 14 publications. A total of 89 articles has been published in these 10 journals according to the Scopus database downloaded.

Most Popular Authors and their Work Frequency

Table 5 shows the authors with most publications with their fractionalised contributions to the total number of articles co-authored.

Author Collaboration Network Visualisation

Figure 2 provides visualisation of the collaboration network of co-authorship of 31 authors showing 11 clusters. Vrontis D, the only author with betweenness of 2, shows most bridging nodes controlling the flow of collaboration or information. The authors Beno M, Caganova D, Nguyen TVT, Tsang S-S, Bentley T, Franken E, Al-Busaidi AS, Al Riyami S, Aroles J and De Vaujany F-X falling in two-node cluster are directly connected with the co-author while bigger clusters showed low closeness. These smaller and far off disconnected clusters show highly fragmented collaboration network.



Source: Graph generated by author based on Biblioshiny generated frequency table from Scopus Database

Figure 1: Bradford's Law (Most Significant Journals)

Table 4: Bradford's Journal Ranking and Article Frequency

Top 10 Journal Names in Zone 1	Rank	N
International Journal of Manpower	1	14
Personnel Review	2	12
Transportation Research Part A: Policy and Practice	3	11
Journal of Business Research	4	10
Administrative Sciences	5	8
Human Resource Development International	6	8
Employee Relations	7	7
Transportation Research Interdisciplinary Perspectives	8	7
German Journal of Human Resource Management	9	6
International Journal of Human Resource Management	10	6
Total		89

Country Productivity

Table 6 enumerates the country with the highest citations and the average citation rate of a single article from the respective countries. With the highest citation score per article (80.3), but less publications (241), Singapore shows high popularity. Also, the publications of countries over the time period of 2019 to 2024 has been depicted in figure 3. The trajectory shows a growth of publications on remote or hybrid work over time.

Table 5: Most Popular Authors and their Work Frequency

Authors	Articles	Articles Fractionalized
Asmussen KE	4	0.92
Beno M	4	2.33
Bhat CR	4	0.92
Jaiswal A	4	1.58
Al-Busaidi AS	3	0.83
Alok S	3	1.17
Balbontin C	3	0.92
Beck MJ	3	0.92
Beigi M	3	0.92
Caganova D	3	1.33

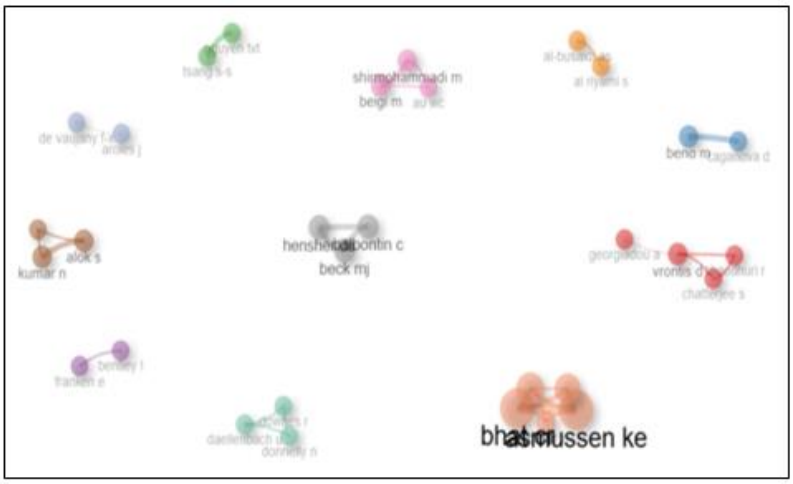


Figure 2: Author Collaboration Network Visualisation (Source: Generated by author with Biblioshiny based on Scopus database)

Table 6: Most Cited Country

Country	TC	Average Article Citations
USA	1100	17.2
United Kingdom	876	36.5
Germany	520	20
Canada	488	54.2
New Zealand	440	62.9
India	406	9
Australia	391	21.7
Netherlands	325	54.2
Indonesia	256	36.6
Singapore	241	80.3

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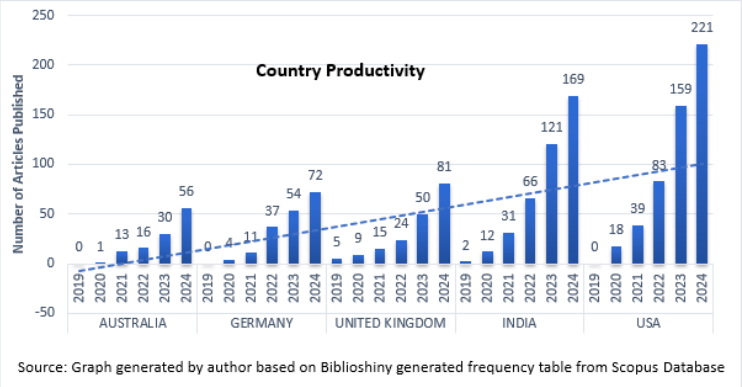

Figure 3: Country with Highest Publication Overtime (2019-2024)

Table 7: Identifed Thematic Clusters using BERTopic (N-453)

Cluster	Label (top terms)	n	%
0	Work/HR practices during remote work	60	13.2
1	Job/work–family satisfaction and conflict	28	6.2
2	Emotional exhaustion and isolation	26	5.7
3	Health, gender, and mental health while working from home	23	5.1
4	ICT and knowledge workers	23	5.1
5	Telework, travel, and commuting	19	4.2
6	Office change and the "new normal"	19	4.2
7	Job burnout and turnover	19	4.2
8	AI and automation in the future of work	15	3.3
9	Remote work and organizational relationships	14	3.1
10	Hybrid teams and virtual workplace	14	3.1
11	Urban, housing, and real-estate effects	14	3.1
12	Agile tools and software teams	13	2.9
13	Boundary and family management	13	2.9
14	Country-specific studies (e.g., Czech Republic)	12	2.6
15	Organizational support	12	2.6
16	Surveillance and informal communication	11	2.4
17	Monitoring and managerial control	11	2.4
18	Cybersecurity	11	2.4
19	Productivity and firm-level effects	10	2.2
20	Knowledge management (banking sector)	10	2.2
21	Systematic and bibliometric reviews	10	2.2
22	Knowledge sharing in virtual teams	10	2.2
−1	Outliers / miscellaneous	56	12.4

Thematic Clusters Corpus Outline

Of the 453 metadata peer-reviewed articles, 23 clusters were identified without any single cluster dominance, each cluster covering 10 (2.2 per cent) to 60 (13.2 per cent) papers. About 56 (12. 4 per cent) could not be assigned to any single mega-cluster due to highly scattered nature of these studies and treated as outliers.

Identified Thematic Clusters

Table 7 presents the identified thematic clusters along with size and proportion of 453 records analysed. These clusters have been grouped relatively based on their conceptual proximity to form six meta-data themes (See table 8) discussed below.

Meta-theme 1 - Organizational practices, management, and control

From table 8, it can be seen that the largest cluster number 0 with 60 articles is broadly exemplified by studies on HR adaptation and digitalisation (Amankwah-Amoah et al., 2021).

Further, emerging sub-themes identified from other clusters are office redesign predicting "new normal" strategies (Pattnaik & Jena, 2020), the case study of financial sector of Czech reporting on country specific remote work (Krajcsák & Kozák, 2022), studies on organisational relationships and feeling of belongingness among employees (Byrd, 2022) and two distinct clusters focussing on employee surveillance or informal communication in remote work (de Vaujany et al., 2021) and managerial monitoring and control (van der Lippe & Lippényi, 2020). Cluster 16 focussing on employee-experienced surveillance and Cluster 17 focussing on monitoring and control practices by managers signify that both are related but logically remain two separate study areas.

Meta-theme 2 - Employee well-being and psychological outcomes

The next noticeable meta theme covers studies on employee well-being and their mental health wherein work-life conflicts and the resulting job satisfaction (Irawanto et al., 2021), emotional fatigue, exhaustion and isolation due to absence of social environment in remote work (Becker et al., 2022), gender differences and mental health disparities in different demographic groups (Prodanova & Kocarev, 2021) and boundary management between the blurred frontier of home and job roles in remote work (Jaiswal et al., 2022) stand out.

From the clusters of this theme, it can be interpreted that rather than the technological or the work location shifts, it is the psychological and relationships in remote or hybrid work setups, that impacts employee well-being and mental peace (Prajapati, 2026).

Table 8: Meta-theme

Meta-theme	Clusters	Total Articles	Proportion
Organizational practices, management, and control	0, 6, 9, 14, 16, 17	135	29.8
Employee well-being and psychological outcomes	1, 2, 3, 7, 13	109	24.1
Technology, knowledge work, and collaboration	4, 8, 10, 12, 20, 22	85	18.8
Spatial and mobility dimensions	5, 11	33	7.3
Risk, security, and productivity	18, 19	21	4.6
Methodological and review contributions	21	10	2.2

Meta-theme 3 - Technology, knowledge work, and collaboration

This meta-theme extends along ICT-enabled collaboration of teams in remote work (Waizenegger et al., 2020), the ever-evolving role of artificial intelligence and automation of processes (), agile software practices (Schmidtner et al., 2021), team dynamics in remote-hybrid work environment (Oppong Peprah, 2024), digital knowledge sharing among organisational members (Tønnessen et al., 2021) and knowledge management (Tavares et al., 2020). The size of the meta-theme and substantial variations in the clusters indicate that sub-literatures are diversified in terms of technology investment, communication and collaboration among distributed team members, and how knowledge is managed in such agile circumstances. This meta-theme does complement mental health and well-being meta-theme discussed above.

Meta-theme 4 - Spatial and mobility dimensions

Remote work involves both geographical instances and infrastructural consequences covered by two clusters of this meta-theme. Cluster 5 focusses on travel and transport behaviour (Bhaduri et al., 2020) and cluster 11 covers the effect of remote work on urban and real-estate housing (Delventhal et al., 2022). This meta-theme with hardly two cluster and 33 documents represents a unique unit of analysis that should focus on the location (city or region) of the workplace more over individual or organisational level studies. This brings out the importance of macro-level impression of remote work understanding as a growing area of interest.

Meta-theme 5 - Risk, security, and productivity

Under this meta-theme, cluster 18 gathers around cybersecurity (Antonacopoulou & Georgiadou, 2021) while cluster 19 around productivity outcomes of remote-hybrid work setups at organisational level (Morikawa, 2022). Again, this group though less in proportion proposes a conceptually unique area of study focussing on organisational cybersecurity risks exposure along with the financial performance of organisations adopting remote-hybrid arrangements.

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Meta-theme 6 - Methodological and review contributions

Finally, the most minuscule meta-theme identified with just one cluster and covering 10 articles focus on the synthesis of extant literature using bibliometric and systematic literature reviews (Shirmohammadi et al., 2022). This shows that to understand the scattered nature of the scholarly work on hybrid work a higher interest in self-reflective synthesis has already begun and the present study extends this methodology by conceptualising the extant literature empirically with the help of computational text-mining approach with BERTopic (Python). This theme however does not form a part of conceptual framework as it cannot be considered as a construct but a meta-commentary theme.

Intertopic Distance Map

To visualise the relative cluster position and distance of the cluster from other clusters, an intertopic semantic space was plotted with two UMAP dimensions using topic-level embedding (see figure 4). The outlier topic -1 was excluded from the semantic map. Each cluster is represented with a bubble, that indicates the relative number of documents contained in the cluster. Larger bubbles represent the most predominant area of study and vice versa. The relative distance between two bubbles is based on the semantic similarity of the vocabulary of the respective clusters, hence, closer the clusters more similar are their concepts and may co-occur frequently in literature.

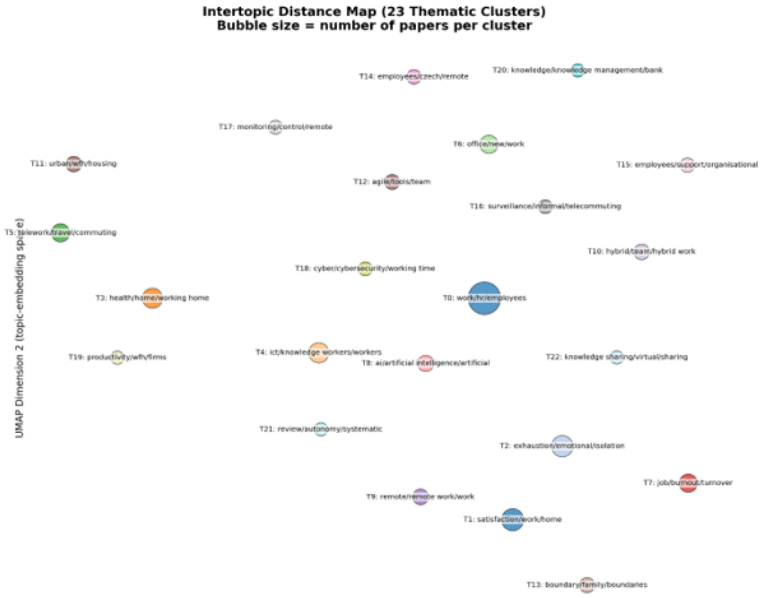

Figure 4: Intertopic Distance Map

The map that is independent and based on purely geometric angles, highly corroborates with the six identified meta-themes. Cluster 5 consisting of telework/travel/commuting and cluster 11 consisting urban/wfh/housing concepts are located closer to each other on the upper left corner of the map that confirms the spatial and mobility meta-theme. Similarly, cluster 1 (work/home/satisfaction), 2(exhaustion/emotional/isolation), 7(burnout/turnover), cluster 9(remote work/relationships) and 13(boundary/family) assemble closely on the lower central part of the map is highly cohesive with the health and well-being meta-theme. The largest bubble of cluster 0 (work/hr/employees) is located centrally closer to cluster 8 (AI/automation) going well with technology, collaboration and general HR practices.

Next, cluster 3 (health/home) locates closely to cluster 19 (productivity/wfh/firms) sharing enough vocabulary. This distinct unexpected adjacency of clusters hints the presence of a latent relationship between employee well-being and organisational productivity in remote or hybrid work and informs future empirical studies. Further, cluster 18 (cybersecurity) is located at a moderate distance from cluster 16 and 17 (control/monitoring) and clusters 4, 8 and 12 covering technology showing isolation. This corroborates with meta-theme 5 on cybersecurity risks in interaction with technology and organisational productivity.

Overall, the clusters leave large empty spaces, remain highly distributed all over with some moderate pairing but does not show a super-tight aggregation of clusters. This is the visual confirmation that the corpus of literature is multi-thematics with diversified concepts and still requires a dominating few narratives that overarch the complete depiction of the area under study.

Conceptual Framework

Based on the thematic analysis the conceptual framework (see figure 5) organises five of the meta-themes (constructs) under three crucial roles. First, technology & collaboration interrelated with management and control act as the antecedents of remote-hybrid work. These when moderated by the spatial and mobility context of remote, two outcomes are expected, employee well-being and security, risk and productivity outcomes. These two outcomes are interrelated as shown on the intertopic map and sends feedback to the antecedents, based on which the organisation may revise its policies which would eventually result into new outcomes.

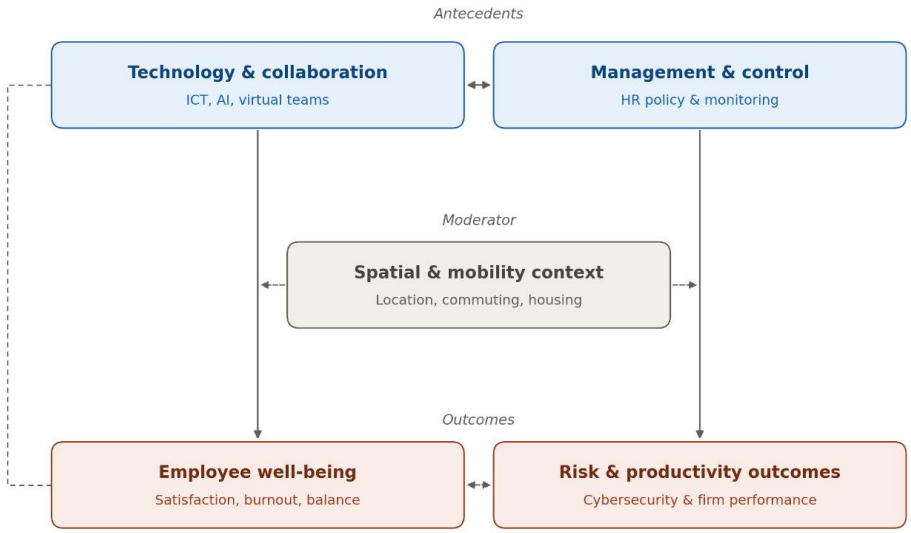

Figure 5: Conceptual framework generated from meta-themes

IV. Discussion

The present study was intended combination of quantitative bibliometric performance analysis and computerised algorithm derived thematic analysis to arrive at a comprehensive disjuncture of remote and hybrid work literature. Both the layers provide evidence towards the fact that the field under study has grown rapidly in response to the pandemic shock, however, its internal structure remain critically fragmented across various concepts. This may be attributed to the ad hoc evolution of the work environment and authors settled with the options that came to them without exercising substantial evidence based narrow route.

The annual publication trend has increased steeply from 2019 (3 articles) to 2024 (136 articles) with the highest surge in 2023 (153 articles). This suggests a phenomenal progression of the remote work academic momentum in the midst of the pandemic and was not organic. Also, the studies have been inclined towards remote work rather than hybrid work. The most cited article globally was led by Waizenegger, 2020 with 430 citations with an average total citation per year of 61.43. All the 15 top cited articles were from 2019 to 2022 as they reported the remote work phenomena early and attracted substantial attention of researchers and industry people seeking evidence and hence the citations, even though the article may not carry thematic weight when the literature matures. USA has been the most cited country with the highest number of productions. Bradford's analysis identified the top 10 journals falling in zone 1 led by International Journal of Manpower (14 articles), Personnel Review (12 articles) and Transportation Research Part A: Policy and Practice (11 articles). The spread of articles

across multidisciplinary journals shows the fragmented nature of the extant literature as corroborated by the thematic fragmentation of BERTopic analysis, not a single journal or theme dominates. This convergence of the two independent methods confirms the fragmentation as a genuine structural feature and not a chance.

The thematic synthesis with BERTopic analysis not only shows that the field is fragmented but also how it is fragmented. While well-being (24.1 per cent) and organisational control (29.8 per cent) altogether represent more than half of the corpus while remote work productivity and cybersecurity together represent only 4.6 per cent. This shows an imbalance in concepts covered which cannot be interpreted on the basis of citation rate or journal concentration. Even if the thematic bubble is smaller in size, an article covering a particular theme may gather high citations. Policy-makers may be interested in the economic evidence of productivity, but the narrower research may cover employee experience and this asymmetry may create biased decisions. The sixth theme identified is not a construct and only reports the methodology used in extant literature, specifically, review.

Further, the intertopic distance map secludes the cluster on monitoring and control from the rest of the cluster addressing emotional fatigue and work-life boundary conflict on the semantic space. There is an obvious link between these two clusters but the studies have thematically separated them rather them investigating them together and this shows an underdeveloped theoretical integration. Future studies need to focus on empirical modelling of the impact of employee monitoring and control on the well-being of employees and fill the gap of bibliometric or thematic analysis. An even adverse situation has been identified in the isolation of the cybersecurity cluster (accounting for only 2.4 per cent of the corpus) on the intertopic distance map. This suggests that information flow across the organisation and security considerations have not yet been absorbed into the hybrid work ecosystem, despite of the fact that security risk is of substantial practical relevance for a distributed organisational workforce.

Taken together, the literature of remote as well as hybrid work has matured across disciplines and journals quickly in terms of production as well as citations, but not in integration. The field is an accumulation of parallelly moving constructs as the thematic map shows no overlaps. This demonstrates a critical lack of rigour in this study area, hence, identified as well as potential themes need to be integrated, conceptualised and tested empirically.

V. Conclusion

The study was conducted initially for bibliometric performance analysis combined with document embedding based thematic analysis using BERTopic computationally in Python environment. 23 distinct clusters, reduced to six broader meta-themes from a Scopus corpus of 453 articles, were extracted where no single cluster indicated dominance. This shows that the corpus is multi-thematic and multi-disciplinary rather

than a unified research context. Employee well-being, monitoring and controlling account for 53.9 per cent of the total corpus while productivity and cybersecurity are underreported. The corpus shows that the literature of remote and hybrid work is highly scattered and needs integration as evident from the intertopic distance map of clusters.
Theoretical Implications: This study recovered the most prominent thematic structure directly by concatenating the title and abstract fields rather than relying on absent and mostly unsuitable author keywords in the metadata. This study serves as a keyword independent alternative to conventional co-word bibliometric mapping and shows that the two complementary approaches used in this study provide realistic themes.

Practical Implications: Organisations should address the impact of different hybrid work models on employee experience that arises out of different elements of hybrid workspace. Managers focussing on monitoring and controlling employees using various surveillance systems should focus on the employee readiness and also monitor employee health and mental well-being.

Limitations: The study is based on a single broad Scopus corpus covering the period of 2019 to 2024 (the peak pandemic driven workplace transformation), but still missed relevant publications in other databases not covered under Scopus. Next, document embeddings were generated using TF-IDF/SVD representation rather than a transformer sentence embedding pretrained model due to restricted network access in the computational environment, the robustness with the sentence embedding would have been reasonably better. The outlier of 12.4 per cent of the corpus did not contribute significantly to the themes.

Future Research Directions
From the conceptual framework presented, empirical testing of well-being linkages with meta-themes 1 and 2 with the moderating effect of spatial proximity may be studied using longitudinal as well as multi-level designs. Similarly, future research needs to focus on the impact of cybersecurity along with managerial monitoring and control on employee experience, well-being and productivity, though these factors remain separated on the intertopic map. Future, studied may extend this combination of research method to incorporate further additions of publications beyond 2024, that may help identify better thematic clusters.

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