



Measuring Altmetrics in Rural Entrepreneurship: Usage, Captures, and Social Media Insights of High-Impact Publications

Manjinder Singh

Associate Professor,
Post Graduate Department of Commerce
Sri Guru Gobind Singh College,
Chandigarh, India.

Sharandeep Kaur

Assistant Professor
Post Graduate Department of Commerce
Sri Guru Gobind Singh College,
Chandigarh, India.

Abstract

In the realm of scholarly communication, the emergence of altmetrics has revolutionized how academic research impact is measured. Altmetrics provide a comprehensive perspective by considering digital footprints, including social media mentions, downloads, bookmarks, and discussions. Despite extensive exploration in various fields, the use of altmetrics in rural entrepreneurship is relatively unexplored. This paper investigates the impact of high-impact publications in rural entrepreneurship through altmetrics, focusing on usage, captures, and social media interactions.

Rural entrepreneurship is crucial for sustainable development, particularly in underserved communities, but traditional metrics struggle to capture its impact. Altmetrics offer a promising approach to bridge this gap, capturing online engagement beyond academia. By examining how impactful rural entrepreneurship publications spread across digital platforms, the study aims to provide a holistic and real-time assessment of research impact.

Employing quantitative analysis, the research combines scientometrics and altmetrics to study rural entrepreneurship publications from 2012 to 2022. The findings reveal a complex interplay between altmetrics indicators and Scopus citations. Notably, the captures and citation metrics exhibited a statistically significant and positive correlation with Scopus citations, implying that the preservation of online content by users contributes to increased citations. However, the correlations between usage, social media metrics, and Scopus citations were not statistically significant. The study underscores altmetrics' potential in understanding the intricate impact of rural entrepreneurship research and suggests future avenues for exploration in this evolving landscape.

Keywords: Altmetrics, Rural entrepreneurship, Scientometrics, Scopus database, High-impact publications, Research impact

1. Introduction

In the era of digital connectivity and information dissemination, the landscape of scholarly communication has undergone a paradigm shift. Traditional metrics, such as citation counts,



have long been the primary yardstick for assessing the impact of academic research. However, the advent of altmetrics has introduced a more comprehensive and dynamic approach to measuring scholarly influence by considering the digital footprint of research outputs. Altmetrics encompass a range of non-traditional metrics that capture online engagement, including social media mentions, downloads, bookmarks, and discussions. While altmetrics have been extensively explored in various disciplines, their application in the realm of rural entrepreneurship remains relatively uncharted. This paper delves into the novel domain of altmetrics within the context of rural entrepreneurship, aiming to uncover insights into the usage, captures, mentions, and social media impact of high-impact publications.

The field of rural entrepreneurship holds substantial importance for sustainable economic development, particularly in underserved and marginalized communities. As traditional industries evolve and technological advancements reshape economic landscapes, rural entrepreneurship emerges as a vital force driving innovation, job creation, and community empowerment. Conventional impact metrics often struggle to capture the diverse and nuanced ways in which research in this field influences policy, practice, and local development. Altmetrics, with their ability to track online interactions and engagement beyond academia, offer a promising avenue to bridge this gap. By examining how high-impact publications in rural entrepreneurship are shared, discussed, and leveraged on digital platforms, this study aims to provide a holistic and real-time assessment of research impact.

The rise of altmetrics has been fueled by the proliferation of social media platforms, online repositories, and collaborative networks. These digital spaces facilitate rapid dissemination of scholarly work and encourage multidirectional conversations among researchers, practitioners, policymakers, and the general public. Altmetrics offer a more democratized perspective on impact, acknowledging that scholarly influence extends beyond the confines of traditional academic circles. In the context of rural entrepreneurship, where stakeholders often operate in resource-constrained environments, the amplification of research through altmetrics could catalyze knowledge diffusion, inform decision-making, and stimulate grassroots innovations. Through an empirical investigation of altmetrics usage, captures, mentions, and social media insights, this paper aims to uncover patterns, trends, and implications that shed light on the evolving dynamics of research dissemination and engagement in the realm of rural entrepreneurship.



2. Methodology

Employing a quantitative approach, this research integrates scientometrics and altmetrics indicators to analyze a collection of publications focusing on rural entrepreneurship. The dataset for this study was sourced from the Scopus database on March 28th, 2023, encompassing the period between 2012 and 2022. The initial Scopus search generated a pool of 433 publications with "rural entrepreneurship" mentioned in the article title, abstract, or keywords. A subsequent refinement process involved applying filters to include only English-written articles, conference papers, and book chapters, resulting in a final dataset of 279 publications for analysis.

Table 1: Search Parameters and Sample Details

Database	Scopus
Searching period	2012-2022
Searching keywords	"Rural Entrepreneurship"
Searching criteria	Article title, Abstract, Keywords
Language	English
Sample size	279
Total Citations	3459
References	12242

Subsequent to this, the obtained articles were organized by their citation counts, and a subset of the 25 highly cited publications was selected for further investigation. These chosen publications were then exported from the Scopus database in CSV file format to facilitate analysis. In order to enrich the dataset for further scrutiny, a diverse set of metrics encompassing usage, captures, mentions, social media interactions, and citations were gathered from the Scopus, Plum Analytics Categories database.

Notably, due to a predominant absence of mention metrics in the majority of papers, this particular metric was excluded from the statistical sample. Consequently, the research analysis was centered around the remaining four indicators. The Plum Analytics Categories database, recognized as a comprehensive repository of altmetrics data, offers a comprehensive spectrum of five distinct indicators, namely usage, captures, mentions, social media engagement, and citations. This amalgamation of indicators presents an inclusive panorama that effectively captures the multifaceted facets contributing to the evaluation of scholarly work's impact.

Usage metric

Usage metrics quantify the interaction with digital content, indicating its popularity and reach. These metrics encompass page views, downloads, and user engagement, aiding in evaluating



the effectiveness and visibility of online resources. They play a pivotal role in understanding audience preferences and optimizing content strategies.

Captures metric

Capture metrics measure the retention of online content by users. They encompass bookmarks, favorites, and other means of preserving information for later access. Captures metrics reflect the content's value and relevance to users, offering insights into its long-term impact and resonance within the audience.

Mentions metric

Mentions metrics gauge the visibility of content through references in external sources. They encompass citations in scholarly works, mentions in news articles, blog posts, and social media discussions. Mentions metrics provide a holistic view of a work's influence and its engagement across diverse platforms, contributing to a comprehensive impact assessment.

Social media metric

Social media metrics evaluate a content's impact across various platforms. They encompass likes, shares, retweets, comments, and other forms of engagement. These metrics quantify the extent of audience interaction, helping to gauge the content's resonance, popularity, and its broader influence in the digital sphere.

Citation metric

Citation metrics assess a paper's scholarly impact through references within the Plum Analytics platform. Drawing from various sources including Scopus, PubMed, Microsoft Academic Search, CrossRef, and USPTO, these metrics illuminate a work's influence and relevance within the academic and research landscape.

Table 2: Coverage of Altmetrics for 25 Highly Cited Publications in Dataset

Alternative Metrics	Number of Publications	% proportion
Usage	20	80
Captures	25	100
Mentions	03	12
Social media	14	56
Citation	25	100



3. Findings

3.1 Descriptive Analysis

The table 3 encapsulates key quantitative aspects of the analyzed dataset. With a total of 279 publications, there's an average annual output of 27.90 publications. Among these, 49 are authored by a single individual, while 230 are the result of collaborative efforts. The cumulative citations garnered by these publications amount to 3459, translating to an average of 12.40 citations per publication. Additionally, the references cited within these works total 12242, providing insights into the breadth of source material used in the research. Overall, these figures collectively depict publication trends, collaboration dynamics, citation impact, and the scholarly depth of the dataset.

Table 3: Descriptive Analysis

Criteria	Quantity
Total Publications	279
Publication per year	27.90
Single-authored publications	49
Multi-authored publications	230
Total Citations	3459
Average citations per publication	12.40
References	12242

3.2 Ranking Rural Entrepreneurship Publications

The table 4 presents a breakdown of the citation patterns for a collection of 279 papers. Out of these, 6 papers (2.15%) have been cited more than 75 times, contributing to 25.27% of the total 3459 citations. Another 9 papers (3.23%) have been cited between 50 and 75 times, accounting for 16.22% of the citations. Furthermore, 23 papers (8.24%) have received citations between 25 and 50 times, making up 24.43% of the total citations. Additionally, 143 papers (51.25%) have been cited between 1 and 25 times, representing 32.93% of the citations. On the lower end, 98 papers (35.13%) have been cited less than 25 times, contributing to only 1.15% of the total citations. Overall, the data shows a distribution of citations that highlights the varying degrees of influence and impact of the papers within the collection

Table 4: Distribution and Impact of Cited Papers in Rural Entrepreneurship

Number of times a paper cited	Number of papers	Percentage of Papers	Total Citations	Percentage of Citations
>75	06	2.15%	874	25.27%
>50 ≤ 75	09	3.23%	561	16.22%
>25 ≤ 50	23	8.24%	845	24.43%
>1 ≤ 25	143	51.25%	1139	32.93%
≤1	98	35.13%	40	1.15%
Total	279	100	3459	100

Table 5 offers valuable insights into the 25 most influential papers in the domain of Rural Entrepreneurship. The papers cover diverse topics in rural entrepreneurship and related fields.



Notably, these papers rank within varying percentiles, with higher percentiles indicating a greater impact relative to other papers. For instance, the paper titled "Rural entrepreneurship or entrepreneurship in the rural – between place and space" published in the International Journal of Entrepreneurial Behaviour and Research in 2015 holds the highest percentile rank of 99th within its field, with a notable field-weighted citation impact of 9.66 and being cited 225 times, securing the top position in Scopus citations ranking. Conversely, paper titled "Private-Public Partnership as a tool to promote entrepreneurship for sustainable development: WWP torrearte experience," published in 2016, is in the 84th percentile, with a field-weighted citation impact of 1.71 and 35 Scopus citations, holding the 25th position. Overall, the table provides insights into the influence and visibility of these rural entrepreneurship-related papers within the academic community, highlighting their varying degrees of impact and citation success.

Table 5: 25 Highly Cited Papers in the field of Rural Entrepreneurship

Sr.no	Title	Journal	Year of Publication	Percentile	Field-Weighted citation impact	Scopus Citations	Ranks
1	Rural entrepreneurship or entrepreneurship in the rural – between place and space	International Journal of Entrepreneurial Behaviour and Research	2015	99th	9.66	225	1
2	The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities	Entrepreneurship and Regional Development	2015	96th	4.68	157	2
3	Resources and bridging: the role of spatial context in rural entrepreneurship	Entrepreneurship and Regional Development	2018	99th	8.56	150	3
4	Twenty Years of Rural Entrepreneurship: A Bibliometric Survey	Sociologia Ruralis	2016	98th	7.71	144	4
5	The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention	Higher Education	2016	98th	6.22	120	5
6	Reuse of recycle paper mill waste in energy absorbing light weight bricks	Construction and Building Materials	2012	53th	3.19	77	6
7	Supporting rural entrepreneurship: a review of conceptual developments from research to practice	Community Development	2014	84th	1.78	74	7



8	Scaling agricultural mechanization services in smallholder farming systems: Case studies from sub-Saharan Africa, South Asia, and Latin America	Agricultural Systems	2020	99th	10.49	71	8
9	The relationship between smartphone use and subjective well-being in rural China	Electronic Commerce Research	2021	99th	10.61	65	9
10	Farm diversification strategies in response to rural policy: a case from rural Italy	Land Use Policy	2019	97th	5.69	65	10
11	Aspects and experiences of crisis in rural Greece. Narratives of rural resilience	<i>Journal of Rural Studies</i>	2017	97th	4.76	62	11
12	Romancing the rural: Reconceptualizing rural entrepreneurship as engagement with context(s)	International Journal of Entrepreneurship and Innovation	2019	98th	6.38	60	12
13	Rural entrepreneurship in place: an integrated framework	Entrepreneurship and Regional Development	2019	96th	4.3	58	13
14	Entrepreneurship as a community phenomenon; reconnecting meanings and place	International Journal of Entrepreneurship and Small Business	2016	88th	2.1	55	14
15	Embeddedness and growth of small businesses in rural regions	Journal of Rural Studies	2018	93th	3.15	51	15
16	Barriers to the development and progress of entrepreneurship in rural Pakistan	International Journal of Entrepreneurial Behaviour and Research	2017	92th	2.9	49	16
17	Transnationalising entrepreneurship in a peripheral region - The translocal embeddedness paradigm	Journal of Rural Studies	2016	91th	2.54	49	17
18	The creative fire: An interactional framework for rural arts-based development	Journal of Rural Studies	2018	96th	4.65	46	18
19	Rural entrepreneurship and migration	Journal of Rural Studies	2019	96th	4.13	45	19
20	The development of the edible cricket industry in Thailand	Journal of Insects as Food and Feed	2016	95th	3.57	45	20



21	An effectual leadership perspective for developing rural entrepreneurial ecosystems	Small Business Economics	2020	97th	4.76	44	21
22	The effect of human and social capital on entrepreneurial activities: A case study of Iran and implications	Entrepreneurship and Sustainability Issues	2019	96th	4.5	44	22
23	Community matters: Successful entrepreneurship in remote rural US locations	International Journal of Entrepreneurship and Innovation	2013	63th	0.72	41	23
24	Local development through rural entrepreneurship, from the Triple Helix perspective: The case of a peripheral region in northern Portugal	International Journal of Entrepreneurial Behaviour and Research	2019	93th	3.18	38	24
25	Private-Public Partnership as a tool to promote entrepreneurship for sustainable development: WWP torrearte experience	Sustainability (Switzerland)	2016	84th	1.71	35	25

3.3 Status of rural entrepreneurship publications based on alternative metrics

In Table 6, the status of usage, captures, mentions, social media and citations of rural entrepreneurship publications and also ranking of publications based on all altmetrics indicators are presented.

Usage. In this matrix, “The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention” is ranked first. This publication includes 2088 usages (26.50 percent). “Reuse of recycle paper mill waste in energy absorbing light weight bricks” and “The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities” with 1811(22.99 percent) and 639 (8.11 percent) are ranked second and third, respectively.

Captures. In captures, “The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention,” “Rural entrepreneurship or entrepreneurship in the rural – between place and space” and “Twenty Years of Rural Entrepreneurship: A Bibliometric Survey” with 486 (9.05 percent), 386(7.19 percent) and 368 (6.85 percent) captures are ranked first, second and third, respectively.

Mentions. In mentions, “Community matters: Successful entrepreneurship in remote rural US locations” is ranked first. This publication includes 02 mentions. “Rural entrepreneurship or



entrepreneurship in the rural – between place and space” and “Resources and bridging: the role of spatial context in rural entrepreneurship” are ranked second with 01 mentions each.

Social media. Based on the metric data, “Scaling agricultural mechanization services in smallholder farming systems: Case studies from sub-Saharan Africa, South Asia, and Latin America” with the most presence 178 (79.46 percent) and “The development of the edible cricket industry in Thailand” with 12 times (5.36 percent) in social media are ranked first and second, respectively. The publication “Supporting rural entrepreneurship: a review of conceptual developments from research to practice” with 08 times (3.57 percent) is ranked third.

Citations. In citation metric, “Rural entrepreneurship or entrepreneurship in the rural – between place and space” is ranked first. This publication includes 225 citations (11.81 percent). “The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities” and “Resources and bridging: the role of spatial context in rural entrepreneurship” with 163 (8.56 percent) and 151 (7.93 percent) are ranked second and third respectively. Comparing the rank of rural entrepreneurship publications in terms of alternative metrics indicates that the publication “Rural entrepreneurship or entrepreneurship in the rural – between place and space” has the first rank in Citations metric. The publication “The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention” has the first rank in Usage and Captures metrics. The publication “Scaling agricultural mechanization services in smallholder farming systems: Case studies from sub-Saharan Africa, South Asia, and Latin America” has the first Social Media rank.

Table 6: Ranking of papers in the field of Rural Entrepreneurship by Altmetrics indicators

Sr.No.	Title	Usage (Rank)	Captures (Rank)	Mentions (Rank)	Social Media (Rank)	Citations (Rank)	Total
1	Rural entrepreneurship or entrepreneurship in the rural – between place and space	5(16)	386 (2)	1 (2)	6 (4)	225 (1)	848
2	The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities	639 (3)	314(5)	0	3 (6)	163 (2)	1282
3	Resources and bridging: the role of spatial context in rural entrepreneurship	372(7)	309(6)	1 (2)	1 (8)	151 (3)	985
4	Twenty Years of Rural Entrepreneurship: A Bibliometric Survey	602(4)	368 (3)	0	0	144 (4)	1258
5	The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention	2088 (1)	486 (1)	0	5 (5)	120 (5)	2819



6	Reuse of recycle paper mill waste in energy absorbing light weight bricks	1811 (2)	211(10)	0	0	77 (7)	2176
7	Supporting rural entrepreneurship: a review of conceptual developments from research to practice	162(11)	179(16)	0	8 (3)	77 (7)	503
8	Scaling agricultural mechanization services in smallholder farming systems: Case studies from sub-Saharan Africa, South Asia, and Latin America	25(15)	323(4)	0	178 (1)	83 (6)	692
9	The relationship between smartphone use and subjective well-being in rural China	0	122(22)	0	0	69 (8)	260
10	Farm diversification strategies in response to rural policy: a case from rural Italy	145(13)	194(15)	0	0	67 (9)	473
11	Aspects and experiences of crisis in rural Greece. Narratives of rural resilience	353(8)	213(9)	0	1 (8)	63 (10)	693
12	Romancing the rural: Reconceptualizing rural entrepreneurship as engagement with context(s)	-	114(23)	0	2 (7)	62 (11)	240
13	Rural entrepreneurship in place: an integrated framework	25(15)	288(7)	0	2 (7)	58 (12)	431
14	Entrepreneurship as a community phenomenon; reconnecting meanings and place	1(18)	82(24)	0	0	55 (13)	193
15	Embeddedness and growth of small businesses in rural regions	400(6)	139(19)	0	0	51 (14)	641
16	Barriers to the development and progress of entrepreneurship in rural Pakistan	4(17)	204(13)	0	0	49 (15)	306
17	Transnationalising entrepreneurship in a peripheral region - The translocal embeddedness paradigm	287(9)	126(21)	0	1 (8)	51 (14)	516
18	The creative fire: An interactional framework for rural arts-based development	511(5)	201(14)	0	1 (8)	46 (17)	805
19	Rural entrepreneurship and migration	188(10)	210(11)	0	1 (8)	46 (17)	491
20	The development of the edible cricket industry in Thailand	4(17)	140(18)	0	12 (2)	47(16)	250
21	An effectual leadership perspective for developing rural entrepreneurial ecosystems	0(19)	216(8)	0	0	46 (17)	308
22	The effect of human and social capital on entrepreneurial activities: A case study of Iran and implications	0	143(17)	0	0	43 (18)	229
23	Community matters: Successful entrepreneurship in remote rural US locations	156(12)	63(25)	2 (1)	0	41 (19)	303



24	Local development through rural entrepreneurship, from the Triple Helix perspective: The case of a peripheral region in northern Portugal	0	206(12)	0	0	36 (20)	278
25	Private-Public Partnership as a tool to promote entrepreneurship for sustainable development: WWP torrearte experience	101(14)	132(20)	0	3 (6)	35 (21)	306
Total		7879	5369	4	224	1905	

The data's normality was assessed using the One-Sample Shapiro-Wilk test. The results indicated a departure from normal distribution. Therefore, to examine the correlation between Alternative Metrics and Citations in Scopus, the Spearman non-parametric test was utilized.

3.4 Correlation between Alternative Metrics and Citations in Scopus: In order to investigate the relationship between alternative metrics and citations in Scopus, we classified the alternative metrics into four distinct categories: usage, captures, social media, and citations.

Correlation between usage metric and citations in Scopus

The results obtained from the Spearman statistical analysis displayed in Table 7 indicate that there is no noteworthy and statistically significant positive connection between the usage metric and Scopus citations (Spearman's $\rho = 0.367$, $p\text{-value} = 0.111$). This implies that publications with increased usage, which includes abstract views, full-text views, clicks, downloads, library holdings, link outs, collaborators, and video or audio plays, did not experience an increase in the number of citations.

Correlation between captures metric and citations in Scopus

According to the information presented in Table 7, the Spearman statistical analysis demonstrates a statistically significant and positive connection between the captures metric (encompassing bookmarks, favorites, followers, forks, readers, exports, subscribers, and watchers) and Scopus citations (Spearman's $\rho = 0.572$, $p\text{-value} = 0.003$). To put it more simply, having a higher number of captures substantially contributes to an increase in the citations received by publications.

Correlation between social media metric and citations in Scopus

The data presented in Table 7 indicates that there is no statistically significant positive relationship between the social media metric and Scopus citations (Spearman's $\rho = 0.239$, $p\text{-value} = 0.410$). This implies that employing social media metrics like tweets, shares, likes,



comments, ratings, recommendations, and scores does not result in a higher number of citations for papers.

Correlation between citation metric and citations in Scopus

The examination of data in Table 7, through the application of the Spearman statistical test, distinctly illustrates a remarkably significant positive connection between the citation metric and Scopus citations (Spearman's $\rho = 0.993$, $p\text{-value} = 0.000$). This implies a robust relationship between the rise in paper citations within Scopus and the acquisition of citations in Plum Analytics.

Table 7: Correlation between Alternative Metrics and Citations in Scopus

Alternative Metrics	Citations in Scopus	
	Spearman’s correlation coefficient	p-value
Usage Metric	0.367	0.111
Captures Metric	0.572	0.003
Social Media Metric	0.239	0.410
Citations Metric	0.993	0.000

4. Conclusions

The study examined the status of highly cited papers in the field of rural entrepreneurship using alternative metrics (altmetrics) indicators. The results showed that the paper titled "Rural entrepreneurship or entrepreneurship in the rural – between place and space" held the top spot among highly cited papers in this area, with an impressive 225 citations. Among papers focusing on altmetrics indicators, the paper ranked 5th, titled "The contribution of self-efficacy to the relationship between personality traits and entrepreneurial intention," achieved the highest altmetrics score. This paper received the highest score across various indicators, including usage metrics, capture metrics, social media metrics, and citation metrics.

Furthermore, the research data demonstrated a positive and significant correlation between three altmetrics indicators (captures, and citations) and Scopus Citations, suggesting an association between them. Importantly, this correlation had not been identified in previous studies. Earlier research by Li et al. (2011), Li and Thelwall (2012), and Zahedi et al. (2014) had shown a positive significant correlation between article readership and the number of paper citations on platforms like Mendeley and CiteULike. Similarly, studies by Watson (2009), Schloegl and Gorraiz (2010), Eysenbach (2011), Thelwall et al. (2013), Haustein et al. (2014),



and Ortega (2016) indicated a positive significant correlation between the number of tweets, article downloads, and received citations.

Using Spearman statistical tests, the study confirmed a positive and significant correlation between two altmetrics indicators (captures and citations) and Scopus Citations. However, the link between altmetrics indicators related to usage, social media, and Scopus Citations could not be established. The absence of a positive and significant correlation between these specific altmetrics indicators and Scopus Citations might have several underlying reasons that necessitate further investigation.

The study examines rural entrepreneurship publications using altmetrics indicators to evaluate their impact. It emphasizes the need for further research due to the lack of connection between traditional scientometrics and newer altmetrics indicators. With altmetrics being relatively new, there's limited exploration in this domain. The study suggests that combining altmetrics and scientometrics indicators can effectively gauge the influence of research and scholars. Altmetrics indicators measure social media attention and engagement for research outputs.

References

- Aggarwal, M., & Johal, R. K. (2021). Rural women entrepreneurship: A systematic literature review and beyond. *World Journal of Science, Technology and Sustainable Development*, 18(4), 373-392.
- Aritenang, A. (2021). The role of social capital on rural enterprises economic performance: A case study in Indonesia villages. *SAGE Open*, 11(3), 21582440211044178.
- Ataei, P., Ghadermarzi, H., Karimi, H., & Norouzi, A. (2020). The barriers hindering the application of the value chain in the context of rural entrepreneurship. *The Journal of Agricultural Education and Extension*, 26(4), 365-382.
- Dabson, B. (2001). Supporting rural entrepreneurship. Exploring policy options for a new rural America, 35-48.
- Deller, S., Kures, M., & Conroy, T. (2019). Rural entrepreneurship and migration. *Journal of Rural Studies*, 66, 30-42.
- Eysenbach, G. (2011). "Can tweets predict citations? Metrics of social impact based on Twitter and correlation with traditional metrics of scientific impact." *Journal of medical Internet research*, 13(4), e123.
- Haustein, S., Peters, I., Sugimoto, C.R., Thelwall, M., & Larivière, V. (2014). "Tweeting biomedicine: an analysis of tweets and citations in the biomedical literature." *Journal of the Association for Information Science and Technology*, 65(4), 656-669.



- Janjua, Z. U. A., Krishnapillai, G., & Rahman, M. (2021). A systematic literature review of rural homestays and sustainability in tourism. *Sage Open*, 11(2), 21582440211007117.
- Kalantaridis, C., & Bika, Z. (2006). Local embeddedness and rural entrepreneurship: Case-study evidence from Cumbria, England. *Environment and Planning A*, 38(8), 1561-1579.
- Li, X., & Thelwall, M. (2012). "F1000, Mendeley and traditional bibliometric indicators." *Proceedings of the 17th International Conference on Science and Technology Indicators: Science-Metrix and OST*, September, Vol. 2, Montréal, pp. 451-551.
- Li, X., Thelwall, M., & Giustini, D. (2011). "Validating online reference managers for scholarly impact measurement." *Scientometrics*, 91(2), 461-471.
- Masoomi, E., Rezaei-Moghaddam, K., & Teixeira, A. C. (2023). Evolution, roots and influence of the rural entrepreneurship literature: A bibliometric account. *Journal of Enterprising Communities: People and Places in the Global Economy*.
- Mourao, P. R., & Martinho, V. D. (2020). Forest entrepreneurship: A bibliometric analysis and a discussion about the co-authorship networks of an emerging scientific field. *Journal of Cleaner Production*, 256, 120413.
- Müller, S., & Korsgaard, S. (2018). Resources and bridging: The role of spatial context in rural entrepreneurship. *Entrepreneurship & Regional Development*, 30(1-2), 224-255.
- Muñoz, P., & Kimmitt, J. (2019). Rural entrepreneurship in place: An integrated framework. *Entrepreneurship & Regional Development*, 31(9-10), 842-873.
- Ortega, J. L. (2016). To be or Not to be on Twitter, and its Relationship with the Tweeting and Citation of Research Papers. *Scientometrics*, 109(2), 1353-1364.
- Parmar, S., & Gahlawat, S. (2020). Thirty years research output on rural women entrepreneurship: A bibliometric analysis of publications (1989-2018). *Library Philosophy and Practice*, 1-11.
- Patel, B., & Chavda, K. (2013). Rural entrepreneurship in India: Challenge and problems. *International Journal of Advance Research in Computer Science and Management Studies*, 1(2).
- Pato, M. L., & Teixeira, A. A. (2016). Twenty years of rural entrepreneurship: A bibliometric survey. *Sociologia Ruralis*, 56(1), 3-28.
- Ripoll, S., Andersson, J., Badstue, L., Büttner, M., Chamberlin, J., Erenstein, O., & Sumberg, J. (2017). Rural transformation, cereals and youth in Africa: What role for international agricultural research? *Outlook on Agriculture*, 46(3), 168-177.



- Schloegl, C., & Gorraiz, J. (2010). Comparison of citation and usage indicators: the case of oncology journals. *Scientometrics*, 82(3), e567-e580. doi:10.1007/s11192-010-0172-1
- Sengupta, S. K., & Debnath, S. K. (1994). Need for achievement and entrepreneurial success: A study of entrepreneurs in two rural industries in West Bengal. *The Journal of Entrepreneurship*, 3(2), 191-203.
- Shetty, P. (2004). Attitude towards entrepreneurship in organizations. *The Journal of Entrepreneurship*, 13(1), 53-68.
- Shrivastava, U., & Kumar Dwivedi, A. (2021). Manifestations of rural entrepreneurship: The journey so far and future pathways. *Management Review Quarterly*, 71, 753-781.
- Sohns, F., & Revilla Diez, J. (2018). Explaining micro entrepreneurship in rural Vietnam—a multilevel analysis. *Small Business Economics*, 50, 219-237.
- Thelwall, M., Haustein, S., Larivière, V., & Sugimoto, C.R. (2013). "Do altmetrics work? Twitter and ten other social web services." *PloS One*, 8(5), e64841. Retrieved from <https://doi.org/10.1371/journal.pone.0064841>
- Watson, A. B. (2009). Comparing citations and downloads for individual articles at the Journal of Vision. *Journal of Vision*, 9(4), e1-e4. doi:10.1167/9.4.i
- Zahedi, Z., Costas, R., & Wouters, P. (2014). "How well developed are altmetrics? A cross-disciplinary analysis of the presence of 'alternative metrics' in scientific publications." *Scientometrics*, 101(2), 1491-1513.