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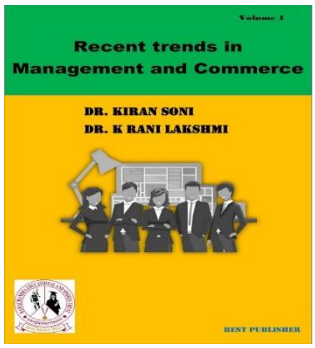

A Comprehensive Analysis of the VIKOR Method for Social Media Communication

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Abstract: *We used structural equation modeling to examine the information and examined disparities between industries as well as interactions between corporate-created and user-generated social media communication. Based on the findings of the empirical studies, brand image and brand attitude were both positively affected by user-generated online communication, but company social media messages largely had an influence on the brand's attitudes. It has been demonstrated that brand awareness and brand mindset positively affect purchasing intention. Detailed VIKOR, fuzzy VIKOR, modified VIKOR, and interval VIKOR approaches, in addition to the VIKOR method, have all been developed depending on the decision-requirements maker's as well as the type of choice dilemma. Based on two demonstration instances, this study analyses performance in terms of ranking between the original VIKOR method and its five variants. When the interval VIKOR method does not perform satisfactorily and since the decision problem's information is uncertain, the fuzzy VIKOR approach should be chosen instead. But the original VIKOR is the greatest way to resolve any decision-making issue without unduly complicating the pertinent mathematical calculations. The alternatives are Tamil Nadu, Karnataka, Kerala, Maharashtra, Andhra Pradesh and Arunachal Pradesh. Evaluation parameters are Face book, Twitter, YouTube and Flicker. Final result of social media communication using VIKOR method. Karnataka is got the first rank and Kerala is got lowest rank.*

Keywords: *Digital Technology, Usage and Problems.*

1. INTRODUCTION

This article says an international statistical and qualitative study that analyses the growing use of social networks in and by organizations in order to better recognize how teams are using social networks, the opportunities that are being encountered, as well as some find the significant, risks, and complexities that need to be acknowledged. In an enjoyable social media interaction, users are encouraged to sign up for social media sites, maintain close relationships with friends and fortify those with new acquaintances, and search for a feeling of belonging and peers recognition in an online support group. Since social networking is a comparatively recent environment for social contact, we plan to investigate it from the perspective of social information dissemination. Such as detailed Remorse theory-based VIKOR, fuzzy VIKOR, fuzzy VIKOR, and interval Depending on the kind, VIKOR approaches have emerged. the decision-making issue and the decision-requirements. Maker's they share basic characteristics and mathematical formulas and are applied in various decision-making contexts. The ranking performance of these five varieties of VIKOR methods can be more effectively compared to their initial figures. This paper's major objective is to compare the ranking results of all six VIKOR method types while addressing two demonstration examples.

2. SOCIAL MEDIA COMMUNICATION

The study methodology emphasizes both the motivations and obstacles for implementing social media at work, which aids in understanding how to encourage people to contribute knowledge on social media. How often do employees share knowledge, i.e. how much time do they spend sharing knowledge, What do they use social media for, how does information sharing on social media benefit businesses, and what inspires (drives) or discourages them? Inform others about your company's social media (restriction) policies. Additionally, we were curious in the promotion of knowledge sharing. The poll did not include any personal information about respondents, and the quantitative analysis of the data was limited to the aggregate level in order to minimize the social desirability

bias. Social media, in its broadest sense, is anything that makes it easier to communicate, network, and/or collaborate online. Other names for the tools and platforms that permit similar user interactions include social software, social networking, and Web 2.0. These facilities are not brand-new. However, the main purpose of social media technology is to serve as networked communication tools (unlike the telephone or email, which are first and foremost tools for one-to-one messaging). Many of the participants also stated that they lacked the resources necessary to dedicate themselves to maintaining a social media presence in between training and emergency situations. Social media is frequently used for one-way message transmission by PIOs who have the authority and means to do so. More recently, in 2015, Waste land et al. performed a county-level study of 241 emergency managers in the United States. In addition to identifying numerous obstacles to social media use, they discovered that slightly over half of the examined agencies were already using it. Based on a 2014 study of 761 emergency service personnel in 32 European countries, Reuter et al. (2016) reported that social media is used by 44% of European emergency services. This work contributes to the body of information in the disciplines of business-to-business social networks and business-to-business advertisement by providing theoretical and empirical evidence that improves comprehension of the relation between Face book social media posts and popularity measures (i.e., the volume of likes and comments). We advance management practice by identifying the tactics that work best in B2B and B2C markets by elucidating when and how B2B social media users remark and like on brand posts.

3. MATERIALS AND METHOD

Oprikovic developed a Vlsekriterijumska Optimizacija I Kompromisno Resenje for the multi-criteria optimization of complex systems (also known as VIKOR) approach in 1998. The main objective of VIKOR is ranking against numerous, or potentially contradictory, decision criteria. VIKOR also uses a clustering method to describe how close a solution is to the ideal, just as some other MCDM systems like TOPSIS. The rank index of VIKOR, in contrast to TOPSIS, is based on a specific measure of how near an answer is to the optimum, and it does away with units using linear normalization. To eliminate numerical issues when using the conventional VIKOR approach to solve problems, Chang created a modified version. In this part, a novel normalizing method is used to modify modified VIKOR. The benefit of recommending a thorough and reconciling model to conventional VIKOR is that it addresses all MCDM objectives. The crucial VIKOR problem is also solved by the suggested approach, as proved by Huang et al. Direct weighting processes (such as the Delphi method, a modified SIMOS procedure, two-way comparison techniques, the Analytical Hierarchical Approach (AHP), the Digital Circuit Approach (DL), and improved versions) can be used to derive the subjective weights from the proposed model. In the meantime, entropy or standard deviation approaches might be employed for objective weighting. Step 1: determine the most favorable values for all criteria.

$$T = \{T_1, T_2, T_3, .., T_j, \ldots, T_n\}$$

= {most desirable element (r_{ij}) or target value for criteria j}

Where r_{ij}(i=1,2,3,…, m and j=1,2,3,…,n) are elements of the decision matrix (alternative i respect to criteria j)
Step 2: Compute the values S_i and R_i by the relations

$$S_i = \sum_{j=1}^{n} w_j \left(1 - e^{\frac{|r_{ij} - T_j|}{-\lambda_j}}\right), \quad R_i = \underset{j}{\text{Max}} \left[w_j \left(1 - e^{\frac{|r_{ij} - T_j|}{-\lambda_j}}\right)\right]$$

When there are competing criteria, the VIKOR technique focuses on ranking and choosing among a collection of possibilities and suggests a workable compromise (s). The VIKOR approach has been widely employed by researchers to resolve a variety of real-world decision-making challenges because of its qualities and capabilities. For instance, Liu et al. solved material selection issues with several interdependent dimensions and criteria by using an MDM model that combines a refined VIKOR and the Deflation occurs in Analytical Network Processing (DANP). To manage complicated interrelationships between variables and criteria and determine the optimum strategy to examine Smartphone advances, Hu, Lu, as well as Tzeng used an MCDM model that combined the techniques of DEMATEL, ANP, or VIKOR and Hsu et al. chose the best vendor to handle recycled material using a hybrid MCDM model that combined DANP and VIKOR. Rezaie et al. and Pourebrahim et al. Utilizing combined fuzzy AHP and Support vector machine (SVM methodologies, the ductility of Iranian cement firms was assessed. To choose criteria and potential improvements to coastal safety, an integrated VIKOR-fuzzy AHP technique was applied..

4. RESULT AND DISCUSSION

TABLE 1. Social Media Communication using VIKOR method

	Face book	Twitter	YouTube	Flicker
Tamil Nadu	73%	56%	67%	55%
Karnataka	55%	50%	74%	64%
Kerala	53%	63%	79%	74%
Maharashtra	48%	61%	63%	75%
Andhra Pradesh	47%	62%	55%	64%
Arunachal Pradesh	41%	55%	65%	61%
Best	**0.41**	**0.63**	**0.79**	**0.55**
worst	**0.73**	**0.5**	**0.55**	**0.75**

Shows table 1 Social Media Communication for using the VIKOR method. Face book, Twitter, YouTube, and Flicker. Alternatives are Tamil Nadu, Karnataka, Kerala, Maharashtra, Andhra Pradesh, and Arunachal Pradesh is the Best and Worst Value.

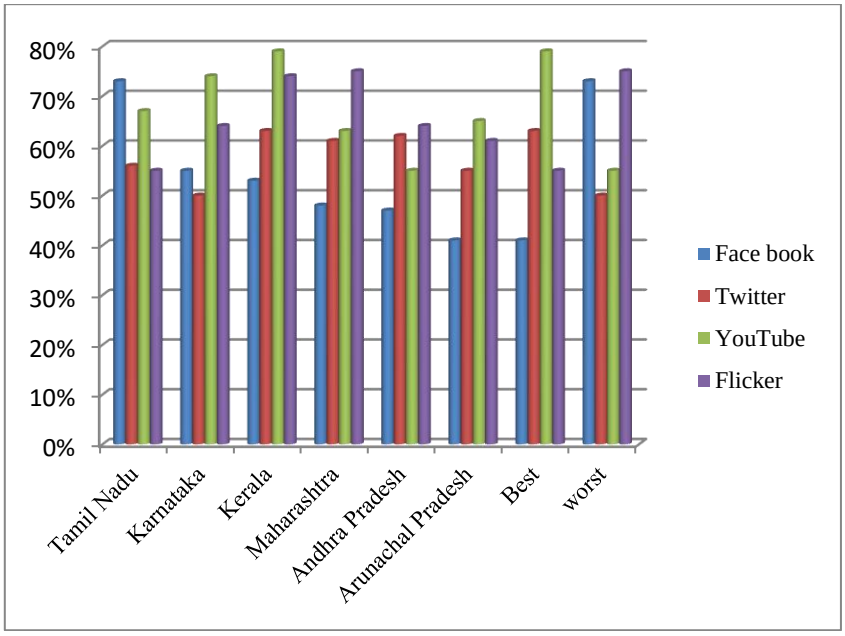

FIGURE 1. Social Media Communication using VIKOR

Shows figure 1 Social Media Communication for using the VIKOR method. Face book, Twitter, YouTube, and Flicker. Alternatives are Tamil Nadu, Karnataka, Kerala, Maharashtra, Andhra Pradesh, and Arunachal Pradesh is the Best and Worst Value

TABLE 2. Calculation Sj and Rj

	Calculation Sj and Rj					
	Face book	Twitter	YouTube	Flicker	Sj	Rj
Tamil Nadu	0.25	0.134615	0.125	0	0.509615	0.25
Karnataka	0.109375	0.25	0.052083	0.1125	0.523958	0.25
Kerala	0.09375	0	0	0.2375	0.33125	0.2375
Maharashtra	0.054688	0.038462	0.166667	0.25	0.509816	0.25
Andhra Pradesh	0.046875	0.019231	0.25	0.1125	0.428606	0.25
Arunachal Pradesh	0	0.153846	0.145833	0.075	0.374679	0.153846

Table 2 shows the calculation Sj and Rj is the sum of Normalization of the tabulation 1 which is calculated from the Determination of best and worst value.

TABLE 3. Sj and Rj

	Sj	Rj
Tamil Nadu	0.759615	0.509615
Karnataka	0.773958	0.523958
Kerala	0.56875	0.33125
Maharashtra	0.759816	0.509816
Andhra Pradesh	0.678606	0.428606
Arunachal Pradesh	0.528526	0.374679
S+ R+	0.528526	0.33125
S- R-	0.773958	0.523958

Shows table 3 final result of the calculation calculated from the sum of the calculation from Sj and Rj.

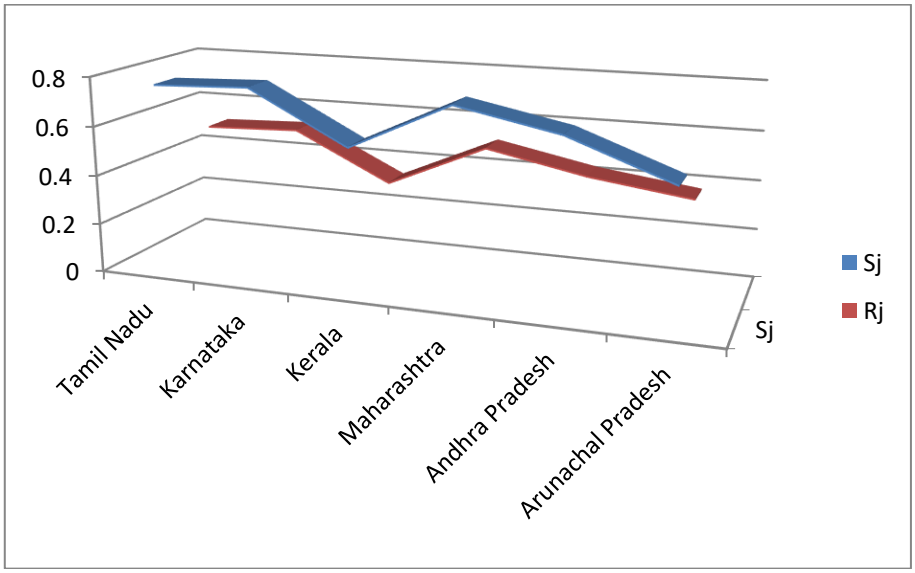

FIGURE 2. Sj and Rj

TABLE 4. Qj and Rank

	Qj	Rank
Tamil Nadu	0.933566	3
Karnataka	1	1
Kerala	0.081946	6
Maharashtra	0.934494	2
Andhra Pradesh	0.558345	4
Arunachal Pradesh	0.112682	5

Shows the table 4 Social media communication of using VIKOR method. Tamil Nadu is got the third rank, Karnataka is got first rank, Kerala is got sixth rank, Maharashtra is got second rank, Andhra Pradesh is go forth tank, and Arunachal Pradesh is got fifth rank

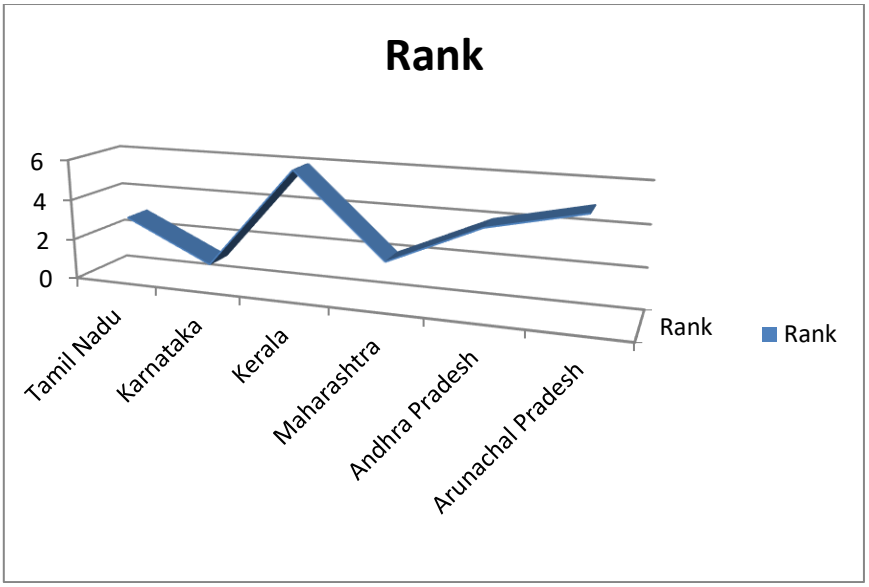

FIGURE 3. Social media communication Ranking

Shows the figure 3 final result of social media communication using VIKOR method. Karnataka is got the first rank and Kerala is got lowest rank.

5. CONCLUSION

It was based on a thorough search of the most prestigious publications in advertising and marketing to find prior research in the area, a study of the philosophical and theoretical challenges of marketing communications via social media, as well as an expectations poll for professionals. Together, the six main directions covered here assist shape. They concentrate on the major theoretical and conceptual issues that social media present as well as the expectations of media firms for what is to come. This kind of cooperation could be justified by the idea that although practitioners frequently have access to actual social media data, they frequently only use it for their immediate purposes. By utilizing these data, it will be possible to get beyond the drawbacks of traditional utilize the unique data that social media provides to conduct a study using students as participants, and eventually keep educators at the centre of social media research. When there are competing criteria, the VIKOR technique focuses on ranking and choosing from a group of alternatives. It determines a compromise solution that the decision-makers can live with since it gives the "majority" the most group value and the "adversary" the least amount of personal sorrow. The weight stability trade-offs and intervals are determined by the extended VIKOR approach. The VIKOR approach is based on an aggregation function that uses linear normalizing to describe "closeness to ideal." In order to make the VIKOR process more applicable to real-world issues, we provide a novel VIKOR technique that substitutes outdated weighting methods with incomplete criterion weights. Furthermore, by reinterpreting the VIKOR technique in terms of DMUU, we demonstrate that it combines projected opportunity loss with least regret. The VIKOR approach might be studied in the future of research because comparable circumstances might arise in real-world settings. The final result of social media communication using VIKOR method. Karnataka is got the first rank and Kerala is got lowest rank.

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