

Abstract Book

16th Conference of the International Federation of Classification Societies

26-29 August 2019
Thessaloniki Concert Hall
Thessaloniki, Greece
#IFCS2019

ORGANISED BY



LOCAL ORGANISER



IN COOPERATION WITH

**THE GREEK
SOCIETY
OF DATA ANALYSIS**

DIRECTOR OF THE CONFERENCE

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The 2019 conference of the International Federation of Classification Societies (IFCS) will be held in Thessaloniki, Greece from August 26 to 29, 2019. The conference theme will be 'Data Analysis and Rationality in a Complex World'. The conference opening will take place on August 26 late afternoon and pre-conference workshops will be held. The conference itself will start on August 27 in the morning, and will close on August 29 with a full day conference program and a conference dinner. The conference will include a President's invited session and a Presidential address, invited presentations, invited and contributed sessions, and poster sessions. The following awards and medals ceremony will be scheduled at the conference.

Helga and Wolfgang Gaul Stiftung Award (age < 30)

Chikio Hayashi Award (age 30 – 35)

IFCS Research Medal for outstanding research achievements (age > 35)

Student/Postdoctoral Fellow Paper Competition and Travel Award (age 22 – 29)

Cluster Benchmarking Competition Award

COMMITTEES

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On the use and reporting of cluster analysis in educational research: A systematic review
Hanneke van der Hoef, Matthijs Warrens, Marieke Timmerman

11.10 – 14.00 Poster Session

Poster Area

Chairs: Sofia Anastasiadou, Odysseas Moschidis

The relationship of the apolipoprotein E genotype gene to the Alzheimer's Disease: A meta-analysis

Sofia Anastasiadou

Bayesian analysis for chromosomal interactions in hi-c data using hidden Markov random field model

Osuntoki Intunu, Andrew Harrison, Hongsheng Dai, Yanchun Bao, Nicolae Zabet

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Beata Bał-Domańska, Elżbieta Sobczak

Comparison of pattering methods: Clustering of variables, Implicative Statistical Analysis and Correspondence Analysis

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Framing coworking spaces digital marketing strategy via social media analytics

Dimitrios Vagianos, Nikos Koutsoupas

Sales performance measure: A systematic review and typology of research studies

Tor Korneliussen, Per Ivar Seljeseth, Michael Greenacre

Document clustering via multiple correspondence, term and metadata analysis in R

Nikos Koutsoupas, Kyriakos Mikelis

Comparison of multivariate methods in group/cluster identification: PCA vs Discriminant Analysis and K-Means clustering

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Multidimensional data analysis in perception of European Union by different generations

Agnieszka Stanimir

13.00 – 14.00 Mid-day Break

14.00 – 14.50 Presidential Address: Predictive ensemble methods for event time data

Berthold Lausen

Chair: Angela Montanari

14.50 – 15.40 Plenary Invited: On the consistency of supervised learning with missing values

Julie Josse

Chair: Angelos Markos

Plenary Hall

15.40 – 16.10 Coffee Break

Parallel Sessions

16.10 – 17.10 SP12: New developments in clustering and scaling data

organized by J. F. Vera & E. Boj del Val

Chair: Jose Luis Vicente-Villardón

Room I



Framing coworking spaces digital marketing strategy via social media analytics

Dimitrios Vagianos, and Nikos Koutsoupas

Abstract The emergence of Coworking Spaces as the workplace of the future has been inspirational for forming and analyzing datasets in this paper, as data have been collected utilizing Social Media Monitoring techniques related to digital marketing. Having focused on a case study of a coworking company, we use Mediatoolkit Social Media marketing tool to collect data derived from the activity of the company's Instagram and Twitter accounts were on a 24/7 basis from varying locations and in multiple languages in a fifteen days' time span. Indices related to sentiment, reach, influence, number of followers, retweets, likes, comments and view scores formed the datasets that are explored using both Multiple Factor Analysis and Hierarchical Clustering.

The analysis in this paper attempts to investigate the inherent properties of the multiple indices describing the general realm of Social Media Marketing tools and more specifically aspires to provide digital marketers with an alternative perspective of social media marketing strategies related to the Coworking Spaces.

Keywords multiple factor analysis; hierarchical clustering; social media analytics, coworking spaces

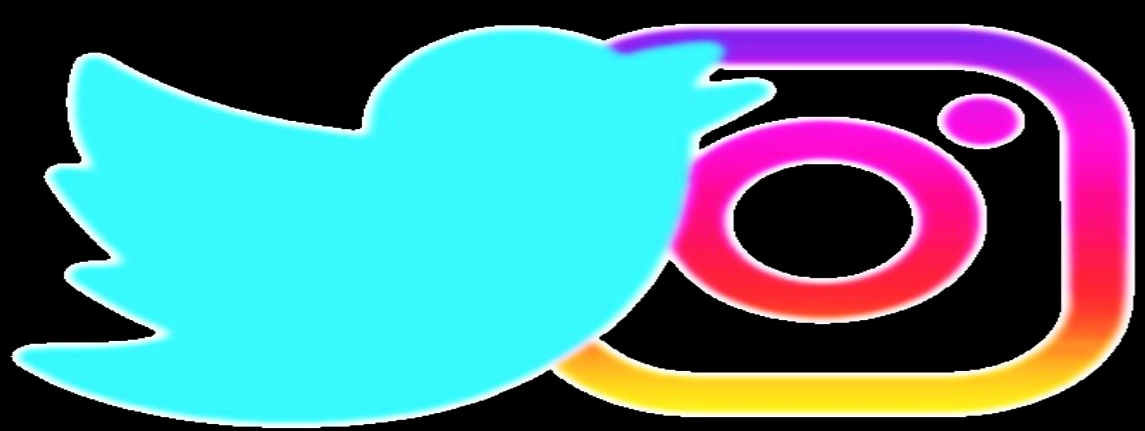
Dimitrios Vagianos

University of Macedonia, Greece, e-mail: vagianos@uom.gr

Nikos Koutsoupas

University of Macedonia, Greece, e-mail: nk@uom.gr

Framing coworking spaces digital marketing strategy via social media analytics



Dimitrios Vagianos / Nikos Koutsoupas | {vagianos/nk}@uom.gr | Department of International & European Studies | University of Macedonia, Thessaloniki, GR

Problem / Question

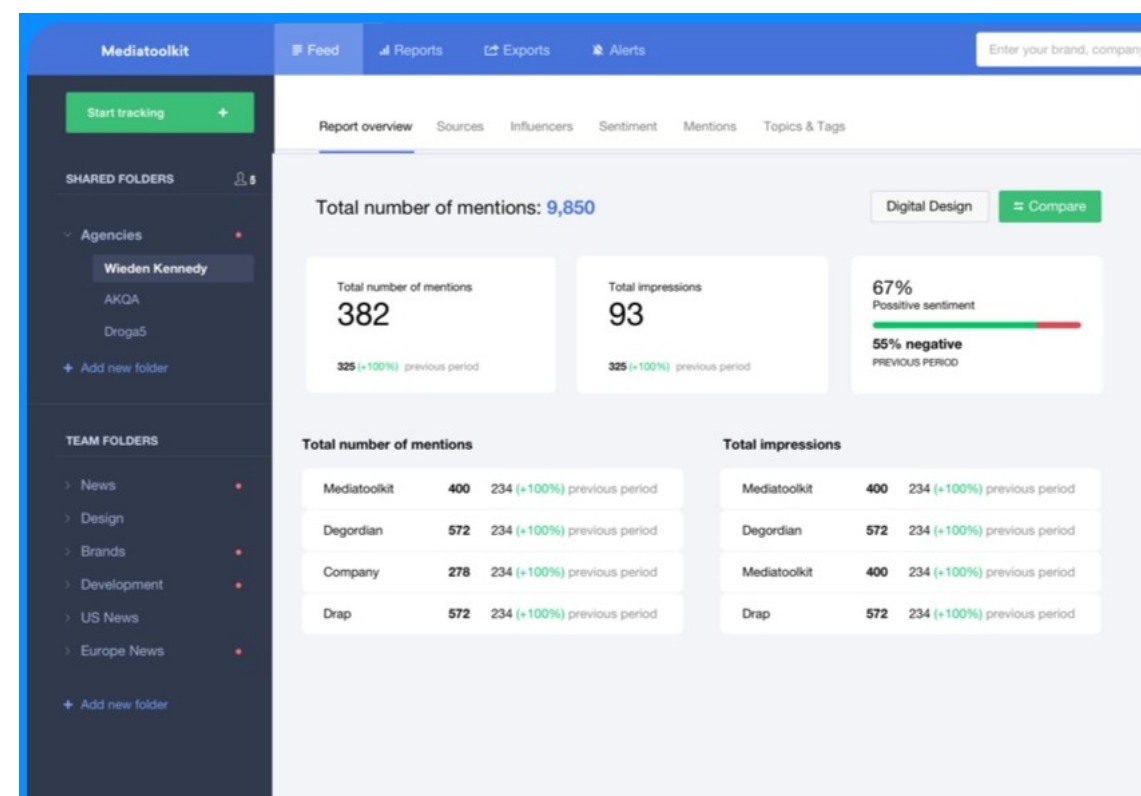
Social Media Data Analysis... Can it support online services marketing strategies;

Data Source

- Extracted text from discussions/reviews in social media (Case in hand: *Wework*, a US based shared workspaces services firm).



Data Extraction



- Utilized *Mediatoolkit*, a social media marketing platform, to transform posted text in *Twitter* and *Instagram* regarding *Wework* to frequency and emotion data in tabular form, along with posting metadata.

Analyzed Data

Table size	Quantitative Vars	Qualitative Vars
4331 rows X 9 cols	<ul style="list-style-type: none">• TIT – Title Length• MEN – Mention• REA – Reach• FOL – Followers	<ul style="list-style-type: none">• IMG – Has Image• TYP –Twitter/Instgr• LAN - Language• SEN - Sentiment• INF - Influence

Initial Input Format

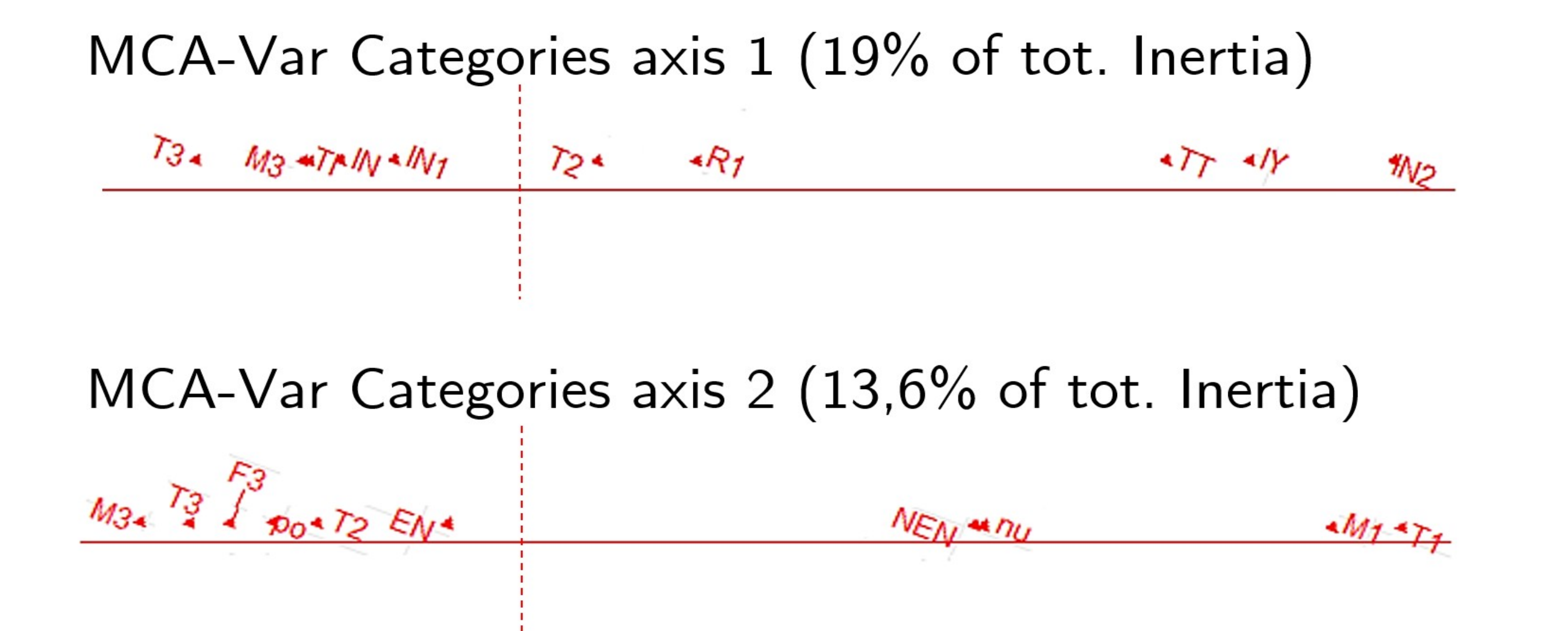
TIT	MEN	REA	FOL	IMG	TYP	LAN	SEN	INF
349	242	1	12	0	twitter	EN	negative	1
312	205	40	803	0	twitter	EN	positive	1
292	232	114	1088	0	twitter	EN	positive	2
256	208	192	2246	0	twitter	EN	positive	2
350	243	720	1996	1	instagram	EN	positive	1
350	244	330	996	1	instagram	EN	positive	1
:	:	:	:	:	:	:	:	:

Final Input Table Format

TIT	MEN	REA	FOL	IMG	TYP	LAN	SEN	INF
T3	M3	R1	F1	IY	TT	EN	ne	IN1
T2	M2	R1	F2	IY	TT	EN	po	IN1
T2	M2	R2	F2	IY	TT	EN	po	IN2
T2	M2	R2	F3	IY	TT	EN	po	IN2
T3	M3	R3	F3	IN	TI	EN	po	IN1
T3	M3	R2	F2	IN	TI	EN	po	IN1
:	:	:	:	:	:	:	:	:

... after Transformation of TIT MEN REA FOL to qualitative variables via quartile categorization (Q1,Q2-Q3,Q4) and relabeling.

MCA



Main trends in posts revealed when examining single MCA Var axis.

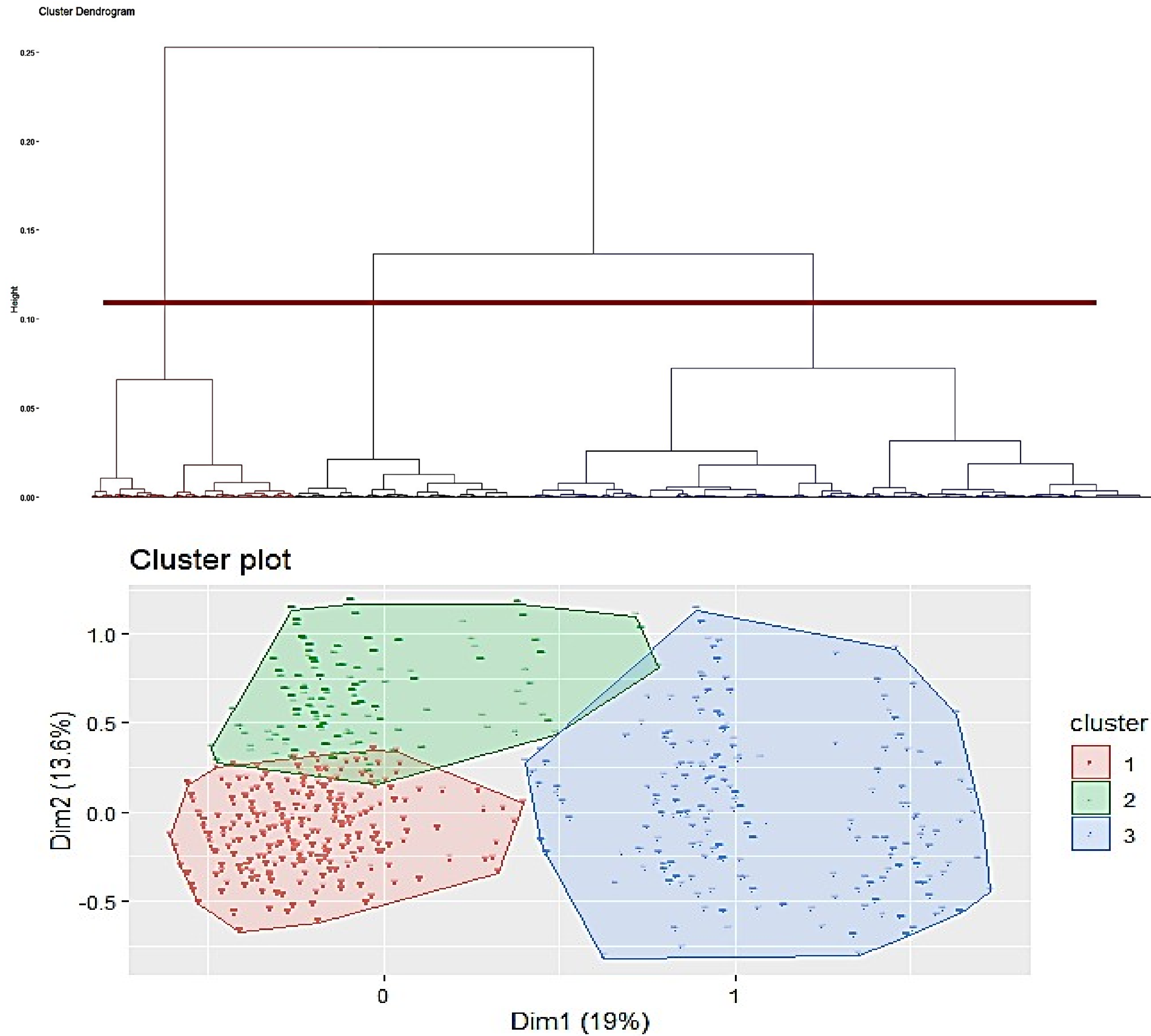
Take Home Message

Data Analysis methods can enhance the output of Social Media Sentiment Analysis tools to support Marketing decisions

For works cited and ... more, please visit:



HC on MCA Output



Each cluster is characterized by a distinct group of categories revealing inherent customer properties.

Software Used

- R/ RStudio
- R packages: FactoMineR, factoextra, Hmisc