





THE 7TH INTERNATIONAL RESEARCH SYMPOSIUM OF THE SGBED

Managing Business in a Digital Age: Opportunities and Challenges

PROCEEDINGS

ISBN 13 978-0-9797659-4-0

December 17-19, 2018, Le Méridien Dubai Hotel & Conference Centre, Dubai Hosted by Skyline University College, Sharjah, United Arab Emirates

Editors

Gouher Ahmed, Naseem Abidi, Yam B. Limbu, C. Jayachandran, Silvio Cardinali

Table of Contents

	The 7th International Research Symposium of the SGBED Gouher Ahmed, Co-Chair & Host Coordinator, Skyline University College, UAE	9-10
D., of	Naseem Abidi, Professor, Skyline University College, UAE	
Preface	Yam B. Limbu, Co-Chair & VP, SGBED, Montclair State University, USA	
	C. Jayachandran, Professor Montclair State University & President SGBED, USA	
	Silvio Cardinali, Co-Chair & VP, SGBED, Polytechnic University of Marche, Italy	
Awards	The 7th SGBED International Research Symposium Awards	11
Journals	Supporting Journals	12
	Marketing Issues	
	E- Logistics Service Quality in the digital era: key drivers for gaining	14-23
	customer satisfaction and loyalty.	
DXB034	Ivan Russo, University of Verona, Italy	
	Ilenia Confente, University of Verona, Italy	
	Nicolò Masorgo, University of Verona, Italy	
	Reviews analysis of Online retail stores in UAE: Analytical study of	24-31
DXB037	sentiment analysis through social media.	
DADOSA	Riktesh Srivastava, Skyline University College, UAE	
	Mohd Abu Faiz, City University College of Ajman, UAE	
	Organizing the Marketing Actions Around Premium Price in Technological	32-41
DXB060	Brands. The Case of Apple.	
	Simonetta Pattuglia, University of Rome "Tor Vergata", Italy	
	Sara Amoroso, University of Rome "Tor Vergata", Italy	
	A Study of Relationship between Trust, Commitment and Relationship	42-52
DXB071	Value in Multi-sided platforms (MSPs) in T-Hub in the Telangana State of	
	India through Structural Equation Modeling (SEM).	
	Vijaya Kumar Gudep, City University College of Ajman, UAE	53-62
DXB072	Competence Certification in the Fourth Industrial Revolution.	33-02
DABUTZ	Ornella Malandrino, University of Salerno, Italy Maria Rosaria Sessa, University of Salerno, Italy	
	Green Product Consumption Patterns in GCC: A Case of Lulu Hypermarket,	63-70
DXB107	UAE	00 70
DADIO	Anil Roy Dubey, Skyline University College, UAE	
	Performance Management System: A Case of XYZ Company, Kingdom of	71-82
	Bahrain.	
DXB119	Bangari Naidu Sunkari, Gulf Petrochemical Industries Company, Bahrain	
	Gagan Kukreja, Ahlia University, Bahrain	
	Omar Albasteki, Gulf Petrochemical Industries Company, Bahrain	

© SGBED 2019 Page 1 of 380

	Effects of Supply Chain Technology in Perspective for Alignment with Revenues	83-94
DXB123	Parrakal Satishchandra Menon, School of Business Alliance University, Bangalore, India	
	N. Abhinay Varma, Alliance Ascent College, Bangalore, India	
	Finance Issues	
DXB045	Social Costs and Economic Benefits of Contract Employment: The Case of India	95-99
	Sivakumar Venkataramany, Ashland University, USA	
	Bitcoin as an Alternative Investment: An Analytical Outlook	100-106
DXB098	Aqila Begum, American College of Dubai, UAE	
	Jennifer Daffodils, Human Resource Manager, UAE	
	Saikat Gochhait, Deemed University, India	107-111
DXB021	Importance and Utilities of Mathematical Modeling in Business Decision Making	107-111
DADUZI	Haftamu Menker, Skyline University College, UAE	
	Financial Performance of Microfinance Institutions in Asia: A Comparative	112-124
	Analysis	
DXB126	Nizar Mousa Sahawneh, Skyline University College, UAE	
	Nandini Kaul, University of Wollongong in Dubai, UAE	
	Namrata Gupta, University of Wollongong in Dubai, UAE	
	Risk, Profitability and Growth Indicators- A Comparative Analysis of UAE's	125-140
DVD407	Large and Small banks	
DXB127	Nizar Mousa Sahawneh, Skyline University College, UAE	
	Nandini Kaul, University of Wollongong in Dubai, UAE Namrata Gupta, University of Wollongong in Dubai, UAE	
	Performance Measures and the CAMEL Rating of the Banking Industry: The	141-146
DXB044	Case of India	141 140
D/1011	Sivakumar Venkataramany, Ashland University, USA	
	UAE the Most Attractive FDI Destination in the Middle East: A study on How	147-162
DXB138	UAE is Sustaining the Status	
DVD139	Manuel Fernandez, Skyline University College, UAE	
	Robinson Joseph, Skyline University College, UAE	
	Entrepreneurship Issues	
DXB023	Entrepreneurial personality	163-170
DADUZS	Tiina Brandt, Tampere University of Applied Sciences, Finland	
	Impact of digitalization on the SMEs and Start-ups in India – Challenges ahead	171-190
DXB125	Shakeel Ahmad, Maulana Azad National Urdu University, Hyderabad, India	
_,,	Syed Samiullah Shah Hussaini, sami.hussaini@ventureast.net	
	Head-Admn. & Legal, APIDC Venture capital, Hyderabad, India	
	Mohd. Akbar Ali Khan, Former Professor & Dean, Osmania University, Hyderabad, India	

Page 2 of 380 © SGBED 2019

Information Technology Issues

	Digital corporate identity congruence analyses: highlighting critical issues and untapped opportunities. A focus on Italian SMEs of the dairy industry	191-204
DVD040	Signori Paola, University of Verona, Italy	
DXB040	Gozzo Irene, University of Verona, Italy	
	Bisutti Vittoria, Padua University, Italy	
	Segato Severino, Padua University, Italy	
	Internet of Things and Consumer Health: An Examination of a Wearable	205-207
	Ankle Edema Monitoring System for Elderly Heart Failure Patients	
DXB061	Muhanad Manshad, University of Northern Colorado, USA	
	Daniel Brannon, University of Northern Colorado, USA	
	Shakir Manshad, New Mexico State University, USA	
	Indigenous Knowledge systems to manage Agriculture in India.	208-215
DXB062	Rudresh Pandey, ABES Engineering College, India	
	Abhijit Das, ABES Engineering College, India	
DXB089	Data Mining and Data Warehousing: The E-Governance Perspective	216-224
DADUOS	Deepak Kalra, Skyline University College, UAE	
	Impact of Emiratization in UAE Private Sector.	225-240
DXB105	Anuradha Reddy, Cornerstone Intl. School for Business Management, India	
	Sudhakar Kota, Skyline University College, UAE	
	A Novel Hybrid Classification (NHC) Algorithm for Diabetes classification.	241-246
DXB102	Karamath Ateeq, Skyline University College, UAE	
27.2202	Gopinath Ganapathy, School of Computer Science, Engineering and	
	Applications, Bharathidasan University, Tiruchirappalli, India.	
DXB110	Analyzing Unstructured Data using Mining Techniques.	247-251
27.2220	Beenu Mago, Skyline University College, UAE	
	Social work in times of digital transformation: historical developments and	252-262
DXB130	trends.	
	Stefan Klar, FOM University, USA	
	Applications Models and Uses of Data Mining in E-Governance for	263-272
DXB140	·	
	Deepak Kalra, Skyline University College, UAE	272 224
DVD404	Impact of Digitization on CRM for B2B Firms.	273-284
DXB124	Parrakal Satishchandra Menon, Alliance University, India	
	Abhinay Varma, Alliance Ascent College, India	205 202
DXB111	Mathematical Modeling of non-Newtonian Fluid under Gravitational Flow over an Inclined Plane.	203-293
DVDIII	Ram Karan Singh, King Khalid University, KSA	
	nam naman onign, ning miana oniversity, Nort	

© SGBED 2019 Page 3 of 380

Economics Issues

DXB094	Emerging Economies and Non- Communicable Diseases: An Integration of Micro and Macro Level Approaches Between Health and Economic Development. Wilson Gachiri, Skyline University College, UAE	294-303
	HRM Issues	
DXB069	Technological Disruption- A Paradox or Continuum to Human Resource Management. K. Vinod Kumar, S.V University Tirupati, India	304-313
	P. Raghunadha Reddy, S.V University Tirupati, India Factors affecting work life balance and Job Satisfaction of Female	313-320
DXB091	employees – A comparative study of teachers in India and UAE. Maryam Haider, Aligarh Muslim University, India Kakul Agha, Skyline University College, UAE	
DXB121	Work Life Balance among Teachers Employed in Higher Education in Oman: Emerging Issues & Challenges. Kakul Agha, Skyline University College, UAE Sami A. Khan, King Abdulaziz University, KSA	321-328
	ABSTRACTS	
DXB022	Value co-creation in vertically integrated industry incubators. Bella Butler, Curtin University, USA Daniel Schepis, University of Western Australia, Australia	330
DXB024	Sharon Purchase, University of Western Australia, Australia Wellbeing and Self-Leadership of Growth Entrepreneurs at Finland. Tiina Brandt, Tampere University of Applied Sciences, Finland Pia Hautamäki, Tampere University of Applied Sciences, Finland	331
DXB025	Modern Sales in Growth-Oriented Finnish Companies Pia Hautamäki, Tampere University of Applied Sciences, Finland	332
DXB026	Knowledge Firms, Intellectual Capital and The Incentive to Adopt Poison Pills. Isaac Wanasika, University of Northern Colorado, USA	333
DXB027	Rescheduling the projects using crash time and real time monitoring Vibha Saihjpal Punjabi University, India S.B. Singh Punjabi University, India	334
DXB035	From Labor Workers to Successful Entrepreneurs: The Case of Migrants from the Indian Sub-continent in the UAE. Khalid Akhal, University of International Business and Economics, China Gouher Ahmed, Skyline University College, UAE	335
DXB036	Retailer Expectations and Consumer response towards Third Generation Private Label Brands: An Evidence of Leading Indian Food Retail Chain. Ajay Singh, ABES Engineering College, India Rakesh Kumar Singhal, ABES Engineering College, India Debdeep De, PwC India	336

Page 4 of 380 © SGBED 2019

DXB038	Technological Change and its Impact on the Labor Market in Egypt.	337
	Mona Farid Badran, Cairo University	
	The Role of Sales Stereotypes in Students' Perception.	
	Silvio Cardinali, Università Politecnica delle Marche, Italy	338
DXB041	Marta Giovannetti, Università Politecnica delle Marche, Italy	550
	Barbara Kulaga, Università Politecnica delle Marche, Italy	
	Environment and Social Sustainability-Vehicle Users Perspective in National	339
DXB042	Capital Region Delhi.	
<i>D</i>	Vishal Gupta, Institute of Management Studies, India	
	Naseem Abidi, Skyline University College, UAE	
	Instrument for Measuring Effective Teaching Competencies for Teachers in	340
DVD042	Indian Business Schools.	
DXB043	Kanupriya Misra Bakhru, Jaypee Institute of Information Technology, India	
	Naseem Abidi, Skyline University College, UAE	
	Analysis of Knowledge Management Practices: A Case study of Private	341
	Scientific and Technological Organizations in Zhejiang, China.	
DXB049	Yi Liu Zhongnan University of Economics and Law, China	
	Chenhui Zhao, Zhongnan University of Economics and Law, China	
	Chao Liu, Zhongnan University of Economics and Law, China	
	Effects of Knowledge Hiding on Employee Creativity?: The Role of	342
	Knowledge Power and Task Independence.	
DXB050	Yi Liu Zhongnan University of Economics and Law, China	
	Chenhui Zhao, Zhongnan University of Economics and Law, China	
	Chao Liu, Zhongnan University of Economics and Law, China	
	Investigating river destination image by using tri-component model: A case	343
	of Malacca River- The Venice of the East.	
DVD054	Jason M. S. Lam, Multimedia University, Malaysia	
DXB051	Ling Suan Choo, Universiti Utara Malaysia	
	Yit Leng Oh, Multimedia University, Malaysia	
	Saw Chin Khor, Universiti Tunku Abdul Rahman, Jalan Universiti, Malaysia	
	The GDPR: A Real Revolution in The Protection of Personal Data in The	344
DXB055	Digital Era.	
	Dusan Soltes, Comenius University, Slovakia	
	Factors determining economic moat of companies with special reference to	345
DXB063	fast moving consumer goods' companies of India.	
	Manoj Kumar, Skyline University College, UAE	
	Sustainable Supply Chain Management – Development of a model through	346
DXB064	Information Technology.	
	Ramakrishna Yanamandra, Skyline University College, UAE	
	A Framework to achieve Supply Chain Resilience through Information	347
DXB065	Technology.	
	Ramakrishna Yanamandra. Skyline University College, UAE	

Page 5 of 380 © SGBED 2019

DXB066	An Empirical Investigation of the Impact of ISO 9001 Certification. C. P. Kartha, University of Michigan-Flint, USA			
	Knowledge management for financial resilience post disasters: An empirical	349		
DVDOCO	analysis.			
DXB068	Abhishek Behl, IIT Bombay, India			
	Pankaj Dutta, IIT Bombay, India			
	Ajith Kumar VV, Skyline University College, UAE			
	The role of e-learning in Tour Operators' marketing strategies.	350		
DXB074	Valerio Temperini, Polytechnic University of Marche, Italy			
	Gian Luca Gregori, Polytechnic University of Marche, Italy			
	Lucia Pizzichini, Polytechnic University of Marche, Italy			
	Managing our Classrooms in a Digital Age: Opportunities and Challenges in	351		
	Learning Through Engagement.			
DXB076	Vish Iyer, University of Northern Colorado, USA			
DADO70	Muhanad Manshad, University of Northern Colorado, USA			
	Brandon Soltwisch, University of Northern Colorado, USA			
	Daniel Brannon, University of Northern Colorado, USA			
	Fear of missing out and internet addiction and their combined influence on	352		
DXB078	online pathological shopping behaviour: Marketing Perspective.			
DADU/6	A. S. Suresh, Christ University, India			
	Anindya Biswas, Christ University, India			
	Developing Framework for Sustainable Procurement of Basmati RICE in	353		
DXB082	India.			
DADUOZ	Rajni Kant Sharma, Maastricht School of Management, Neatherland			
	Naseem Abidi, Skyline University College, UAE			
	Investigating the relationship between Age and Smart Phone Usage	354		
	Patterns: Evidences from Indian Smart Phone Users.			
DXB086	A M Sakkthivel, Skyline University College, UAE			
	V Moovendhan, Madanapalle Institute of Technology and Sciences, India			
	Githa Heggde, IFIM Business School, India			
	An Analytical Study on the Human and Relational Capital as Outcomes of	355		
	Knowledge Management Activities in Academic libraries in Sultanate of			
DXB090	Oman.			
	Hanin Alqam, Middle East College, Oman			
	Shyamala Srinivas, Middle East College, Oman			
	Political Marketing and Social Media influence on Young Voters in Ghana.	356		
	Justice Boateng Dankwah, University of Energy and Natural Resources, Ghana			
DXB100	John Paul Kosiba, University of Professional Studies, Ghana			
	Robert E. Hinson, Ghana Business School, University of Free State, Ghana			
	Ogechi Adeola, Pan-Atlantic University, Nigeria			

Page 6 of 380 © SGBED 2019

	Investigating the Dialogic Potential of Botswana Trade and Investment	357
	Centre Website in Boosting Foreign Direct Investment.	
DVD404	Robert E Hinson, Ghana Business School, University of Free State, Ghana	
	Anne Renner, University of Ghana Business School, Ghana	
DXB101	John Paul Kosiba, University of Professional Studies, Ghana	
	Ogechi Adeola, Pan-Atlantic University, Nigeria	
	Nnamdi O. Madichie, University of East London	
	Michael Nkrumah, Ghana Institute of Mgt. and Public Administration, Ghana	
	The challenge of consumer information management in the era of robots	358
DXB103	and artificial intelligence: opportunities and critical issues.	
	Nadia Olivero, University of Milano Bicocca, Italy	
	Investigation of green marketing practices of UAE hypermarkets.	359
DXB106	Shanmugan Joghee, Skyline University College, UAE	
	Luxury Service Experience: Its Domain and Impact on Emotional Responses	360
DXB108	on Brand Equity.	
	Sherriff T.K. LUK, Emlyon Business School, France	
	Consumer profiling and diffusion of mobile banking in an emerging market.	361
DVD400	Mallika Srivastava, Symbiosis Institute of Business Management, India	
DXB109	Semila Fernandes, Symbiosis Institute of Business Management, India	
	Ajith Kumar VV, Skyline University College, UAE	
	Shoppers Value, Customer Satisfaction and Demographic Variables:	362
DVD440	Evidence from Indian Online Retail.	
DXB113	Biranchi Narayan Swar, Symbiosis Institute of Business Management, India	
	Rajesh Panda, Symbiosis Institute of Business Management, India	
	An Effective Way of Managing Employees in Digital Era through Vipassana	363
DVD444	Meditation.	
DXB114	Seema Pradhan, Symbiosis International University, India	
	Ajith Kumar VV, Skyline University College, UAE	
	VIX Futures: Value-at-Risk and return distribution.	364
DXB116	Ali Husain Ahmed, Xiamen University, China	
	Qian Han, Xiamen University, China	
	Effect of Disruptive technologies on retail banking activities.	365
DXB118	Abdul-Rahman Khokhar, Saint Mary's University, Canada	
	Mapping antecedents of innovative work behavior: A conceptual review.	366
	Michael K. Muchiri, RMIT University, Melbourne, Australia	300
DXB120	Adela J. McMurray, RMIT University, Melbourne, Australia	
DVD150	Mathews Nkhoma, RMIT Vietnam University, Australia	
	Hiep C. Pham, RMIT Vietnam University, Australia	
		267
	The Impact of Economic Freedom Leads on Economic Growth: Empirical Evidence from the MENA Countries	367
DVD122		
DXB132	Anwar Al-Gasaymeh, Applied Science University-Amman-Jordan, Jordan	
	Haitham Alzoubi, Skyline University College, UAE Gouher Ahmed, Skyline University College, UAF	
	NOUTE ATTICU. NYTHE UTIVEINTY CONERC. UAF	

Page 7 of 380 © SGBED 2019

	Investigating the Relationship between Sustainable Supply Chain Strategies	368
DXB133	and Supply Chain Collaboration and its Impact on the Competitive	
	Priorities: An Empirical study on Jordanian Pharmaceutical companies.	
DVD133	Haitham M. Alzoubi, Skyline University College, UAE	
	Gouher Ahmed, Skyline University College, UAE	
	Anwar Al-Gasaymeh, Applied Science University-Amman-Jordan, Jordan	
	Biometric Identity card as a tool for E Governance in Sultanate of Oman	369
DXB134	Kavita Chavali, Dhofar University, Oman	
	Shouvik Sanyal, Dhofar University, Oman	
	Perception of Educated Citizens on Aadhar Card as a tool for Effective and	370
	Efficient E Governance in India.	
DXB135	Sudha Mavuri, GITAM Institute of Management, India	
	Kavita Chavali, Dhofar University, Oman	
	Shireen Rosario, Dhofar University, Oman	
	Examination of Index Model and Prediction of Beta -A case study	371
DVD407	examination in IT Sector.	
DXB137	Manuel Fernandez, Skyline University College, UAE	
	B.Rajesh Kumar, Institute of Management Technology, UAE	
	Glocalization and tourism – A Smart Tourism Era.	372
DXB139	Mohit Vij, Skyline University College, UAE	
	Rasha El Khatib, Skyline University College, UAE	
	Women's Birthplace Choice: The State of Art.	373
DVD4.44	Silvio Cardinali, Università Politecnica delle Marche, Italy	
DXB141	Marta Giovannetti, Università Politecnica delle Marche, Italy	
	Valentina Foglia, Università Politecnica delle Marche, Italy	
	Perceived Banking Service Quality in Al-Buraimi Region; A Study of	374
DVD143	Customers.	
DXB142	Haidar Abbas, Al-Buraimi University College, Oman	
	Abdullah Said Khamis Al-Badi, Al-Buraimi University College, Oman	
	Linkage between Technology and Human Capital Development Strategies:	375
DVD142	Exploratory Evidences from Four Leading Firms in India.	
DXB143	Sanjib Biswas, Calicut Business School, India	
	Shekhar Chaudhuri, Calicut Business School, India	
	The duration of copyright, new revenue-generating models for the music	376
DXB144	industry, and access to digital content on the Internet.	
	Markus Rytinki, University of Oulu, Finland	
	Impact of Mobile Augmented Reality (MAR) on retailing in UAE. An	377
DXB146	exploratory study	
	Abdul Salam Mohammad, Skyline University College, UAE	
DVD147	Entreprenuership Ecosystem: Innovative Thinking in UAE	378
DXB147	Kakul Agha, Skyline University College, UAE	

Page 8 of 380 © SGBED 2019

PREFACE

The 7th International Research Symposium of the SGBED

Editors

Gouher Ahmed¹, Naseem Abidi², Yam B. Limbu³, C. Jayachandran⁴, Silvio Cardinali⁵

The SGBED (Society for Global Business & Economic Development) organized its 7th International Research Symposium, "Managing Business in a Digital Age: Opportunities and Challenges" in collaboration with Skyline University College, Sharjah, United Arab Emirates (UAE) during December 17-19, 2018, at Le Méridien Dubai Hotel & Conference Centre, Dubai. The SGBED established in 1995 continue to serve the academia with the following objectives:

- Promote research and publications in the area of business and development issues by organizing major international business conferences and research symposiums around the world;
- Facilitate networking opportunities for faculty and generate opportunities for collaborative research and publications; and
- Organize professional seminars and workshops in collaboration with partner institutions on business topics and issues pertaining to emerging markets and developing countries.

The SGBED had so far organized 7 international research symposiums and 15 major International Business conferences. The 16th International Business conference is scheduled to take place in Sao Paulo, Brazil in June 10-12, 2019.

The 7th symposium had an excellent response from 27 different countries with 120 papers on the following themes.

- Advances in Digital Technologies and Development: Digital Technologies across Urban and Rural Communities; Agriculture, Manufacturing & Services; Health Care, Education; Tourism & Hospitality, Entertainment, etc.
- Knowledge, Human Capital & Data Management in a Digital Age: HR, Intellectual Capital, Technology Management, Technological Forecasting & Big Data;
- Entrepreneurship, SMEs, Micro Enterprises in a Digital Age: *Mobile Technology, "Apps," Crowd Funding & Enterprise Development.*
- Marketing & Consumer Behavior in a Digital Age: commerce; B to B; B to C; C to C Transactions
- Sales Force Management & CRM in a Digital Age:
- Integrated Marketing Communications in a Digital Age: *Digital Advertising; Social Media & Social Networks*
- Supply Chain Management in a Digital Age:
- Digital Technology in Government and Delivery of Public Goods & Services: *Role of Bio-metric Identity Cards (eg, Aadhaar in India)*

© SGBED 2019 Page 9 of 380

- Banking, Finance, Accounting, Taxation & Payment Systems in a Digital Age
- Privacy, Cyber Threats & Security Issues

Based on authors' preferences, symposium proceedings include full papers and abstracts.

We sincerely appreciate the Symposium Organizing Committee and all the sponsors and voluteers to make it a memorable event.

Mr. Kamal Puri, Patron & President, Skyline University College, UAE

Mr. Nitin Anand, Patron & COEC, Skyline University College, UAE

Prof. C. Jayachandran, President, SGBED, Montclair State University, USA

Prof. Samir Chatterjee, Chair, SGBED Board, Curtin University, Australia

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Dr. Ramakrishna Yanamandra, Assistant Professor, Chair of Quality Assurance and Risk

Management Implementation Committee, Skyline University College, UAE

- 1. Dr. Gouher Ahmed, Co-Chair and Host Coordinator of 7th SGBED International Research Symposium, SGBED Regional Coordinator-Middle East and Professor at Skyline University College, UAE.
- 2. Dr. Naseem Abidi, Professor and Chair-Outreach and Accreditation Committee at Skyline University College, UAE.
- 3. Dr. Yam B. Limbu, Co-Chair and Vice President SGBED, Associate Professor at Montclair State University, USA.
- 4. Dr. C. Jayachandran, President SGBED, Professor at Montclair State University, USA.
- 5. Dr. Silvio Cardinali, Co-Chair and Vice President SGBED, Associate Professor, Polytechnic University of Marche, Italy

© SGBED 2019 Page 10 of 380

AWARDS

The following research papers of the 7th SGBED International Research Symposium were judged and given best paper awards.

Organizing the Marketing Actions Around Premium Price in Technological Brands - The Case of Apple.

Simonetta Pattuglia, University of Rome "Tor Vergata", Italy Sara Amoroso, University of Rome "Tor Vergata", Italy

Social Costs and Economic Benefits of Contract Employment: The Case of India Sivakumar Venkataramany, Ashland University, USA

The 7th International Research Symposium of the SGBED was recognized by Government of Dubai



The Government of Dubai Award

The 7th SGBED International Research Symposium recognized as the best organized event by the Government of Dubai and awarded the prestigious Al Safeer Congress Ambassador Award on 27th February, 2019. Prof. Gouher Ahmed. Co-Chair & Host Coordinator Symposium, **SGBED** Regional Coordinator Middle East, and Professor at Skyline University College, received the award from His Excellency Helal Saeed Almarri, Director General of Dubai Tourism. Government of Dubai, UAE.



© SGBED 2019 Page 11 of 380

SUPPORTING JOURNALS

1. Journal of Knowledge Management

Emerald, ABDC A Category, SCOPUS Index (IF5y: 3.293). Manlio Del Giudice, Editor in Chief Journal of Knowledge Management, University of Rome, Link Campus Naples, Italy

2. International Journal of Business and Emerging Markets

Inderscience, SCOPUS indexed and ABDC listed journal.

Guest Editors:

Isaac Wanasika, University of Northern Colorado, USA. Yam B. Limbu, Montclair State University, USA. Ying Hua, University of International Business and Economics, China Na Wang, Huaqiao University, China

3. International Journal of Sustainable Society

Inderscience, SCOPUS indexed journal.

Guest Editors:

Gouher Ahmed, Skyline University College, UAE. C. Jayachandran, Montclair State University, USA. Yam B. Limbu, Montclair State University, USA.

4. International Journal of Business Analytics

IGI, SCOPUS Indexed journal.

Guest Editors:

Yam B. Limbu, Montclair State University, USA. Silvio Cardinali, Università Politecnica Delle Marche, USA. Gouher Ahmed, Skyline University College, USA.

© SGBED 2019 Page 12 of 380

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Referencing

Referencing of research papers published in the proceedings may be used as,

Signori Paola, Gozzo Irene, Bisutti Vittoria, Segato Severino (2019), Digital corporate identity congruence analyses: highlighting critical issues and untapped opportunities. A focus on Italian SMEs of the dairy industry, in Ahmed G., Abidi, N., Limbu, Y., Jayachandran, C., Cardinali, S., (Eds.), *Managing Business in a Digital Age: Opportunities and Challenges*, Proceedings of the 7th International Research Symposium of the SGBED, pp. 171-184. ISBN 13 978-0-9797659-4-0

Proceeding can be downloaded from the following websites

SBGED website www.sgbed.com or http://www.sgbed.com/download/past-sgbed-symposium-proceedings/

Skyline University College, UAE website www.skyline university.ac.ae

© SGBED 2019 Page 13 of 380

DXB040

DIGITAL CORPORATE IDENTITY CONGRUENCE ANALYSES: HIGHLIGHTING CRITICAL ISSUES AND UNTAPPED OPPORTUNITIES. A FOCUS ON ITALIAN SMES OF THE DAIRY INDUSTRY

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ABSTRACT

Firms often signal their identities through their digital footprints. The context chosen for this research is the Italian dairy industry, which is fragmented with many product-oriented smaller farms. Corporate identity congruence (CIC) refers to the fit between several corporate identity meanings. These meanings are signaled to stakeholders by multiple vehicles, some of which are digital in nature. Digital signal analyses could reveal misalignment between offline and online communication. The research design involves multiple studies: phenomenological interviews on 7 case studies, using NVIVO to analyze transcripts and other documents; nutritional and chemometric analysis on dairy products; corporate identity congruence meaning based analysis, with a particular focus on digital communication. Misalignments discovered between what companies do, who they are, and what they say (offline and online) are discussed as critical issues. This digital CIC analysis strives to highlight new opportunities for companies that want to evolve their digital corporate identity.

Keywords: Corporate Identity, Congruence, Dairy industry, Digital Communication, Big Data.

Introduction

A digital corporate identity analysis is able to reveal critical issues and untapped opportunities for those companies that are still digital novices. Sometimes these firms lack modern communication and digital skills. This study aims to help practitioners in understanding their communication misalignments, conducting a meanings-based analysis of their corporate identity, and in providing insights from mixed methods analysis of interview, print and digital content.

A corporation's identity refers to what an organization stands for and the mix of elements that give the organization distinctiveness (Balmer, 1998; 2008; Wernerfelt, 2014). The origins of corporate identity research have been traced at times to ideas presented by Olins (1978; cited in Balmer, 2015) and Kennedy (1977). It can be conceptualized as "what we indubitably are" (Balmer & Greyser, 2006, p.735; van Rekom, 1997), or the management of all ways the organization presents itself to all of its audiences (Olins, 1995), or holistically as comprised of four dimensions, i.e., communication and visual identity, behavior, corporate culture, and market conditions.

Despite the interdisciplinary nature of corporate identity, an extensive literature base currently exists on the corporate identity theme within marketing alone. A number of these articles offer literature reviews covering over two decades of work on corporate identity conceptualizations (Abratt, 1989; Balmer, 1998, 2001, 2008; Balmer & Greyser, 2002; 2003, 2006; Brown, Dacin, Pratt & Whetten, 2006; Cornelissen, Haslam & Balmer 2007; Cornelissen, Christensen & Kinuthia 2012; Dacin & Brown, 2002, 2006; He & Balmer, 2007, 2013; He & Mukherjee, 2009; Melewar, 2003, 2008; Melewar & Karaosmanoglu 2006; van Riel & Balmer, 1997). In particular, He (2012) underlined the importance of understanding managerial perspectives and intent, specifically on trying to determine on which of the many corporate identity elements leaders anchor. He (2012) went on to state the need for understanding the extent of integration among these elements. In addition, Brown, Dacin, Pratt & Whetten, (2006) summarize the interdisciplinary work on identity, intended image, construed image and reputation as four viewpoints describing managers' perspectives of interactions between a focal firm and its stakeholders, with two that are particularly relevant here: "who are we as an organization?", mental associations about the organization held by organizational members and "what does the organization want others to think about the organization?", mental associations about the organization that organization leaders want an important audience to hold, of which customers are one of the most important.

A Corporate Identity Congruence analysis should include all the elements that are part of a corporate identity. Flint, Signori & Golicic (2018) identify five categories of corporate identity elements, presenting sixteen signaling vehicles that can be adapted to the dairy industry: product characteristics (product attributes, packaging, label); marketing processes (digital media, printed collateral, interpersonal interactions, events, architectural design); operations (production and operations); supply chain management processes (network structure, relationship management); and organizational characteristics (firm location, organizational structure and employee skills). Corporate identity-related messages, be they leadership communications, printed collateral, stories, digital manifestations, visual imagery or behaviors, can be thought of as signals to the marketplace.

The context chosen for this research is the Italian dairy industry, which is fragmented with many product-oriented smaller farms (Confente & Signori, 2016). The dairy industry holds an important role in the Italian food market, with a revenue of 15.9 billion euros (ISMEA, 2017). Milk comes mainly from small farms that represent the majority of the producers. Big companies are only a few, operating on a large scale. Then, most farms are located in the Northern and Central Italian regions. Cheese represents the main final product of milk and only a small portion is delivered to retailers to be sold as fluid milk products. Over the last few years, the consumption of fresh milk and its supply have been increasing together with consumer pricing (Madau, Furesi & Pulina, 2016). The dairy farms are not benefitting from these higher consumer prices, due to buying power of intermediaries. This situation could be related to the growing presence of market power along the supply chain, which comes from a high concentration of industrial firms and retailers (Sckokai, Soregaroli & Moro, 2013). In fact, Pieri (2013) demonstrates the presence of only eight industrial firms, that control 20 per cent of the Italian market; four of them, the largest, produce 13 per cent of the total milk.

In the last few years, the global dairy industry began to face three problems: even though dairy goods represent an important source of nutrients for humans, nutritional experts keep emphasizing a balanced lighter diet which reduces the amount of dairy products consumed

(Sonesson & Berlin, 2003); second, because producing and distributing these products have a critical impact on the environment (Palmieri, Forleo & Salimei, 2017), in particular on resource reduction and gas emissions (Gonzalez-Garcia, Hospido, Moreira, Feijoo & Arroja, 2013, in Palmieri, Forleo, & Salimei, 2017), environmental sustainability is becoming increasingly critical (Glover, Champion, Daniels & Dainty, 2014); and third, meanwhile global corporations continually rely on digital media for communicating with all stakeholders, with consumers becoming less sensitive to traditional media and seeking more relations and experiences even for convenience goods (Confente & Signori, 2016).

Objectives and methodology

This digital Corporate Identity Congruence analysis strives to highlight new opportunities for companies that want to evolve their digital corporate identity. The digital focus is part of a larger research design, composed of three main stages, based on a mixed method, multidisciplinary approach.

The overall research design involves multiple studies: phenomenological interviews with top managers of 7 case studies (Yin, 2009); nutritional and chemometric analysis on dairy products of 20 dairy farms; corporate identity congruence meaning based analysis, with a particular focus on digital communication. The main analysis method is a meanings-based analysis on Corporate Identity elements (Flint, Signori & Golicic, 2018), using NVIVO to capture meanings in transcripts and other elements of the corporate identity. This research involves three different studies:

1. Study 1= "Who they are", identification of corporate identity main meanings. Adopting a case study method protocol (Yin, 2009), the first study aimed to collect information on "who they are", in particular trying to capture through personal interviews (1-2 hours long) the main meanings top managers were choosing for their corporate essence. He (2012) underlined the importance of understanding managerial perspectives and intent, specifically on trying to determine on which of the many corporate identity elements leaders anchor.

The sample is composed by 7 firms of the Italian dairy industry (see Table 1 for sample description), all located in Vicenza province. A case study is a medium size company, producing asiago cheese, fresh cheese, aged cheese, butter, yogurt, milk (interview with the general director). B and C are small size lowland companies. B produces asiago cheese, ricotta and milk (2 interviews with the cooperative's president and with his two secretaries). C produces asiago cheese, caciotta cheese and fresh cheese (interview with the cooperative's president and managing director). D is a micro alpine company, which produces asiago cheese, caciotta and ricotta (2 interviews with the CEO and family owners). E and F are large size companies, producing milk and fresh and aged cheese. E is located in an alpine environment (interview with the marketing manager), while F in the lowland (interview with the general manager). G is an alpine large company, producing fresh and hard cheese, and butter (interview with the CEO and owner).

All interviews were transcribed and analyzed with coding within the NVIVO software, searching for meanings on different identity elements reported by senior managers: product characteristics (product attributes, packaging, label); marketing processes (digital media, printed collateral, interpersonal interactions, events, architectural design); operations (production and operations); supply chain management processes (network structure, relationship management); and organizational characteristics (firm location, organizational structure and employee skills). Insights from study 1, related to the main orientation on

production of many companies in the sample, confirmed the need to inspect product (milk) attributes in relation to production systems that were mentioned in corporate identities.

2. Study 2: "What they do", analysis of nutritional profiles.

The purpose of this study 2 was to evaluate how different production systems and seasons can affect milk's nutritional profile of dairy farms located in the Veneto Region (Italy). The trial was carried out on twenty lowland dairy farms (of which, 7 are in study 1 sample) grouped in five feeding systems (fixed effect F) according the main forage of the lactating dairy cows' diet: HMS (high maize silage diet), MMS (medium maize silage diet), GMS (mix of grass and maize silage diet), HGS (high grass silage), HMH (high meadow hay diet). Over the year 2018, the milk was collected in the experimental farms four times (fixed effect S): February (WT thesis, winter samples), May (SP thesis, spring samples), July (SM, summer samples), September (AT, autumn thesis) and submitted to chemometric analysis in order to determine the content of lipid and protein-like nutritional compounds. The fatty acid (FA) profile was determined by gas-chromatography, fat-soluble vitamins were evaluated by HPLC, the N-fraction was detected by using a high resolution mass spectrometry (HRMS), the proximate composition by means of near infrared (NIR) spectroscopy (Nguyen Dupas, Adt, Degraeve, Ragon, Missaoui, Novelli, Segato, Phan & Ouhalal., 2014; Ottavian, Franceschin, Signorin, Segato, Berzaghi, Contiero & Cozzi, 2015; Segato, Galaverna, Contiero, Berzaghi, Caligiani, Marseglia & Cozzi, 2017). Data were submitted to a two-way analysis of variance (two-way ANOVA) by using a general linear model that considered the fixed effects F (feeding system) and S (season of milk production) and their interaction (FxS). The HRMS dataset was also used to perform a principal component analysis, using the software Unscrumbler 10.5 X (CAMO Software AS, Oslo, NO) and Metaboalayst 4.0 (Xia Lab, McGill University, Quebec, CA), in order to discriminate the different feeding systems.

TABLE 1: SAMPLE DESCRIPTION

Company	<u>Chain</u>	<u>Products</u>	<u>Dimension</u>	Foundation Year	<u>Company</u> <u>Type</u>	<u>Market</u>
A	Lowland	Asiago, Fresh Cheese, Aged Cheese, Butter, Yogurt, Milk	Medium	1929	Ltd	National
В	Lowland	Asiago, Ricotta, Milk	Small	1901	Cooperative	Local
С	Lowland	Asiago, Caciotta, Fresh Cheese.	Small	1989	Cooperative	Local
D	Alpine	Asiago, Caciotta, Ricotta	Micro	1900	Farm	Local
E	Alpine	Asiago, Fresh Cheese, Hard Cheese, Butter, Yogurt, Milk, Ice Cream	Large	1954	Cooperative	National and International
F	Lowland	Asiago, Fresh Cheese, Hard Cheese, Butter, Yogurt, Milk	Large	1952	Cooperative	National and International
G	Alpine	Butter, Gran Moravia, Fresh Cheese, Aged Cheese	Large	1784	Ltd	National and International

3. Study 3= "What they say", content communication analysis.

All documents related to case stud firms' communications vehicles were collected and analyzed with NVIVO coding, following the same research method and sample used in study 1, and searching for meanings in communication content related to all of the identity elements (Flint, Signori & Golicic, 2018). Then, the communication analysis separated results for traditional and product offline vehicles (in this industry in particular: flyers, brochures, packaging, labels), versus digital media (in particular, websites, facebook, youtube). Offline and online communication flows were collected and observed for 6 months in 2018.

Results

1. Study 1 findings: identification of corporate identity main meanings.

Thanks to the interviews with the owners and presidents of the seven firms, it has been possible to know more about who they are and who they want to be in the future. Micro and small firms often struggle in communicating all their initiatives and efforts to their stakeholders, and top managers and owners place a lot of effort on personal communication to the marketplace and to their stakeholders. The direct contact with owners and presidents gave to the researchers several important inputs, difficult or impossible to collect from other sources.

Study 1 findings show two groups of main meanings: the first related to the meaning "Natural", including signifiers regarding being natural in general, or directly stressing the natural attribute of milk and the dairy product and production; the second group is "Sustainability", which is composed of many sub-codes, such as environmental, social, economic. Study 1 findings are presented in Figure 1. For more details, the codebook in Table 2 contains details of codes, sub-code descriptions, source (interviews included) and frequency. All coding was originally done in Italian but has been translated here into English.

B, C and D cases could be defined as production oriented. In fact, they all focus their attention mainly on the production of hand-made cheese, composed of natural ingredients, following their own tradition. Moreover, even if sometimes they are not conscious at all about this, they work in a sustainable way, respecting the environment, taking care of cows and helping local communities. All of them have their own shop, a small factory outlet, through which they have a direct contact with consumers. However, despite this, the major part of their production is sold to wholesalers and distributors, with the consequential effect of losing their identity on packaging and labels. E, F and G cases, the largest companies, are focused both on product quality and elements of sustainability and nature. This is demonstrated by a great number of initiatives in terms of environmental safeguarding and social activities that companies undertake. Finally, case A is the only firm that is not aligned with the sustainability trend. In fact, sustainability is considered also in its economic dimension, as a way to save money. The focus of the company is oriented especially towards internal innovations and certifications.

Figure 1 shows the positioning of the seven firms in relation to two attributes: Natural and Sustainability. These attributes confirmed as important to analyze because of their relevance in recent dairy industry trends (Confente & Signori, 2016). Findings for each case study are reported in Figure 1, in which the two main meanings compose a map with four quadrants, enabling to classify four different corporate identity profiles:

- The Nutritionists (upper left quadrant), give more importance to health, quality and nature of the products than to sustainability factors;
- The Healthy and Sustainable Experts (upper right quadrant), focus on product quality, nature, healthy consumption and the integration of sustainability in their business;
- The Green Purists (lower right quadrant), want to reach only one major goal of integrating sustainability in every part of their work;
- The Industrialists (lower left quadrant), want to reach high economic goals, by the use of industrial processes and without working on sustainability.

Firms have been positioned in the maps following the NVivo Coding results derived from interviews. Firms have been positioned in Figure 1, based on the extent to which the firms emphasize "natural" and "sustainability" meanings within the interviews analyzed. A greater extent of natural is toward the top, greater extent of sustainability is toward the right. All firms except one are set in the upper right quadrant, which contains "The Healthy and Sustainable Experts", based on top management description of their corporate identities. Different from the others, A is positioned in the lower left quadrant, that includes "The Industrialist". Generally, companies place effort on developing sustainable and natural products, each of them at different levels. Alpine (triangles) and Lowland (circles) graphical distinction is to connect studies 1 and 3, with study 2.

Interviews Natural + $\begin{array}{c}
 & & & & \\
 & & & & \\
\hline
B_1 & & & \\
\hline
C_1 & & & \\
\hline
\end{array}$ $\begin{array}{c}
 & & & \\
\hline
B_1 & & \\
\hline
C_1 & & \\
\hline
\end{array}$ Sustainability $\begin{array}{c}
 & & \\
\hline
A_1 & & \\
\hline
\end{array}$ Key: A = Aloine A = Aloine

Figure 2: Corporate Identity Main Meanings Map On Interviews Contents

2. Study 2 findings: analysis of nutritional profiles.

An evaluation of the nutraceutical value of dairy products could be another challenge aiming at both tracing the dairy chain and assessing their degree of sustainability.

A preliminary analysis of data showed a significant influence of the F (feeding system) effect on the nutritional value of milk even though the variation of data was affected by the interaction FxS. As reported in previously studies (Bernardini, Gerardi, Elia, Marchesini, Tenti & Segato, 2010; Segato, Galaverna, Contiero, Berzaghi, Caligiani, Marseglia & Cozzi, 2017), the substitution of maize silage with high meadow hay resulted in the decrease of the incidence of saturated fatty acids (SFA) and monounsaturated FA (MUFA) and, consequently, in the increase

of the long chain polyunsaturated FA (PUFA). Milk from HGS and HMH was also characterized by a significant amount of CLA (conjugated of linoleic acid) while the incidence of PUFA n-3 remained comparable among feeding systems. Moreover, it was observed a slightly (P<0.10) decrease of saturated FA (SFA) along the season that increased the proportion of monounsaturated FA (MUFA) in all the feeding systems, especially in the SM samples. The feeding system thesis did not affect the amount of vitamin A and E (retinol) that, on average, was equal to 6.8 and 12.2 µg per g of fat, respectively. These fat-soluble vitamins tended to increase throughout the time of sampling, being slightly higher in the SP and SM seasons. Aside from the effect of experimental factors, what is certainly noticeable is the considerable amount of these two fat-soluble vitamins in milk of the entire experimental thesis that, acting as antioxidant, could play a positive role in protecting the double bonds of unsaturated fatty acid during both milk processing and/or the metabolic pathways related to the human consumption. Considering the reduction of milk production of the HMH thesis dairy cows and the increase of the cost per milk unit, an adequate communication would be necessary to improve the consumers' perception regarding the high nutritional milk quality of this dairy chain (De Nardi, Marchesini, Stefani, Barberio, Andrighetto & Segato, 2014).

The HRMS determination allowed the identification of a complex pattern of N-compounds and other hydrophilic substances in milk and milk-derivatives (cheese, yogurt, cottage cheese, concentrated whey). Several metabolites belonging to the chemical classes of amino acids, organic acids and alcohols such as valine, creatinine, succinic acid, acetic acid, glycerol, citric acid seemed to be potential markers for the classification of the milk and milk-derivatives based on its production system. The accuracy of classification of the feeding systems based on HRMS data was quite correct for HMH samples (hit samples = 0.74), meanwhile it was less frequent for the others thesis (hit samples < 0.65). Compared to milk samples obtained by the use of maize or other fodder silage, the discrimination of HMH-samples was probably attributable to a significant difference in the lipid profile, as highlighted by the wet-chemistry analysis. The outcomes of this study confirm that the use of HRMS coupled with NIR spectral data could be a reliable, chemical-free tool to identify milk from different dairy chains, especially in the case of those from the same season of production (Ottavian, Facco, Barolo, Berzaghi, Segato, Novelli & Balzan, 2012).

3. Study 3 findings: content communication analysis.

Study 2 results reveal some strengths on what companies do, in particular some dairy chains producing higher nutritional milk, with important values and product attributes that could be communicated to the market. Study 3 aims to verify if companies' communication is aligned and congruent with what companies are (study 1), and with contents discovered on what companies are really doing (study 2).

Table 2 reports findings from the NVIVO analysis of multiple sources. In particular, this codebook highlights that interviews represent an essential source of information, particularly true when researching on small firms. These firms often do communicate all of their identities, activities and values using few corporate identity elements. Table 2 also reports a distinction between offline and online sources. Offline communication sources in this sample are mainly materials related to companies (brochures and flyers) or products (flyers, packaging and labels). Online communication sources are websites, Facebook and Youtube, in particular: websites in

every case; Facebook A, B, D, E, F, G; Youtube E, F, G. Other digital media are not used by firms in this sample.

TABLE 2: CODEBOOK

Name	Description	Source	References
Azienda	Elements that are linked to the	10	43
(Firm)	company in its own.	Case B (Interview)	
		Case C (Interview)	
		Case D (Interview)	
		Case E (Interview, Digital)	
		Case F (Interview, Digital)	
		Case G (Interview, Digital)	
Elementi	Specific elements regarding	14	51
distintivi	particular and differentiating	Case A (Interview, Digital)	
(Distinctiv	features of companies.	Case B: (Interview, Digital)	
e alamanta)		Case C (Interview, Digital)	
elements)		Case D (Interview, Digital)	
		Case E (Interview, Digital) Case F: (Digital)	
		Case G (Interview, Digital)	
Iniziative	Elements that concern local	Case G (linerview, Digital)	17
(Initiatives	initiatives of companies	Case A (Digital)	1 /
)	toward communities.	Case C (Interview)	
,	toward communities.	Case D (Interview, Digital)	
		Case E (Digital)	
		Case F (Digital)	
Packaging	Elements of firms' packaging.	10	16
(Packagin		Case A (Product Communication, Digital)	
g)		Case B (Product Communication, Digital)	
		Case C (Interview, Product Communication, Digital)	
		Case D (Interview, Product Communication, Digital)	
		Case E (Interview, Product Communication, Digital)	
		Case F (Product Communication, Digital)	
		Case G: (Interview, Product Communication, Digital)	
Naturale	Elements regarding being	7	12
(Natural)	natural in general. + Elements	Case B (Interview, Digital)	
	that are linked to firm's natural	Case C (Interview)	
	products.	Case D (Interview)	
		Case E (Digital)	
Molgo	Flaments regarding the alains	Case F (Digital)	15
Malga (Alpine	Elements regarding the alpine natural environment	Case D (Interview, Product Communication)	15
cottage)	natural environment	Case F (Product Communication)	
cottage		Case G (Digital, Product Communication)	
Mucche	Elements regarding nature and	12	22
(Cows)	healthy animals	Case A (Product Communication, Digital)	22
· · · · · · · · · · · · · · · · · · ·		Case B (Interview)	
		Case D (Interview)	
		Case E (Interview, Product Communication, Digital)	
		Case F (Interview, Product Communication, Digital)	
		Case G (Interview, Product Communication, Digital)	
Prodotti	Elements that concern every	17	105
(Products)	kind of product made by firms.	Case A (Interview, Digital)	
		Case B (Interview, Product Communication, Digital)	

		Case C (Interview, Product Communication,	
		Material)	
		Case D (Interview, Product Communication, Digital)	
		Case E (Interview, Digital)	
		Case F (Interview, Product Communication, Digital)	
		Case G (Interview, Digital)	
Relazioni	Elements generally referred to	4	19
(Relationships)	relations between companies	Case B (Interview)	
	and their stakeholders.	Case D (Interview)	
		Case F (Interview)	
		Case G (Interview)	
Consumat	Elements linked to relations	5	15
ori	between companies and	Case A (Interview)	
(Consume	costumers.	Case B (Interview)	
rs)		Case E (Interview)	
		Case G (Interview)	
Dipendent	Elements linked to relations	2	19
i	between companies and	Case A (Interview)	
(Employee	employees.	Case E (Interview)	
s)			
Catena	Elements linked to relations	4	8
distributiv	between companies and	Case A (Interview)	
a	distributors (large grocery	Case E (Interview)	
(Distributi	stores included)	Case F (Interview)	
on			
network)			
Supply	Elements that give information	17	88
chain	about the entire firms' supply	Case A (Interview)	
(Supply	chain.	Case B (Interview, Digital)	
chain)		Case C (Interview, Digital)	
		Case D (Interview)	
		Case E (Interview, Digital)	
		Case F (Interview, Digital)	
		Case G (Interview, Digital)	
Sostenibilità	Elements regarding	22	93
(Sustainability)	sustainability in general.	Case A (Interview, Digital)	
		Case B (Interview, Digital)	
		Case C (Interview, Digital)	
		Case D (Interview)	
		Case E (Interview, Digital, Product Communication)	
		Case F (Interview, Digital, Product Communication)	
A 7.0	71	Case G (Interview, Digital, Product Communication)	2.4
Ambiente	Elements that concern	8	34
(Environ	environmental sustainability.	Case C (Interview)	
ment)		Case E (Interview, Digital)	
		Case F (Interview)	
		Case G (Interview)	<u> </u>
Biologico	Elements linked to the	9	26
(Organic)	"organic" concept.	Case C (Interview)	
		Case D (Interview)	
		Case E (Interview, Digital, Product Communication)	
		Case F (Interview, Digital, Product Communication)	
		Case G (Interview)	

Cooperati	Elements associated with	7	22
va	sustainability into	Case A (Interview)	
(Cooperati	cooperatives.	Case E (Interview)	
ve)	_	Case F (Interview, Digital, Product Communication)	
		Case C (Interview)	
Sociale	Elements that concern social	11	27
(Social)	sustainability.	Case D (Interview)	
		Case C (Interview)	
		Case A (Interview)	
		Case G (Interview, Digital)	
		Case E (Interview)	
		Case B (Interview)	

Through NVivo, it is possible to show the most recurrent words within the analyzed sources. This tool permits s us to understand what are the most used words and, consequently, what are the most discussed themes. Word counting was not the main purpose of this study, however some findings are reported to highlight some curious results. Measuring word frequencies, the most used word is milk, that is in line with the main theme of the research, that is the dairy industry and their main attention to production. Then, product and products mentions are positioned in second place, followed by cheese. Milk, and related products, are obviously the center of this industry, however firms do not communicate those important attributes, related to nutritional profiles, discovered in study 2 and that could be valued by customers. This note is confirming that communication contains product and production plain descriptions. Another very interesting piece of data is shown in the concepts of "sustainability" and "quality": where sustainability appears more frequently than the word quality. This could mean that these dairy companies are maybe shifting their communication more toward sustainability than quality content. This result is interesting, if we consider that in this industry and context, for many years referring to quality (product or production related) has been the most frequent main topic in small food companies' communication. Moreover, also the location (Vicenza) is in high position, highlighting the importance of the product origin and company location. Finally, only two brand names are tracked in this analysis: it means that only two cases are frequently repeating their brand or company names in their communication, while all the others are not even mentioning their own names in their communication contents.

Figure 2: Corporate Identity Main Meanings Map On Offline Communication

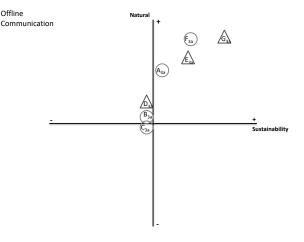


Figure 2 shows results on a map created in the same way as study 1. The positions of seven companies are related to content found in traditional offline product materials. Cases are differently positioned in Figure 2 (based on content revealed in product communication) if compared with Figure 1 (based on content revealed by interviews). These differences show some misalignments. In particular, small firms (B, C, D) do not communicate in an appropriate way their identity and their work, changing position on the map and becoming less natural and less sensitive on sustainability in their communications. At the same time, large companies (A, E, F, G) communicate their identity and work within their product material, appearing sometimes more natural and more focused on sustainability than what they effectively are.

Figure 3: Corporate Identity Main Meanings Map On Online Communication

Figure 3 refers to results of case studies' online communication analysis, and positions in the map are directly reporting firms' efforts in communicating the two main meanings of "natural" and "sustainability". Comparing Figure 2 and 3 it becomes more evident that digital content is more focused on sustainability in many cases (a little more for A, B, C; and many more for F). Two cases (E and G) are aligned and congruent in their offline and online contents. Case D does not communicate any natural or sustainable meaning on digital media.

Conclusions

This paper reports important findings from a multidisciplinary mixed method research project. First, the use of some food fingerprints could be a useful chemometric tool that allows for effective product protection and a corresponding increase in economic value of milk and other dairy products obtained by the means of a production system that maximizes the amount of their nutritional traits; this could be communicated to the marketplace. The preliminary results of study 2 evidenced that the identification of qualified biomarkers from the lipid and protein fraction can be an effective chemometric tool to discriminate the dairy chains based on feeding system

characterized by an increase use of maize silage from arable land in comparison with crop from permanent meadow.

Second, what is evident is that medium and large companies are misaligned in who they are, what they really do and what they say. In particular, some of them oversell the sustainability factor. In this case sample, two cases risk be accused of greenwashing (over exposition on sustainability factors on product related communication); and one case masks its industrial profile to the market. The other group of small and micro companies and cooperatives, sometimes fail to transfer their values (nature orientation and nutritional profile) to the market: two cases show communication gaps and untapped market opportunities; one case is the only one that emphasises in its mission a nutritional focus, however it does not communicate it to the market. Focusing on the digital effort, content analyzed reveals that four companies are digitally stressing more on sustainability meanings than in other media (three cases communicate a little more sustainability on digital media; two many more). Only two case studies show a congruent alignment in who they are and what they say.

In conclusion, this research demonstrates a general lack of strategy in dairy firms' communication efforts. Furthermore, cases of the alpine chain do not communicate anything about the higher nutritional value of their products. Misalignments discovered between who firms are, what companies do, and what they say (offline and online) should be considered critical issues. This digital CIC analysis strives to highlight new opportunities for companies that want to evolve their digital corporate identity. In particular, if a company is not transferring its core values and actions to its stakeholders, the power (and margins) will remain with distributors, and final consumers will not perceive any differentiation on dairy products and brands. Furthermore, if a company stresses some values in its communication that are not really true, in the future, the market may discover this, creating a high risk for the company's reputation. Top managers should analyze their corporate identity elements to verify the congruence in what they are, what they do and what they say, to be able to align their essence and communication. In particular, digital media should not be considered as simple and casual vehicles, in which greenwashing or false content is allowed. In this research, the majority overstress the importance of sustainability in their social media, compared to other identity elements. Moreover, it is confirmed that in this industry and context, firms do not possess digital communication skills, in terms of media mix, media plans, frequency and content. This research has some limitations, due to the limited sample size. Future research may explore this mixed method approach in other industries and contexts. However, this mixed method study contributes to the corporate identity domain in showing that meanings-based corporate identity congruence analyses can be helpful to highlight new opportunities for companies that want to evolve their digital presence in congruence with their corporate identity strategy.

Aknowledgements

We would like to thank Fondazione Cariverona and Fondazione Studi Universitari di Vicenza for their support of the research project on "Autenticazione alimentare a tutela del consumatore per uno sviluppo sostenibile e la promozione di una nutrizione globale", from which the results reported in this paper are extracted.

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