



# **Proceedings of the 14<sup>th</sup> International Conference of the Society for Global Business & Economic Development (SGBED)**

**Global Connectivity, Knowledge and Innovation for  
Sustainability and Growth: New Paradigms of Theory and  
Practice**

## **Editors**

**Vidya Atal  
Ram Sewak Dubey**

**Montclair, New Jersey, USA  
June 21-24, 2016**

---

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limits of the U.S. copyright law for private use of patrons without fee. University faculties are permitted to photocopy isolated articles for non-commercial classroom use without any charge. For other copying, reprint or replication requirements, write to the Center for International Business, Montclair State University, Montclair, NJ 07043, USA.

**CD version: ISBN: 978-0-9797659-9-5**

**Additional copies of CDs can be ordered from:**

The Center for International Business (Room 582)

Feliciano School of Business

Montclair State University, Montclair, NJ 07043, USA

Tel: +1-973 655 7523

Email: [cib@mail.montclair.edu](mailto:cib@mail.montclair.edu)

## **SGBED wishes to recognize the following sponsors**

### **Principal Sponsors**

Feliciano School of Business, Montclair State University  
PSEG Institute for Sustainability Studies, College of Science and Mathematics,  
Montclair State University  
Department of Economics, Finance and Real Estate, Montclair State University  
Curtin Business School, Curtin University, Australia  
Fox School of Business, CIBER, Temple University  
EADA Business School, Barcelona, Spain

### **Gold Sponsor**

Bloomberg LP

### **Silver Sponsors**

Anonymous  
Dr. P.M. Rao, Long Island University, NY, USA  
STC General Fund  
Studio 042

## **Supporting Journals**

*Evidence Based HRM* (EBHRM, Emerald)

*International Journal of Business and Emerging Markets*

(IJBEM, Inderscience)

*Journal of Economics and Administrative Science* (JEAS, Emerald)

*Journal of Indian Business Research* (JIBR, Emerald)

*International Journal of Society Systems Science* (IJSSS, Inderscience)

*JCC: The Business and Economics Research Journal*

## **Conference Executive Committee**

Frank Aquilino – Montclair State University  
Jonathan Bamber – Montclair State University  
Dennis M. Bone – Montclair State University  
Martina Broglietti – Università Politecnica delle Marche  
A. Gregory Cant – Montclair State University  
Marina Cunningham – Montclair State University  
Kimberly Hollister – Montclair State University  
Christopher KcKinley – Montclair State University  
C. Jayachandran – Montclair State University  
Phil Mattia – Montclair State University  
Aditi Patel – Montclair State University  
Robert S. Prezant – Montclair State University  
Robert Taylor – Montclair State University  
Linda Trainor – Montclair State University  
Amy Tuininga – Montclair State University  
Roger Salomon – Montclair State University

## **Conference Program Co-Chairs**

Yam B. Limbu – Montclair State University  
Susana Yu – Montclair State University

## **Proceedings Editors**

Ram Sewak Dubey – Montclair State University  
Vidya Atal – Montclair State University

## **SGBED Principal Coordinators**

Samir Chatterjee - Curtin Business School, Australia  
C. Jayachandran - Montclair State University  
Silvio Cardinali - Università Politecnica delle Marche, Italy  
Lin Guijin - UIBE, China  
Johan De Jager - Tshwane University of Technology, South Africa  
Phillip LeBel - Montclair State University, USA  
Sherriff Luk - Nanjing University of Finance & Economics, China  
Ramon Noguera - EADA Business School, Barcelona, Spain  
Vasant Raval - Creighton University, USA  
Jan Rudy, MBA Director - Comenius University, Slovakia  
Yam B. Limbu - Montclair State University  
Jose Sanchez-Guiterrez - University of Guadalajara, Mexico  
Nitin Sanghavi - Manchester Business School, UK  
Sununta Siengthai - AIT School of Management, Thailand  
Tony Travaglione - Curtin Business School, Australia  
Lubica Bajzikova - Comenius University in Bratislava

## **Program Committee - Track Chairs**

### *Accounting Track:*

Shifei Chung – Rowan University  
Betsy Lin – Montclair State University

### *Economics, Finance, Real Estate, Banking & Public Policy Track:*

Chee Ng – Fairleigh Dickinson University  
Yudan Zheng – Long Island University

### *Entrepreneurship, SMEs and NGO Track:*

Devon Johnson – Montclair State University

### *Information Technology and Operation Management Track:*

Rashmi Jain – Montclair State University

### *International Business, MNEs and Global Issues Track:*

Susan Hume – The College of New Jersey

### *Management, Organizational Behavior, Corporate Governance, Legal Issues and Human Resources Track:*

Wencang Zhou – Montclair State University

### *Marketing, Services, E-Commerce Track, Sports and Tourism:*

Christina Chung – Ramapo College

### *Sustainability and Environment Track:*

Robert W. Taylor – Montclair State University  
Amy Tuininga – Montclair State University  
Mark Kay – Montclair State University

### *Pedagogy:*

Yudan Zheng – Long Island University  
Mark Kay – Montclair State University

## **Program Committee – Reviewers**

Frank Aquilino, Montclair State University  
Vidya Atal, Montclair State University  
Hanmei Chen, Western Washington University  
Ken Cheng, Morgan State University  
Bea Chiang, TCNJ  
Laurence DeGaetano, Montclair State University  
Ram Sewak Dubey, Montclair State University  
Ikechi Ekeledo, Montclair State University  
Archana Kumar, Montclair State University  
Laurence Lauricella, Montclair State University  
Joseph Lipari, Montclair State University  
Peter Lohrey, Montclair State University  
Richard Lord, Montclair State University  
Brian Dean Knox, University of Pittsburgh  
Ram B. Misra, Montclair State University  
Ramesh Narasimhan, Montclair State University  
Joseph R. Nicholson, Montclair State University  
Deniz Ozenbas, Montclair State University  
Richard Peterson, Montclair State University  
Jo Ann Pinto, Montclair State University  
Wing Poon, Montclair State University  
Vasant Raval, Montclair State University  
Hermann Sintim, Montclair State University  
Ron Strauss, Montclair State University  
Nilufer Usmen, Montclair State University  
James Yang, Montclair State University  
Mei Zhang, Rowan University  
Bruce A. Huhmann, New Mexico State University  
Alyssa Reynolds, New Mexico State University  
Elmira Shahriari, New Mexico State University  
Vasant Raval - Creighton University, USA  
Philip LeBel, Montclair State University  
Patrali Chatterjee, Montclair State University  
Manveer K. Mann, Montclair State University  
Yanli Zhang, Montclair State University  
Isaac Wanasika, University of Northern Colorado  
Yawei Wang, Montclair State University



# Society for Global Business & Economic Development (SGBED): Two decades of Accomplishments

■ Dr. C. Jayachandran, President, SGBED

It is my honor to present to you all the 14<sup>th</sup> SGBED conference organized at the beautiful facilities of the Feliciano School of Business in June 21-24, 2016. We are grateful to Montclair State University President Dr. Susan A. Cole for her interest in SGBED activities as reflected in her participation and presentation of keynote addresses in several of our conferences. Dr. Cole's continued support and encouragement to engage in international collaboration that advance research and teaching had a significant impact on our accomplishments. Our Provost Dr. Willard Gingerich, Feliciano School of Business Dean Dr. A. Gregory Cant and Vice-Dean Dr. Kimberly Hollister, and Dr. Robert Prezant, Dean, College of Science and Mathematics have enthusiastically supported the idea of bringing the SGBED 14<sup>th</sup> conference to Montclair and helped in crafting a theme that reflects the interdisciplinary nature of the conference. They have provided generous support in terms of financial, physical and above all the encouragement to make this possible. Almost two decades ago, thanks to a US Federal grant Dr. Philip LeBel, former dean of the MSU Business School and myself had an opportunity to meet with President Dr. Sun Weiyan and Dean Dr. Lin Guijun at the University of International Business and Economics (UIBE) in 1995 in Beijing and developed a collaborative proposal to advance academic research and scholarship at an international level and today I am happy that this initiative had matured over the years.

Driven by the above objective, SGBED had successfully implemented 13 major conferences in Beijing (1997, 1999, 2000), Guangdong (1998), Chennai (1998), Bratislava (2001, 2009), Bangkok (2003), Guadalajara (2004), Seoul (2005), Kyoto (2007), Singapore (2011), Ancona, Italy (2014). Five research symposia were implemented in Nanjing (2015), IIM Bangalore (2012), Barcelona (2010), Dubai (2009) and Bangkok (2006). These conferences and research symposiums have attracted more than 4,000 academics and generated peer reviewed publications in 20 volumes of proceedings containing more than 2,000 research papers and several special issues of peer reviewed journals, and five books of readings.

**Highlights of the 14<sup>th</sup> Conference held at the Feliciano School of Business:** The SGBED conference presented at the brand new facility of the Feliciano School of Business reflects a feeling of home coming and an accomplishment which started with an informal relationship between Montclair State Center for International Business (CIB) and UIBE, had now matured with a global reach to advance interdisciplinary research that focus on international business and development issues. The 14<sup>th</sup> conference is jointly presented by Feliciano School of Business and Montclair State PSEG Institute for Sustainability Studies along with UIBE, Curtin School of Business, EADA Business School, FOX School of Business, IIMB, Comenius University in Bratislava, University of Guadalajara, VIT University, and other partner institutions.

Unlike the earlier conferences, the 14<sup>th</sup> conference is presented in a four day format to facilitate pre-conference workshops: doctoral symposium for Ph.D. scholars and a workshop on manuscript development; besides the conference facilitates a full-day event, "Understanding Global Value Chains: How to Prepare Students for Success in an Increasingly Interconnected World" for Community College faculty and administrators from the Northeast. This event is presented by the Centers for International Business Education & Research (CIBERS) of Temple Fox School of Business, University of Connecticut and Michigan State. The main conference is organized into plenary sessions, multiple concurrent sessions and a poster session to facilitate discussion of more than 150 research submissions from 30 + countries. For the first time, the 14<sup>th</sup> conference will use Skype to facilitate such of those participants who cannot participate in person. Besides publishing the conference proceedings, the conference will facilitate publication of selected papers in five peer reviewed journals. The conference will end with a gala dinner, awards distribution and a cultural tour of New York City.

Most importantly, this conference wouldn't have been possible without the dedicated work of several colleagues. Our Co-Chairs, Drs. Yam B. Limbu and Susana Yu, proceedings editors Drs. Vidya Atal and Ram Dubey, and Dr. Amy Tuninga, Director, PSEG Institute of Sustainability Studies, along with a committed group of

50 + regional coordinators, Phil Mattia at Feliciano School of Business and Ms. Martina Brogliotti at Università Politecnica delle Marche, Italy who managed the web support have been instrumental in making this conference possible.

**Making the Academic Conferences Affordable & Impactful:** Unlike other academic organizations, SGBED does not collect annual membership fee and largely depend on institutional support, sponsorships and the support provided by a large network of coordinators make these conferences affordable and also global. Besides our participants like the SGBED format as it provides a balance between academic scholarship and practice by presenting leaders from government and business.

**Notable Government Leaders:** Government officials who spoke at the SGBED conferences include: China: The Vice-Premier Hon. Li Lanqing, Madame Wu Yi, Ministry of Foreign Trade and Economic Cooperation, Hon. Chen Yuan, Dy. Governor of Peoples' Bank of China, Hon. Wang Guangxian, Dy. Governor of Guizhou Province; India: Her Excellency Justice Fathima Beevi, Governor of Tamil Nadu, The Tamil Nadu Hon. K. Anbazhagan, Minister of Education, The US Consulate General Ms. Michele J. Sison, Slovakia: The Charge D'Affairs of the USA in Slovakia, Mr. Douglas C. Hengel, Hon. Ivan Miklos, Deputy Prime Minister of Slovakia for Economic Affairs, Hon. Lumomir Fogas, Deputy Prime Minister of Slovakia for Legislation and Maria Kadlecikova, Deputy Prime Minister of Slovakia for European Integration.

**Nobel Laureates & Leaders from Academia:** Former President of Montclair State University Dr. Irvin Reid, and President Dr. Susan A. Cole have delivered keynote at different conferences in China, Mexico, Bratislava and Bangkok; Dr. Edmund Phelps, Nobel Laureate in Economics delivered a keynote in Bangkok; and Dr. Ferid Murad, Nobel Laureate gave a keynote on science and development in Mexico. Dr. Peter Buckley, former President, Academy of International Business (AIB) delivered in keynote in Beijing; Dr. Howard Thomas, former AACSB President and Dean of the Singapore Management University, Provost & Professor Dr. Raj. Srivastava and Dr. G. Viswanathan, Chancellor, VIT University delivered a keynote in Singapore.

**Notable Business Leaders:** Dr. Raja Mitra of World Bank, Mr. Max Qu, Chairman & CEO of HI Sun Technology Ltd, Mr. Steven Carroll, China Group Controller of Motorola, Mr. Bill Bowers, VP & Controller of Motorola, Mr. Peter O'Connor, CEO, Asia Pacific Region for CIGNA International, Dr. Michael Zipp, MD, Henkel Investment CO. Ltd, Mr. David Alstrom, VP, Ericsson (China) Company Ltd, Mr. Andy Lai, Greater China Marketing Director for HP, Mr. John Parker, Chairman, American Business Council, and Mr. Ron Sommers, CEO, Mangalore Power Co, Mr. Slaomir Hatina, Chairman of the Board of Directors of Slovnoft, Mr. Jozef Uhrik, General Manager of Volkswagen, Mr. Stefanec, President, Coca-Cola Beverages, Mr. Marian Nemec, President, National Bank and Mr. Ludomir Slahor, President, EXIMBank were invited to deliver keynote in Beijing, Chennai, Bangkok, Seoul, Kyoto and Bratislava.

**Notable Corporate Sponsors:** Ford Operations Ltd (Thailand); Sony Corporation Ltd; Fuji Zerox Ltd; Slovnoft, a.s. Bratislava; ProCS s.r.o (Slovakia); US Steel Corporation Ltd (Slovakia); Cigna Corporation Ltd; Ericsson, China; Motorola (China) Electronic Ltd; Henkel China Investment Corporation Ltd; China Cotton Industries Ltd; Hi-Sun Technology Ltd; Hendan Iron & Steel Group Co. Ltd, China; Sealed Air Corporation, NJ; Precision Custom Coatings LLC, NJ; Shinawatra Corporation Ltd (Thailand); PTT Exploration and Production Plc (Thailand); Konica Minolta, Rohlm Corp; Murata Machinery Corp; Kyocera (Japan); Sun Microsystems (Korea), S.K. Telecom (Korea), Omni Life, Sophia Laboratories, InterAmerican Investment Corp (Guadalajara), and others sponsored our conferences in different locations.

**Co-Chairs & Hosts of SGBED Conferences (most recent, first):**

Dr. Yam B. Limbu & Susana Yu: Feliciano School of Business, Montclair State University, NJ (2016)

Dr. Silvio Cardinali: Università Politecnica delle Marche, Ancona, Italy (2014)

Dr. Sudhi Seshadri: Lee Kong Chian School of Business, Singapore Management University (2011)

Dr. Jan Rudy: Faculty of Management, Comenius University in Slovakia (2009)

Dr. Okachi Katsuji: Ryukoku University, Kyoto (2007)  
Dr. Namjae Cho: Hanyang University, Seoul (2005)  
Dr. Silvia Dorantes Gonzales: Universidad delle Valle de Atemajec (UNIVA), Guadalajara (2004)  
Dr. Paul Himangshu: Asian Institute of Technology, Bangkok (2003)  
Dr. Jan Rudy, Faculty of Management, Comenius University in Slovakia (2001)  
Dr. Lin Guijun: University of International Business & Economics (UIBE) Beijing (1999, 2000)  
Drs. Balasubramanian & Dastagir: IIM Bangalore & Md. Sathak Trust, Chennai (1998)  
Dr. Lin Guijun: University of International Business & Economics (UIBE) Beijing (1997, 1998)

**Co-chairs & Institutional Sponsors of Research Symposia: (most recent, first)**

Dr. Sherriff Luk: Nanjing University of Finance & Economics (2015)  
Drs. Vishnuprasad Nagadevara & Vasanthi Srinivasan: Indian Institute of Management Bangalore (2012)  
Dr. Martin Rahe (Late): Dean of Research, EADA Business School, Barcelona, Spain (2010)  
Dr. Michael Thorpe: The Wallongong University in Dubai (2009)  
Dr. Paul Himangshu: Asian Institute of Technology, Bangkok (2006)

**Organization: SGBED Board of Governors:**

Dr. Samir Chatterjee (Chair) Emeritus Professor of Management, Curtin School of Business  
Dr. Tony Travaglione, Professor & Pro-Vice Chancellor, Curtin School of Business  
Dr. Ramon Noguera, Academic Dean, EADA Business School, Barcelona  
Dr. Jan Rudy, Faculty of Management, Comenius University in Slovakia  
Dr. Dusan Soltes, Professor, Faculty of Management, Comenius University in Slovakia  
Dr. Vishnuprasad Nagadevara, Professor & Dean, Woxsen School of Business, India  
Dr. Vesa Routama, Professor, Dept. of Management, University of Vaasa, Finland  
Dr. Sherriff Luk, Professor of Marketing & Brand Management, Beijing Normal University,  
Dr. Nitin Sanghavi, Professor of Marketing, Manchester Business School, UK  
Dr. Vasant H. Raval, Professor of Accounting, Heider College of Business, Creighton University, USA  
Dr. Jose Sanchez, Professor & Head, Dept. of Marketing, University of Guadalajara, Mexico  
Dr. Harald Kupfer, Professor & Scientific Director of Studies, FOM University, Germany  
Dr. Johan de Jager, Research Professor, Tshwane University of Technology, South Africa  
Dr. C. Jayachandran, Professor of Marketing & International Business, Montclair State University, NJ  
Dr. Richard Lord, Department of Economics & Finance, Montclair State University, NJ  
Dr. Yam B. Limbu, Associate Professor of Marketing, Montclair State University, NJ  
Dr. Silvio Cardinali, Associate Professor of Marketing, Universita Politecnica delle Marche, Ancona Italy

**Officers:**

**President:** Dr. C. Jayachandran, Montclair State University, NJ

**Vice Presidents:**

Dr. Tony Travaglione, Curtin Business School, Perth  
Dr. Silvio Cardinali, Universita Politecnica delle Marche, Ancona, Italy  
Dr. Jan Rudy, Comenius University in Slovakia  
Dr. Yam B. Limbu, Montclair State University, NJ

**Some thoughts for the Future:**

SGBED is soliciting institutions to sponsor the 6<sup>th</sup> research symposium in the summer of 2017 and the 15<sup>th</sup> International conference in the summer of 2018. Interested institutions or coordinators can submit a proposal. SGBED also invites proposals to establish a journal, either online or in print. Any scholar interested in taking a leadership towards this effort is invited to submit a proposal.

**Thank you for your continued support and cooperation.**

## Preface

The world is becoming increasingly interconnected across all fronts at an unprecedented pace; it is deemed that networks, knowledge and innovation, and entrepreneurship drive growth and development. The rise of emerging markets and growth of global supply chains are attributed to globalization and ICT; nations and firms continue to form strategic levers using the power of comparative advantage; and human capital worldwide is becoming more mobile and virtually engaged despite the national boundaries. The developments have also caused dramatic structural and organizational changes and disruption of traditional businesses and job markets. Global investments in commodities and indiscriminate exploitation of natural resources affected the sustainability of global ecosystems. Equal access to education, knowledge and health are also under the microscope. The challenges of rising inequalities in wealth and income, economic stagnation, unemployment, and the impact of globalization have also taken the center stage of public discourse. These trends bring heightened levels of responsibility to business, institutions and society.

In view of the strategic importance of these challenges, the 14<sup>th</sup> International Conference of the Society for Global Business & Economic Development (SGBED) invited academic and professional perspectives in the form of empirical research, case studies and applications on a wide range of related topics. The overwhelming response received from scholars and practitioners from around the world bear testimony to the importance of the chosen theme and currency of the conference.

The papers included in these Proceedings have been selected through a rigorous review process of over 300 scholarly papers. Both full papers, as well as selected papers in the abstract form are published here. Altogether, the selected papers and research abstracts represent over 150 universities located in 40 different countries. The sheer size and scope of the conference necessitated the publication of the proceedings in the CD-ROM format.

The full papers have been divided in broad categories of themes: Accounting, taxation and business law; Economics, finance, real estate, banking and public policy; Entrepreneurship, SMEs and NGO; Information technology and operation management; International business, MNEs and global issues; Management, organizational behavior, corporate governance, legal issues and human resources; Marketing, services, e-commerce, sports and tourism; Pedagogy; and Sustainability and environmental issues. These papers cover a broad range of issues. To name a few, the topics related to global, regional and country level trends in trade and investment, innovations and volatility in financial markets, rapid advancement of Information and Communications Technology and its influence on business delivery system, pedagogy, sports tourism, new trends in risk and resource management, cultural conflict, environmental equity and challenge of sustainable growth, choice of appropriate corporate governance system, and, enforcement of international accounting standards have received a great deal of attention in the conference contributions. Accordingly, the papers have been grouped under 9 sections representing the major topics of the conference. An additional section, section 10, has been added to accommodate all the selected abstracts with interesting ideas for future research.

Contributions from authors around the world helped make this volume an integrated, cohesive inquiry into the major drivers of global business today and the required directions for sustainable growth in business activities in the future. We express our sincere gratitude to all these authors.

We believe these proceedings offer some of the best information available in the area of global business and economic development. We hope this publication will contribute to the success of those willing to pursue scholarly research on global business trends in the context of a changing environment.

*Editors*

**Disclaimer:**

All papers and abstracts included in this volume have been formatted to ensure uniformity in style of representation. Uniform formatting could possibly modify some of the figures appearing in the papers. In view of the variations in writing styles and language proficiency of the authors, proof reading of these papers was kept confined to ensuring conformity with the APA style. Harmonization of language skill reflected across papers was beyond the scope of the editorial process. Language and grammar used in the papers, thus, remain to be the sole responsibility of the respective authors.

## TABLE OF CONTENTS

<i><b>Content</b></i>	<i><b>Page Number</b></i>
<b>Track: Accounting, Taxation and Business Law</b> .....	<b>1</b>
Implications of Corporate Tax Inversions.....	2
International Taxation: Tax Equity Concerns .....	18
Abuses And Penalties Of A Corporate Tax Inversion.....	28
<b>Track: Economics, Finance, Real Estate, Banking and Public Policy</b> .....	<b>39</b>
Working for the Elephant or the Dragon: Indian and Chinese Investment in U.S. firms and the Challenge to Retain and Attract Managerial Talent.....	40
Optimizing Discount Rates: Expressing Preferences for Sustainable Outcomes in Present Value Calculations .....	59
The Role of Minimum Wage in Compensation Systems of the Slovak Republic.....	70
Productivity and Efficiency: A Comparative Study of Islamic and Conventional Banks in GCC Countries .....	79
A Link Between the Acculturation Process and Project Management Maturity Model (PMMM) in a Cross-Border M&A: A Case Study of an Acquisition of a Brazilian Firm in the Automobile Industry .....	96
Signals in Reward Crowdfunding: Evidence from the Jingdong Reward Crowdfunding Platform.....	113
Intellectual Capital in Public Universities: Comparative Analysis, University of Guadalajara and University of Guayaquil.....	129
Do Local Communities Always Benefit from MICE Activities?.....	141
Capital structure of the communication sector in Mexico.....	147
Assessing the Risk-Return Trade-Off in Frontier Markets Using Exchange-Traded Funds .....	158
Risk management on attracting FDI to infrastructure projects in emerging markets: A conceptual model .....	174
Financial crisis and Local Banks. A study of the Italian Banking System .....	187
A Text-Analysis Approach Of Push And Pull Motivations In Heritage Festivals: Evidence From Three Italian Cases.....	207
Momentum Profits and Investor Behavior .....	210

<b>The Eurozone Crisis: Not The Global Financial Crisis But Its Own Governance Is Responsible .....</b>	<b>220</b>
<b>The Effect Of Cartel On Pig Market In Thailand By Using System Dynamics Model .</b>	<b>228</b>
<b>Heterogeneous Institutional Investors and Earnings Smoothing.....</b>	<b>237</b>
<b>Track: Entrepreneurship, SMEs and NGO .....</b>	<b>256</b>
<b>A Regional Profiling Of Start-Ups And Spin-Offs In Italy: Is Smart Specialisation A Utopia? .....</b>	<b>257</b>
<b>Beyond the Nature of the Farm: The Determinants of Farm Integration and Structure .....</b>	<b>264</b>
<b>Environmental Factors for Social Entrepreneurship Success: Comparing Four Regions.....</b>	<b>278</b>
<b>Predicting Growth Potential of Small and Medium-Sized Logistics Companies .....</b>	<b>296</b>
<b>An e-Engagement Of Social Media With Micro, Small And Medium Enterprises Of Andhra Pradesh .....</b>	<b>310</b>
<b>The Role of Business Incubators on Start-Up Growth.....</b>	<b>324</b>
<b>Creation Of Social Value In An Unfavourable Economic Environment: Latin American Agro-Industry Smes In Al-Invest.....</b>	<b>335</b>
<b>The Impact of Educational Level on Behaviour during Knowledge Transfer in Small and Medium Enterprises (SMEs) .....</b>	<b>344</b>
<b>Research on the CSR of Small and Medium-sized Enterprise: Take a Company Semir as an Example .....</b>	<b>359</b>
<b>Using the UTAUT Model to explain the adoption of Mobile Money Usage by MSMEs' Customers in Uganda .....</b>	<b>367</b>
<b>Factors Influencing the Use of HRIS: Case Study from SMEs in Vietnam .....</b>	<b>377</b>
<b>An Insightful Understanding of Perception and Trust Towards HRIS: A Case Study from SMEs in Vietnam.....</b>	<b>395</b>
<b>CSR Strategies To Improve Competitiveness Development: Manufacturing Industry In Mexico .....</b>	<b>422</b>
<b>Challenges Faced by Entrepreneurs: An Empirical Study of India .....</b>	<b>432</b>
<b>Track: Information Technology and Operation Management .....</b>	<b>440</b>
<b>Access To Cloud Distribution Platforms And Software Safety .....</b>	<b>441</b>
<b>Solar Based Technology: A Case Study of Challenges in a Developing Economy .....</b>	<b>455</b>

Emerging Techniques in User Identification and Social Data Consolidation.....	467
Importance, Role and Impact of E-Training on Employees in Workplace .....	474
A Special Review for the Wave of Big-data Development .....	486
<b>Track: International Business, MNEs and Global Issues .....</b>	<b>496</b>
The Impact Of Internal And External Aspects On Foreign Subsidiaries' Performance During Economic Crisis .....	497
Foreign Direct Divestment in the Water Sector in Brazil: in Search of the Causes...	511
Analysis Of Foreign Direct Investment In The Water Industry And Sanitation Between 1990 And 2010 In Latin America .....	514
The Impact of Institutional Distance on Survival of Foreign Subsidiaries .....	523
Revisiting Ownership Advantages of Resources Seeking MNEs: Evidence from Chinese Firms Operating in Emerging Market .....	536
Foreign Subsidiaries' Attributes And The Location Strategy Of Multinational Firms In Global Cities In Emerging Markets.....	546
Comparative Study on the “New Silk Road” Strategy Between China and the U.S.....	562
Study on the Chinese Carbon Emission Trading Market Development under the Globalization.....	572
Does FDI make the world more convergent or divergent? .....	581
Assessing Development Performance Of Urban Agglomeration Based On Malmquist- Luenberger Index: A Empirical Analysis Of The Urban Agglomeration Around Beijing, China .....	594
The Determinants Of Expatriation Strategy Of Foreign Subsidiaries In Emerging Markets During Post-2008 Economic Crisis .....	607
Family Business Groups In Mexico And Their Financial Performance .....	622
Analysis of the Moderator Effect of RMB Exchange Rate on Export: The Case of Guangdong Province in China.....	629
<b>Track: Management, Organizational Behavior, Corporate Governance, Legal Issues and Human Resources .....</b>	<b>635</b>
Impact of Organizational Empowerment on Employee Commitment: Moderating role of Organization Learning Culture and Locus of Control .....	636
Two Decades Of WTO: Governance, Innovation And Prospects .....	650



<b>Impact of Employees Performance Appraisal on Job Outcomes with the moderation of Distributive Justice .....</b>	<b>659</b>
<b>Burnout And Career Success .....</b>	<b>670</b>
<b>Beyond Wit and Grit: Spiritual Quotient the key to Organisational Development... 676</b>	
<b>Employees' Satisfaction on Performance Management Review (PMR) in Navigos Group Vietnam JSC. ....</b>	<b>684</b>
<b>Performance Evaluation of Indian Cement and IT Companies: An Efficiency- Profitability Matrix Approach .....</b>	<b>732</b>
<b>Relevance of Ethics Program Components in Slovakia.....</b>	<b>742</b>
<b>Personality, Gender And Four-Factor Model Of Cultural Intelligence – Are Some People Smarter In Culturally Diverse Situations? .....</b>	<b>755</b>
<b>HR Practices In the new Millennium: Balance between Human Touch &amp; Technology .....</b>	<b>768</b>
<b>Global Managers and ASEAN Readiness in Thailand .....</b>	<b>784</b>
<b><a href="#">Track: Marketing, Services, E-Commerce, Sports and Tourism.....</a></b>	<b>800</b>
<b>Impact Of Humor In Advertising Marketing, On Purchase Intent A Study To Investigate The Effectiveness Of Humor When Introduced In Marketing Communication As Advertisement .....</b>	<b>801</b>
<b>Application of Neuromarketing Perception in Commercial Sales in SMEs of Jewellery Industry in Guadalajara .....</b>	<b>810</b>
<b>The Irresistible Desire for Counterfeit Clothing: The Role of the Symbolic Meaning .....</b>	<b>819</b>
<b>Partnership and Power: Exploration in a Cause-related Marketing Context .....</b>	<b>830</b>
<b>The Buyers' Pre-Buying Phase – A View From The Personality Perspective .....</b>	<b>835</b>
<b>Did the World Watch the 2015 FIFA Women's World Cup? A Comparative Analysis of TV Viewing Trends in the USA and Globally .....</b>	<b>850</b>
<b>Who Traveled to Canada for the Women's World Cup? A Discussion of the Power of Sports Events to Increase Tourism .....</b>	<b>859</b>
<b>Are American College Students Interested in International Sports? Implications for Sports Business and Sports Tourism .....</b>	<b>863</b>
<b>Impact of Social Media Marketing on Customer Purchase Intention: Mediating role of Customer Trust (Marketing and Communication in Connected Environment).....</b>	<b>871</b>

How Innovation Interacts With Mobile Learning In Guadalajara, México.....	883
Urban Impact Investing: Keeping Results Local.....	905
Effect of Pre-consumption and Consumption Experience on Perceived Value and Brand Equity .....	915
Interface between Marketing, Social Policy and Development: An Evaluation and Future Directions for a Global Economy .....	931
“I am too BUSY!!!!!! Come back some other time” – Exploring the ability of Entertainment Marketing to change this.....	943
e-Business Decision Making In Mexican Exporting SMEs: An Empirical Study .....	952
Management Students Engagement with Social Networking Sights (SNS) and Regularity .....	970
The influence of peers and brands in the skateboarding subculture: A Mexico and U.S.A comparison.....	981
The Interpretation And Enlightenment Of Chicago Marathon Organization To China .....	992
Analysis on Kun Opera Performing Art Products for Tourism - Taking The Peony Pavilion staged at Kezhi Garden as an example .....	995
<b>Track: Pedagogy</b> .....	1005
Bologna Process as one of the Tools of Innovation in Higher Education in the Post-Soviet Kyrgyzstan.....	1006
Racing to the Top – A Case on Competition and Strategy in Crowd Equity Platforms .....	1010
<b>Track: Sustainability and Environmental Issues</b> .....	1018
The Drivers of Success in Developing Business Sustainability Standards: Evidence from the LEED Certification of the USGBC .....	1019
The Role Of Regulation On Innovation And Productivity In The Infrastructure Industries: The Case Of Water And Sewerage Systems In Brazil.....	1026
<b>Abstracts</b> .....	1029
Event Stream Analytics for Fault Prediction and Optimization .....	1030
Engineering Systems for Big Data Processing.....	1031
Key Account Management in SMEs: an Italian Case Study .....	1032

Characteristics of U.S. Public Companies Adopting Pension Accounting Changes for Defined Benefit Plans .....	1034
Advanced Bioscience Sustainable Solutions Bio Sensing and Monitoring of Plants and Fish for all Ag Biotech Growing Environments.....	1035
Stock Market Financial Ratios: Case Studies of Two Major Australia, New Zealand Banks .....	1036
Strategy for Diffusion of Technological Innovations .....	1038
Motivation, Resistance To Stress, And Adaptation To Changes Among Employee Of Different Generations .....	1041
Critical Issues And Prospects For The Start-Up Companies .....	1042
It Isn't What You Say, it's How You Say It: Language Abstraction and Enjoyment Orientation in Movie Reviews .....	1044
Multinational Corporations of Emerging Markets: Evidence from China.....	1046
Ethical Implications of Sustainability Initiatives in Corporations .....	1048
Innovativeness of Gay Consumers: An Investigation on Turkish Gay .....	1051
Sustainability Integration: A Model for Developing Corporate Responsibility Commitment Through Effective Sustainability Programs, Reporting, and Governance.....	1053
Accounting Standards Enforcement in an International Setting: Testing the Impact of Cultural, Religious, Political and Legal Environment on National Regulatory Efforts .....	1056
Assessing the Impact of the Great Recession on Emerging Economies: Latest Evidence	1057
A Conceptual Framework for Leveraging Standard and Big Data Resources to Achieve Sustainable Business Solutions .....	1058
Identifying and Comparing Tourism Industrial Cluster of Yangtze River Delta in China	1059
Sustainability and Company's Value – A Follow-Up Study of S&P 500 U.S. Companies ...	1066
Sport Events Travel Behavior: The Moderating Role Of Training In Triathlon.....	1068
Towards A Perspective Focusing On The Factors And Practices To Fight The Entrepreneurial Burnout.....	1072
Mining Methods for Information Extraction from Structured and Unstructured Data ....	1073
Re-defining Customer Equity with Superimposing Customer Loyalty as an Individual Component.....	1074
The Sustainability of the U.S. Corporate Income Tax System .....	1077

The Impact of the New Revenue Standard on Real Estate Sales.....	<b>1079</b>
Sustainable Rankings – Are They Consistent Across Rating Agencies?.....	<b>1082</b>
Sustainability Practices in European Versus U.S. Corporations - Is the Divide Getting Closer? .....	<b>1084</b>
The Practice of Job Satisfaction as a Meaningful Tool in Organizational Productivity: A Developing World Perspective .....	<b>1086</b>
Economic Value Added and Ecology Value Added as a measure for disaster preparedness linked to Corporate Social Responsibility: Japan as a test-bed bridging Asia and North America .....	<b>1087</b>
Does Islamic Finance Prevent Financial Crises: A Global Perspective .....	<b>1088</b>
What future development is coming for the brand Made in Italy? A critical analysis .....	<b>1089</b>
Board Characteristics and Voluntary Corporate Social Responsibility Disclosure –Evidences from Listed Companies in Singapore (2011-2014) .....	<b>1091</b>
When (and Where) It Is Cool To Lose Your Cool: The Role of Culture In the Relationship Between Online Review Valence and Reader Feedback .....	<b>1095</b>
Social Norms (and Market Norms) in Social Media: The Relationship Between Ad Placement on User-Generated Content and Viewers' Attitudes Towards the Content ....	<b>1098</b>
Comparative Research of Medical Tourism between China and America .....	<b>1101</b>
Exploring Research on the Management Situation of College: Basketball Coach in the United States .....	<b>1104</b>

# ***Application of Neuromarketing Perception in Commercial Sales in SMEs of Jewelry Industry in Guadalajara***

*Jovanna Nathalie Cervantes-Guzman. nathalie.cervantes34@outlook.com*

*Guillermo Vázquez-Ávila. gvazquez@cucea.udg.mx*

*Francisco Javier Borbolla-Elizondo. fjbe@yahoo.com*

*Centro Universitario de Ciencias Económico Administrativas (CUCEA). Universidad de Guadalajara (UdG), México.*

*Address: Periférico Norte N° 799, Núcleo Universitario Los Belenes, C.P. 45100, Zapopan, Jalisco, México. Tel. 52 (33) 37703343/ 3312809887.*

## **Abstract**

*Neuromarketing knowledge can be considered as support into a strategy to improve the quality in the service at SMEs. The research analyzed the relationship between neuromarketing perception and the quality of service for sales to the final customer of commercial SMEs in Guadalajara jewelry industry, as the jewelry Capital of America and one of the most profitable industries in the economy of Mexico. The methodology used was correlational, a field research, non-experimental and transactional. Demonstrates a relationship by applying the statistical test of Wilcoxon, among others, the factors of neuromarketing with tangible elements in direct sales, intangible items in sales by social networks and intangibles elements. This is an empirical study supported in scientific studies performed by neuroscience machines. It contributes to the application at a low cost of knowledge which was previously obtained through scientific studies of neuromarketing, allowing a better understanding of the needs and desires of consumers to carry out strategies while retaining a purpose practiced in the business environment.*

**Key words:** *Neuromarketing, Sales, Service Quality.*

## **Introduction**

Neuromarketing is a recent area of knowledge which is believed to represent the twenty-first century in microbiology in the twentieth century, chemistry in the nineteenth or physics in the eighteenth century (Bachrach, 2013). Is defined by Klaric (2011) as the study of the effects of advertising and other communications with the human brain with the intention to get to predict consumer behavior, connecting strategically products, services, brands or categories to the customer's mind.

As part of the foregoing in Mexico SMEs constitute 95% of established companies and contribute 23% to GDP, but it has a number of problems that causes 75% shut down their operations after two years on the market (INEGI, 2010), and the possibility of success is in average 25% to 30%, below the world average that is 40%.

## **Problem statement**

Today, despite being one of the major drivers of the economy, it has a number of problems that cause 75% of SMEs closing their operations after two years on the market (INEGI, 2010). One of its main causes is the lack of proper application of marketing caused by ignorance on the part of entrepreneurs in the new areas of marketing which produces a greater connection between the brand and the consumer (Braidot, 2009).

The problems for the development of SMEs are increased because not only do they have to compete with Mexican companies but also with companies from foreign market, this occurs by the wide trade liberalization happened in Mexico in recent years caused by NAFTA (Haar, 2004). Consequently, it results in a dispute with

companies that offer products and / or services with lower prices than those offered by the domestic market and higher added value, generating a more competitive environment affecting the return on investment achieved prices.

One of the new trends in marketing is being used by more than 80% of the 100 leading companies in the business world to show positive results and its structure has the ability to adapt to different business and sizes is neuromarketing that is defined as the identification of brain areas involved in the process of buying a product or a brand selection (Taher, 2006).

### **Investigation questions**

1. What is the proposal to compare the relationship between neuromarketing and service quality in a sales model led to the end customer?
2. What are the factors influencing neuromarketing commercial SMEs in the jewelry industry in Guadalajara?
3. What is the relationship between the elements of the quality of the service involved in commercial SMEs in industry jewelry in Guadalajara?
4. What is the relationship between the variables of neuromarketing and service quality of commercial SMEs in the jewelry industry in Guadalajara?

### **Theoretical review**

#### **Small and médium-sized enterprises**

Mostly SMEs are intended for the business and a considerable percentage of companies that are engaged in the production of products also sold so discarded intermediaries, thereby achieving a more direct relationship between producer and consumer.

SMEs are mainly focused on the retail although this is one of the most competitive and less profit margin sectors, but the risks in its operations are smaller resulting in more attractive for its establishment (Canning, 2002).

#### **SMEs in the jewelry industry in Mexico**

Mexican craft sector is made about a million people scattered in 31 Mexican states with a higher concentration in the western and central of the country (INEGI, 2010). The jewelery industry in Mexico obtained a growth of 1.5% in 2013 and an annual production of 144 186 000 pesos (The Economist, 2014), representing 0.4% of total production volume (Guzman, 2006). It consists of 40 jewelers' centers, 700 designers, manufacturing workshops 2,000 and 1,000 exporters. Mexico stands out for its extensive jewelry tradition emphasizing in the manufacture of handmade jewelry. Only in the area of Jalisco is one of the national leaders in the production and commercialization is 60% of the jewelry in the country following in order of importance the Federal District produces 30% and Monterrey with 10% (Guzmán, 2006).

### **Neuromarketing and scientific contributions**

#### **Neuroscience**

Neuroscience represents the fusion between the disciplines of molecular biology, electrophysiology, neurophysiology, anatomy, embryology, developmental biology, cell biology, neuroscience, cognitive neuropsychology and cognitive science (Braidot, 2007).

The main aspect of neuroscience is to explain how millions of individual nerve cells work in the brain to generate behavior and in turn are influenced by the environment and the behavior of other individuals (Barrier, 2009). Neuroscience makes it possible to integrate the contributions of studies on the interpretation of the central nervous system in different communication systems to link them with perceptual representations of individuals to gain the knowledge of the inner workings of behavior that reveal the association of thought with feeling, that is, meet the functional structure of the mind and how it interacts with neurons to define human behavior (Malfitano, 2007).

### **Adaptation of neuromarketing in SMEs.**

Today the constant changes have led to the marketing employee in business to be redesigned in order to meet changing consumer needs and achieve greater effectiveness in customer satisfaction, creating a competitive advantage and greater return on investment sales (Kojima, 2010).

In order to survive, achieve thrive in a highly competitive market and distinguish themselves from competitors is necessary to increase the effectiveness of marketing businesses by neuromarketing, knowing what the customer really wants and not what he says he wants, with adequate information to ensure proper planning and distribution of the product and / or service in the target market (Brooksbank, 2002).

Currently neuromarketing is used mostly by large enterprises, but also can be implemented in SMEs by focusing on rational, emotional and instinctive process of the buying process, meeting the needs and desires of consumers to form an emotional attachment to the brand, adapting to the areas and circumstances to be defined business objectives. (Sánchez, 2013).

Neuromarketing can be adapted in SMEs in various aspects: the package that is part of the experience offered by the company being the first thing what the customer perceives to modify it and as a result to make it more pleasing to the eye by organic forms, causing activation zone providing brain reward surprise and joy which improves the perceived experience in buying, it can be used in placing items and decor to provide a comfortable environment to encourage sales providing cross-selling different products, also in the creation , product development and design, and especially in dealing with the client (Ruiz, 2012).

### **General purpose**

Outline a model of sales to the end customer to compare the relationship between neuromarketing and quality of service.

### **Methodological design**

Based on the needs of the research study, the modalities of fieldwork and archival research are used; then graphically described the process that took place in the working methodology.

Using non-experimental research of transversal character, the purpose is the collection of data to describe the variables without prior manipulation and analyze their relationship at a given time (Baptista, al el, 2010). It is composed of:

- Exploratory research- Are survey SMEs belonging to the industries jewellers located in Magno Centro Joyero San Juan de Dios of Guadalajara as the jeweler mall number one in Latin America and its external customers in a period between August to October 2015.

- Correlational research.-Through this research will study the relationship between neuromarketing and quality of service.

The independent variable sales to final customers is comprised of the dependent neuromarketing variable that is made up of the factors of neuromarketing and the dependent variable quality of service that is made up of the elements in the quality of service. It was designed based on the model of the thesis of expertise of the University of Zulia from the Bolivarian Republic of Venezuela with the theme: Neuromarketing and quality service of the pharmaceutical sector in the city of Maracaibo. It is adapted to support a fashion designer school Center Fashion Design and studies in a jewelry school. A specialist in quantitative methods at the University of Guadalajara and a doctor specializing in consumer behavior and brand. (Table 1).

TABLE 1: PROPOSAL MODEL

Variables	Dimensions	Sub-dimensions	Indicators	Author
Neuromarketing	Factors of neuromarketing	Cultural factors	Culture	(Braidot, 2007)
			Subculture	
			Social class	
		Social factors	Group of membership	(Kotler, 2003)
			Reference group	
			Status	
		Personal factors	Occupation	(Vélez, 2011)
			Purchasing power	
			Lifestyle	(Kotler, 2003)
		Psychological factors	Personality	(Rivera, Arellano, Moreno, 2009)
			Motivation	(Rodríguez, at el, 2006) (Kotler, 2003)
Quality of service	Elements of the quality of service	Tangible elements in direct sales	Installations	(Lovelock & Wirtz, 2009)
			Shelves	
			Exhibitor	
			Decoration	
			Merchandise	
		Intangible elements in sales for social networks	Collection	(Web and Macros, 2015)
			Advertising	
		Intangible elements	Reliability	(Prieto, 2005)
			Capacity of response	
			Empathy	

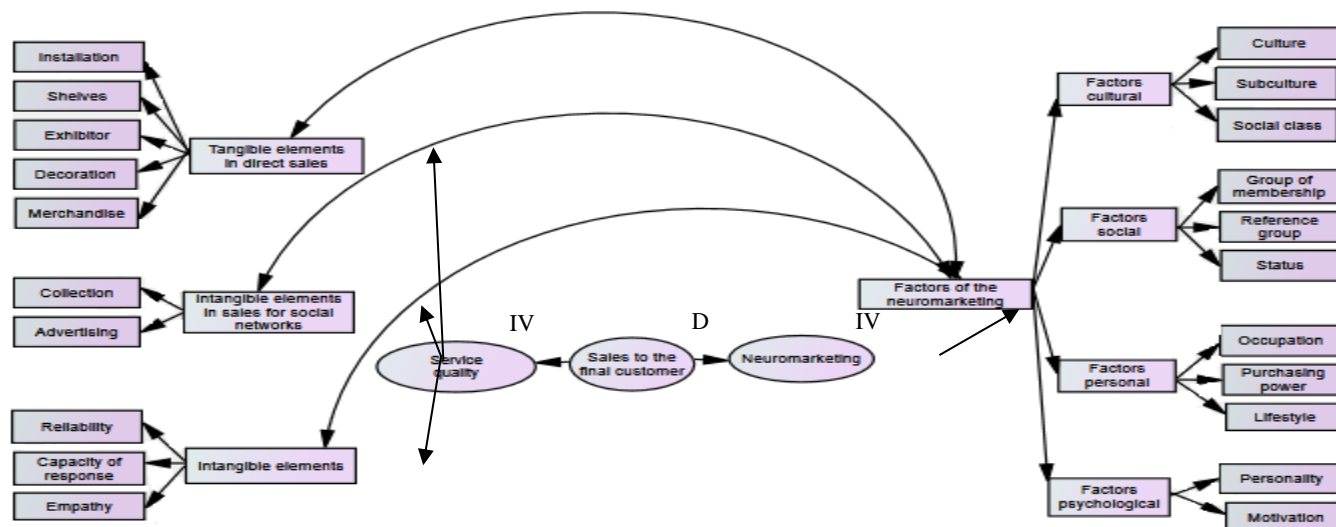
Source: Made by myself

The study used the following dimensions:

- Reliability. - Capacity of the company to provide the service accurately.
- Ability Answer. - Capacity of the organization to assist customers and serve them quickly.
- Empathy. - The company puts in place the client paying attention individually.



FIG. 1. VARIABLES



Source: Made by myself

### Sample

TABLE 2: SAMPLE

Population	Sample
Variable neuromarketing	
Commercial SMEs in the jewelry industry center located in the Centro Magno Joyero San Juan de Dios	55
Variable quality of service	
Centro Magno Joyero San Juan de Dios. External customers	270

Source: Made by myself

Sampling applied was probability in which all people have studied the same probability of being selected, studying the population evenly. The simple random sampling method providing the same probability of choice in the people who make the sample it was used in the questionnaire application. (Angels & Münch, 2006)

### Results y analysis:

#### Dimension: Factors of neuromarketing

TABLE 3: FACTORS RESULTS DIMENSIÓN NEUROMARKETING

Sub-Dimensions	Ítems	Indicators	Alternatives									
			TA		DA		NA/ND		ED		TD	
			FA	%	FA	%	FA	%	FA	%	FA	%
Cultural factors	1	Culture	18	32,7	18	32,7	15	27,3	3	5,5	1	1,8
	2	Subculture	19	34,5	22	44,0	3	5,5	8	14,5	3	5,5
	3	Social class	16	29,1	26	47,3	4	7,3	7	12,7	2	3,6
Social factors	4	Group of membership	19	34,5	20	36,4	12	21,8	3	5,5	1	1,8
	5	Reference groups	14	25,5	29	52,7	6	10,9	4	7,3	2	3,6
	6	Status	18	32,7	13	23,6	13	23,6	6	10,9	5	9,1
Personal factors	7	Occupation	23	41,8	16	29,1	10	18,2	6	10,9	-	-
	8	Purchasing power	18	32,7	25	45,5	7	12,7	4	7,3	1	1,8
	9	Lifestyle	16	29,1	18	32,7	13	23,6	6	10,9	2	3,6
Psychological factors	10	Personality	17	30,9	18	32,7	9	16,4	9	16,4	2	3,6
	11	Motivation	12	21,8	21	38,2	13	23,6	7	12,7	2	3,6

Source. Made by myself

The first thing that stands out from cultural factors in frequency data is that of SMEs surveyed the Magno Centro Joyero San Juan de Dios in the first item 32.7% strongly agree and agree that values affect customers in expressing their decision making with a cumulative total of 65.5%, showing that coexist in the jewelry industry indicators neuromarketing as pointed out by Braidot (2007) values are feelings that people have about the products they select. In relation to the second item it is 40% agree that the profession influences customer purchasing jewelry, as is proposed by Braidot (2007) the target market they operate in an environment that produces different demands of the profession-related products. In the third item 47.3% agree that social class influences customer buying jewelry, being an important factor when choosing because the consumer behavior changes, such differences are observed in attitudes, learning and consumption. On the whole cultural and sub-cultural factors are external factors that have great influence on consumer behavior that produce achieving higher levels of competitiveness.

#### Dimension: Elements of the quality of service

TABLE 3: ELEMENTS OF THE QUALITY OF SERVICE

Sub-Dimensions	Ítems	Indicators	Alternatives									
			TA		DA		NA/ND		ED		TD	
			FA	%	FA	%	FA	%	FA	%	FA	%
Tangible elements in direct sales	1	Installation	59	21,9	161	59,6	39	14,4	11	4,1	-	-
	2		63	23,3	151	55,9	49	18,1	6	2,2	1	0,4
	3	Shelves	50	18,5	121	44,8	81	30,0	15	5,6	3	1,1
	4	Exhibitor	41	15,2	140	51,9	83	30,7	5	1,9	1	0,4
	5		57	21,1	132	48,9	70	25,9	9	3,3	2	0,7
	6	Decoration	44	16,3	95	35,2	89	33,0	37	13,7	5	1,9
	7	Merchandise	20	7,4	97	35,9	119	44,1	29	10,7	5	1,9
	8		49	18,1	131	48,5	77	28,5	13	4,8	-	-
Intangible elements in sales for social networks	9	Colection	29	10,7	122	45,2	99	36,7	18	6,7	2	0,7
	10		41	15,2	132	48,9	87	32,2	10	3,7	-	-
	11	Advertising	27	10,0	84	31,1	116	43,0	39	14,4	4	1,5
Intangible elements	12	Reliability	28	10,4	114	42,2	94	34,8	30	11,1	4	1,5
	13		40	14,8	128	47,4	80	29,6	22	8,1	-	-
	14	Capacity of response	77	28,5	114	42,2	61	22,6	18	6,7	-	-
	15		53	19,6	130	48,1	77	28,5	10	3,7	-	-
	16		60	22,2	134	49,6	64	23,7	10	3,7	2	0,7
	17	Empathy	92	34,1	112	41,5	52	19,3	14	5,2	-	-
	18		58	21,5	113	41,9	87	32,2	10	3,7	2	0,7
	19		58	21,5	130	48,1	75	27,8	7	2,6	-	-

Source. Made by myself

As a result of the work of field applied to the clients of the Magno Centro Joyero San Juan de Dios in their absolute and relative frequency. First item within the tangible elements in direct sales facilities 59.6% agreed that installations are visually attractive according to the expectations of the customer. In the second item 55.9% agreed that facilities provide an environment appropriate to the needs and desires of the client, the tangible elements as the physical aspect of the facilities and presentation of the settlements are a factor that can induce the client perform a commercial activity. The eighth item 48.5% agreed that merchandise is appropriate to the needs and desires of the target, according to Jimenez (2012) in Maslow hierarchy: jewelry is at the level of social acceptance to be a psychological need that is satisfied when people take care of himself physically, covering the needs of belonging to a social group and acceptance; at the level of self-esteem covering the need to achieve success, reputation, respect, prestige and status; and it is also a desire to be a feeling that motivates the desire to own an object to quench a taste.

#### Analysis Wilcoxon test

In analyzing the relationship between the variables of neuromarketing and service quality of commercial SMEs in the jewelry industry in Guadalajara.

TABLE 5. TEST STATISTICS<sup>A</sup>

	Intangible elements in sales of social network - Intangible elements	Tangible elements in direct sales - Intangible elements	Intangible elements in sales of social network - Tangible elements in direct sales	Tangible elements in direct sales – Factors for NMKT	Intangible elements in sales of social network – Factors for NMKT	Intangible elements – Factors for NMKT
Z	-1,265 <sup>b</sup>	-,628 <sup>b</sup>	-,595 <sup>b</sup>	-,360 <sup>c</sup>	-,251 <sup>b</sup>	-,528 <sup>c</sup>
Sig. asintót. (bilateral)	0,206	0,530	0,552	0,719	0,802	0,598

- a. Wilcoxon signed-rank test.  
b. b. Based on the positive ranks.  
c. c. Based on the negative ranks  
Source: SPSS

The outcome of the bilateral asymptotic significance is 0,719 so there is no significant difference between factors of neuromarketing and tangible elements in direct sales. The outcome of the bilateral asymptotic significance is 0,802 so that there is no significant difference between factors of neuromarketing and intangible elements in sales of social networks. The outcome of the bilateral asymptotic significance is 0,598 so there is no significant difference between factors of neuromarketing and intangible elements in sales of social networks.

## Conclusions

The purpose of this research was to outline a proposal model of sales to final customers of commercial SMEs in the jewelry industry in Guadalajara comparing the relationship of neuromarketing and quality of service. In applying the tools of neuromarketing can investigate consumer preferences, their motivations, their ability to pay and their values, as well as the quality of service perceived by the customer; the main reason is to meet customer expectations and achieve their loyalty to have a positive economic impact on SMEs through increased sales.

The results allow conclusions highlight the following specific objectives: Regarding the second specific goal focused on identifying factors that influence neuromarketing commercial SMEs in the jewelry industry in Guadalajara for the sales model, with the percentages indicators more favorable of each sub-dimension are subculture, reference group, occupation and personality.

Regarding the third objective aimed at comparing the elements of quality of service affecting trade SMEs in the jewelry industry in Guadalajara for the sales model. In the tangible elements in direct sales indicator having the greater presence of positive is the appearance of the physical facilities in the process of promoting servuction the moment of truth that helps the growth of the industry. In intangible elements in sales of social networks Magno Centro Joyero San Juan de Dios there is weakness in advertising on social networks that handle according to customer feedback. In intangibles elements ServPerfect assessment tool was used to assess customer perception regarding the service received, the items with the highest scores were the responsiveness that is the desire of the

organization to assist customers and serve them quickly and empathy where the organization is put in place to provide individualized customer attention to each element with the lowest score was the reliability is the ability to provide service accurately.

## References

- [1] Bachrach, E. (2013). *Ágil Mente*. México: Publishing Grijalbo.
- [2] El economista. (July 28, 2014). *Sector joyero estima en 5.0% su crecimiento este año*. El Economista. Obtained from <http://eleconomista.com.mx/industrias/2014/07/27/sector-joyero-estima-50-su-crecimiento-ano>
- [3] Braidot, N. (2007). *Neuromarketing: Neuroeconomía y Negocios*. Spain: Publishing Puerto Norte Sur.
- [4] Braidot, N. (2009). *Neuromarketing: ¿Por qué tus clientes se acuestan con otro si dicen que les gustas tú?, 1º Edición*. Barcelona, Spain: Publishing Planeta.
- [5] Brooksbank, R. (2002). *The adoption of strategic marketing and its contribution to the competitive success of companies*. New Zeland: Marketing Intelligence & Planning.
- [6] Canning, G. (2002). *Is your company marketing oriented?* USA: The Journal of Business Strategy.
- [7] Guzmán, S. (July 2006). *Estudio de mercado: El mercado de la joyería en México*. Oficina Económica y Comercial de la Embajada de España en México. Obtained from [http://www.exportapymes.com/documentos/productos/le2186\\_mexico\\_joyeria.pdf](http://www.exportapymes.com/documentos/productos/le2186_mexico_joyeria.pdf)
- [8] Haar, J. (2004). *Efectos del TLCAN en la competitividad de la pequeña empresa en México, Volume 52(Number 6)*. Comercio exterior. Obtained from <http://revistas.bancomext.gob.mx/rce/magazines/67/3/RCE3.pdf>
- [9] INEGI. (2010). Información preliminar Enero-Agosto 2010. *Estadísticas del comercio exterior de México*. Obtained from [http://www.inegi.gob.mx/prod\\_serv/contenidos/espanol/bvinegi/productos/continuas/economicas/exterior/mensual/ece/ecem](http://www.inegi.gob.mx/prod_serv/contenidos/espanol/bvinegi/productos/continuas/economicas/exterior/mensual/ece/ecem)
- [10] Jimenez, E. (April 25, 2012). *Joyeria necesidad o lujo*. Foro Alfa. Obtained from <http://foroalfa.org/articulos/joyeria-necesidad-o-lujo>
- [11] Klaric, J. (2011). *Estamos Ciegos*. Colombia: Publishing Planeta.
- [12] Klaric, J. (2014). *Véndele a la mente, no a la gente*. Perú: Biblioteca Nacional de Perú.
- [13] Kojima, T. K. (2010). *Proposal and development of the direct mail method PMCI-DM for effectively attracting customers*. International Journal of Management and Information Systems.
- [14] Malfitano, O. (2007). *Neuromarketing: celebrando negocios y servicios*. Argentina: Publishing Garnica.
- [15] Münch, L. & Ángeles, E. (2009). *Métodos y técnicas de investigación. 4º edition*. DF, México: Publishing Trillas
- [16] Ruiz, J. (2012). *Neuromarketing Spain: Blog sobre neurociencias aplicadas al marketing*. Spain. Obtained from <http://neuromarketingspain.blogspot.mx/2013/07/neuromarketing-y-el-packaging-en-las.html>
- [17] Sánchez, J. (2013). *El neuromarketing en la PYME. Pymes y autónomos*. Obtained from <http://www.pymesyaautosomos.com/marketing-y-comercial/el-neuromarketing-en-la-pyme>
- [18] Taher, N. (2006). *Neuromarketing*. New York: ICFAI University Press.

## End Notes

Within the limitations of the research are that is not a parametric statistics, for what cannot be proofs of inferential statistics such as parametric test t, the correlation coefficient of Pearson and linear regression; because for a parametric analysis you should start with the following assumptions:

1. The population distribution of the dependent variable is normal: the universe has a normal distribution.
2. The measurement of the dependent variable is intervalar or reason.
3. When two or more populations are studied, these have a homogeneous variance: the populations in question have similar dispersion in distributions.