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15th Annual International Symposium on Economic Theory, Policy & Application

19-30 June & 1-2 July 2020, Athens, Greece

Edited by
Gregory T. Papanikos

2020

Abstracts
15th Annual International Symposium on Economic Theory, Policy & Application
29-30 June & 1-2 July 2020, Athens, Greece

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(In Alphabetical Order by Author's Family name)

Preface

This book includes the abstracts of all the papers presented at the ***15th Annual International Symposium on Economic Theory, Policy & Application*** *(29-30 June & 1-2 July 2020)*, organized by the Athens Institute for Education and Research (ATINER).

A full conference program can be found before the relevant abstracts. In accordance with ATINER's Publication Policy, the papers presented during this conference will be considered for inclusion in one of ATINER's many publications.

The purpose of this abstract book is to provide members of ATINER and other academics around the world with a resource through which to discover colleagues and additional research relevant to their own work. This purpose is in congruence with the overall mission of the association. ATINER was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet to exchange ideas on their research and consider the future developments of their fields of study.

It is our hope that through ATINER's conferences and publications, Athens will become a place where academics and researchers from all over the world regularly meet to discuss the developments of their discipline and present their work. Since 1995, ATINER has organized more than 400 international conferences and has published nearly 200 books. Academically, the institute is organized into 6 divisions and 37 units. Each unit organizes at least one annual conference and undertakes various small and large research projects.

For each of these events, the involvement of multiple parties is crucial. I would like to thank all the participants, the members of the organizing and academic committees, and most importantly the administration staff of ATINER for putting this conference and its subsequent publications together. Specific individuals are listed on the following page.

Gregory T. Papanikos
President

15th Annual International Symposium on Economic Theory, Policy & Application, 29-30 June & 1-2 July 2020, Athens, Greece

Scientific Committee

All ATINER's conferences are organized by the Academic Council. This conference has been organized with the assistance of the following academic members of ATINER, who contributed by chairing the conference sessions and/or by reviewing the submitted abstracts and papers:

1. Gregory T. Papanikos, President, ATINER & Honorary Professor, University of Stirling, U.K.
2. Chris Sakellariou, Head, Economics Unit, ATINER & Associate Professor of Economics, Nanyang Technological University, Singapore.
3. Sharon Claire Bolton, Vice President of Research, ATINER & Professor, The Management School, University of Stirling, Scotland.
4. Henry Thompson, Professor Emeritus, Auburn University USA.
5. Neslihan Kahyalar, Academic Member, ATINER & Lecturer, De Montfort University, UK.
6. Timothy M. Young, Director, Center for Data Science (CDS) & Professor and Graduate Director, Center for Renewable Carbon, The University of Tennessee, USA.
7. Codruta Simona Stoica, Head, Mathematics & Statistics Unit & Professor and Vice-Rector, Aurel Vlaicu University of Arad, Romania.

FINAL CONFERENCE PROGRAM

15th Annual International Symposium on Economic Theory, Policy & Application, 29-30 June & 1-2 July 2020, Athens, Greece

PROGRAM

Monday 29 June 2020

08.00-08.30
Registration

08.30-09.00
Opening and Welcoming Remarks:

- **Gregory T. Papanikos**, President, ATINER.
- **Sharon Claire Bolton**, Professor, The Management School, University of Stirling, Scotland.
- **Timothy M. Young**, Professor and Graduate Director, The University of Tennessee, USA.
- **Codruta Simona Stoica**, Professor and Vice-Rector, Aurel Vlaicu University of Arad, Romania.

09.00-09.30
Radmila Janicic, Professor, University of Belgrade, Serbia.
Title: *Holistic Marketing Approach in Literature Arts.*

09.30-10.00
Evangelos Xevelonakis, Professor, Head of Center Data Science & Technology, HWZ University of Applied Sciences in Business Administration Zurich, Switzerland.
Title: *Identifying Sustainability Efforts in Swiss Start-up Webpages using Machine Learning and Lexicon Based Approaches.*

10.00-10.30
Cyrine Khalfallah, PhD Student, IHEC Carthage, Tunisia.
Faten Malek, Adjunct Professor, ESSCA École de Management, France.
Norchene Ben Dahmane Mouelhi, Senior Lecturer, IHEC Carthage, Tunisia.
Title: *What Luxury for the Silver Generation Market? Seniors' Motivations in Luxury Consumption*

10.30-11.00
Thanos Athanasopoulos, Senior Lecturer, De Montfort University/Leicester, UK.
Title: *Stability of Collusion and Vertical Differentiation.*

11.00-11.30
Gede Sumertha Kusuma Yanca, Lecturer, Former Dean, Faculty of Defense Srategy, Indonesia Defense University, Indonesia.
Title: *Participation Indonesian Female Peacekeeper in UNIFIL Year 2015-2017: Implication to Defense Diplomacy.*

11:30-12:00
Tobias Zander, PhD Student/Researcher, University of Wuppertal, Germany.

Title: *A Gravity Approach to Analysing the Effects of Corruption on Foreign Direct Investment Flows within OECD Economies.*

12:00-12:30
David Hanrahan, Researcher, University of Wuppertal, Germany.
Title: *Tax Challenges of the Digitalized Economy.*

12:30-13:00
Codruta Simona Stoica, Professor and Vice-Rector, Aurel Vlaicu University of Arad, Romania.
Title: *Modelling with Evolution Cocycles*

13:00-13:30
Zoubida Jadda, Professor, Écoles de Saint-Cyr Coëtquidan, France.
Title: *PS – Boolean Functions.*

13:30-14:00
Patrice Parraud, Assistant Professor, Ministère des Armées, France.
Title: *New and Efficient Combined Hard Fault and Algebraic Attack on Full Trivium.*

14:00-14:30
Carla Santos, Adjunct Professor, New University of Lisbon and Polytechnic Institute of Beja, Portugal.
Title: *Linear Mixed Models and Best Linear Unbiased Estimators for Estimable Vectors.*

14:30-15:00
Cristina Dias, Adjunct Professor, New University of Lisbon and Polytechnic Institute of Beja, Portugal.
Title: *An Extension of the Concept of Common Structure for a Series of Studies.*

15:00-15:30
Catherine Bruneau, Professor, University of Paris 1 Panthéon-Sorbonne, France.
Title: *Labor Productivity in France: Is the Slowdown of its Growth Inevitable or are There Levers to Fight it?*

15:30-17:00
A Panel on **"Corporate Responsibility, Equality and Diversity Practices in Organizations"**
Leader: Neide Lúcia de Oliveira Almeida, PhD Student, Sustainability Management Systems, Fluminense Federal University (UFF), Brazil.

- **Edna Ribeiro Alves**, MBA Teacher, Fluminense Federal University, Brazil.
  Title: *Are the Organizations Ranked by the Great Place to Work a Great Place for All in Brazil? An Analysis of what is Being Done toward the Brazilian LGBTQI+ Minority.*
- **Marcello Borio**, Researcher, Fluminense Federal University, Brazil.
  Title: *The Rights of Inclusion of People with Disabilities (Pwd) in the World of Work: An Overview in Brazilian Organizations.*
- **Patricia Goncalves Pacheco**, Researcher, Fluminense Federal University, Brazil.
  Title: *Diversity, Equity, and Inclusion: A Case Study of a Brazilian SME.*

17:00-17:30 Rafael Roos Guthmann, Assistant Professor, Pontifical Catholic University of Rio de Janeiro, Brazil.
Title: *On the Informational Efficiency of Decentralized Price Formation*

17:30-18:00
Ampalavanar Nanthakumar, Professor, State University of New York at Oswego, USA.
Title: *Comparison of Archimedean Copula Models for Reliability.*

18:00-18:30
Irma Hunt, Associate Professor, Shippensburg University, USA.
Title: *Cheating, Culture, and Incentives: Who Deserves a Bonus?*

18:30-19:00
Michael Radin, Associate Professor, Rochester Institute of Technology, USA.
Title: *Value Orientations, Emotional Intelligence and International Pedagogical Innovations and Practices.*

19:00-19:30
Carmine Gorga, President, The Somist Institute, USA.
Title: *Concordian Economics: An Integration of Theory, Policy, and Practice.*

19:30-20:00
Maryam Dilmaghani, Associate Professor, Saint Mary's University, Canada.
Title: *The Blue of the Rainbow: Sexual Orientation and Hiring Discrimination in Blue-collar Occupations.*

20:00-20:30
Timothy M. Young, Professor and Graduate Director, The University of Tennessee, USA.
Title: *Improving Manufacturing Data Quality with Data Fusion and Advanced Algorithms for Improved Total Data Quality Management (TQDM)*

Tuesday 30 June 2020

08:30-09:00
Yanbo Ren, Research Assistant & Postgraduate, Shanghai International Studies University, China.
Title: *The Effect of Product Design Novelty on Purchase Intention: The Mediating Role of Cognitive and Affective Attitudes.*

09:00-09:30
Lukanda Kalobo, Lecturer, Central University of Technology, Free State, South Africa.
Title: *The Relationship between the Teaching of Mathematics and the Teaching of Statistics at High School Level in the South African Context.*

09:30-10:00
Narjes Haj Salem, Assistant Professor, University of Sharjah, UAE.
Title: *The Theory of Planned Behavior: An Exploration of the Role of Anticipated Emotions in Green Product Consumption.*

10:00-10:30
Jan Konig, Honorary Professor, University for Sustainable Development Eberswalde, Germany.
Title: *Labor Market Integration of Migrants: Hidden Costs and Benefits.*

10:30-11:00
Weiwei Zhao, PhD Student, Shanghai International Studies University, China.
Title: *A Better Family Member or a Better Female Leader? The Effects of Work-Family Enrichment and Female Leadership Effectiveness in the Mediating Role of Positive Mood.*

11:00-11:30
Ida Kukliansky, Head, Industrial Engineering and Management Department, Ruppin Academic Center, Israel.
Title: *Is Ogive's Interpretation Easy for College Students?*

11:30-12:00
G Suganya, Research Scholar, PSG Institute of Management, India.
Title: *Efficiency of the Unorganised Sector's Supply Chain*

12:00-12:30
Iman Boseila, Lecturer, MSA University / Cairo University, Egypt.
Title: *Global vs. Local? Egyptian Consumers' Perceptions and Preferences of Global vs. Local Brands.*

12:30-13:00
Siting Lu, PhD Student, The University of Edinburgh, UK.
Title: *Status Signalling with Luxury and Cultural Goods.*

13:00-13:30
Lucky Otame, PhD Student, Bournemouth University, UK.
Title: *The Link between International Remittances from Abroad and Households' Ability to Access Capital for Business Development: The Case of Nigeria.*

13:30-14:00
Alexander Seiler, PhD Student, University of Basel, Switzerland.
Title: *Foreign Exchange Hedging of Bonds in Foreign Currency.*

14:00-14:30
Saiyu Gu, Postgraduate Student, Shanghai International Studies University, China.
Title: *Crafting a Confucian Culture in Chinese Corporations: A Case Study of Guangzhou Borche.*

14:30-15:00
Danyang Zhao, PhD Student, Xi'an Jiaotong University / Hong Kong Polytechnic University, China / Hong Kong.
Title: *Does Contract-Based Governance Lead to or Curtail Opportunism?*

15:00-15:30
Nahdh S.M.Alsaif, Lecturer, University of Anbar, Iraq.
Title: *Approximate Solution for Integro Partial Differential Equation via Neural Network*

15:30-16:00
Rolf Rellstab, Research Associate, ZHAW School of Management and Law, Switzerland.
Title: *Motivation for Craft Beer Consumption – A Means-End Approach.*

16:00-16:30
Ovinda Wijeyaratne, Lecturer, Nottingham Trent University, UK.
Title: *A Development of a Conceptual Framework to Study Customer Buying Behaviour during a Pandemic Crisis.*

16:30-17:00
Jessica Thacker, PhD Student, South Asian University, India.
Debdatta Saha, Assistant Professor, South Asian University, India.
Title: *The "Missing Middle" Problem and Small Firm Fragility: The Case of Food Processing in India.*

17:00-17:30
Sureyya Dal, Assistant Professor, Trakya University, Turkey.
Title: *Regional Disparities of Poverty in Turkey: Lessons from Family Characteristics.*

17:30-18:00
Juan Carlos Chica, Associate Professor, Colombia National University, Colombia.
Title: *Influence of Olfactory Marketing on Human Attention and Concentration for Marketing Decision Making.*

18:00-18:30
Maria Estela Navarro Robles, Titular Professor, National Pedagogical University (UPN), Mexico.
Title: *Analysis of the Results of a Pilot Test for an Online Course of Rational Numbers Designed Using Variation Theory and Lesson Study.*

18:30-19:00
Juan Ignacio Alcaide, Lecturer, University of Cadiz, Spain.
Title: *Reconnecting the Old City-Harbour: Best Practices for Attracting Cruise Tourists.*

Juan Ignacio Alcaide
Lecturer, University of Cadiz, Spain

Reconnecting the Old City-Harbour: Best Practices for Attracting Cruise Tourists

Cruise tourism continues to be a main international growth sector. This paper is based on the gap between destination management organization and unguided city tour as key drivers for change. The paper is focused on evaluating the tourist attraction indicators that strengthen the unguided tour of the city of Cadiz, then aims to refine the focus of sustainable practices, and finally proposes strategies for improving cruise tourists' satisfaction. Cadiz is a successful city for the large cruise industry and harbour located in the city core, is chosen as the case area to evaluate the alignment of strategic management and marketing. The study is based on an analysis of on structured survey of strengths and improvement potential. The result indicates that industry should more effectively focus on opportunities and challenges and promote old city experience. They could place a stronger emphasis on local identity by cooperating with local-regional network and potential strategies that can be employed by cruise line operators with respect to community relations.

Nahdh S.M. Alsaif
Lecturer, University of Anbar, Iraq
Mahmood A. Shamran
Lecturer, University of Baghdad, Iraq
Ronak Bagelany
Assistant Lecturer, University of Kirkuk, Iraq
&
Saad N.Al-Azzawi
Professor, University of Baghdad, Iraq

Approximate Solution for Integro Partial Differential Equation via Neural Network

Finding the exact solutions of functional equations has attracted the consideration of mathematician's interest in current years. Many issues in theoretical physics and different sciences lead to (IPDE). The solutions of this form of equations are regularly very complicated. For this cause in many cases, it is required to attain the approximate solutions. The aim of this paper is to solve integro partial differential equations (IPDEs) using artificial neural network through designing multi-layer feed forward Neural Network. A multi-layers design in the proposed method consists of a hidden layer having five hidden units with tanh (tansig). Transfer function used as each unit and one output unit with linear (purelin) transfer function, in this design using Levenberg-Marquardt algorithm training. Moreover, examples on partial integro-differential equations carried out to demonstrate the efficiency and accuracy of the introduced technique.

Thanos Athanasopoulos
Senior Lecturer, De Montfort University, UK
Burak Dindaroglu
Assistant Professor, Izmir Institute of Technology, Turkey
&
Georgios Petropoulos
Postdoctoral Researcher, MIT, USA

Stability of Collusion and Vertical Differentiation

We study collusion in a vertically (product quality) differentiated duopoly. We find that the two firms face a trade-off between profit maximization and stability of collusion. Profit maximization dictates that most of the production should be allocated to the firm with the best quality, while stability requires that the firm with the least quality should get a large share of production and collusive profits. This implies that collusion gets monotonically easier to sustain as quality differentiation rises, when inter-firm payments are unfeasible. Finally, we show that side payments can become a factor of cartel destabilization when quality differentiation is sufficiently large.

Iman Boseila
Lecturer, MSA University / Cairo University, Egypt
Ehab Abou Aish
Professor, Cairo University, Egypt
&
Abeer Mahrous
Professor, Cairo University, Egypt

Global vs. Local? Egyptian Consumers' Perceptions and Preferences of Global vs. Local Brands

In the current globalized world economy, markets are rapidly integrating across borders, for many product categories, consumers can choose between global and local alternatives. However, when consumers choose between global and local brands, do global brands benefit from customer perceptions of their high globalness (Steenkamp, et al, 2003). Many variables lead to favor global brands (Winit et al., 2014). From a utilitarian perspective, these variables include perceptions of higher quality and competitive prices resulting from standardization and economies of scale. In contrast, from a hedonic perspective, the aspirational benefits and prestige of global brands may result in higher esteem and status to the purchaser (Özsomer, 2012). Psychologically, global brands are perceived as creating an identity, a sense of achievement, and identification for consumers, symbolizing the aspired values of global consumer culture (Özsomer, and Altaras, 2008).

On the other hand, other variables lead to favor local brands, such as a strong association with the local environment, authenticity, and responsiveness to local requirements, as well as the pride that comes from consuming brands that support the cultural heritage and national economy. Also, local brands traditionally benefited from close relationships with consumers (Özsomer, 2012). However, especially in an emerging market context, smaller local brands are struggling to compete with the higher resourced global brands (Ger, 1999).

Nevertheless, the existing literature offers limited insights into how the globalness of the brand drives consumers' perceptions and purchase intentions, particularly in emerging markets. Prior studies indicated that consumer perceptions of brands' quality-and identity-signaling abilities are important determinants of brand choice (Reed, et al. 2012). Also, it indicated that higher perceived brand quality and prestige are key advantages of global brands, especially in developing countries (Steenkamp, et al. 2003). However, global brands could also lead to positive consumer responses.

In addition, research has shown that consumers' values affect their brand choices. Among the values particularly relevant to choices between local and global brands are those associated with localization and globalization; including consumer ethnocentrism (Shimp, and Sharma, 1987), materialism (Richins, and Dawson, 1992), and susceptibility to normative influence (Batra et al., 2000) and others. Studying these consumers' values provide important insights into the predictors of global or local brand preferences.

Therefore, this research will address consumers' perceptions of global versus local brands and the underlying consumer values that impact this brand choice in an emerging market context. In specific, this research develops a comprehensive model of global vs. local brand preference that incorporates cognitive and affective mediating factors (perceived quality, prestige, self-identity expressiveness, and brand perceived overall value) to explain consumers' behavioral intentions toward these brands. As there is a scarcity of prior research examining the roles of brand identity expressiveness, and brand's perceived value, these additional variables for why consumers may form preferences for global versus local brands are being tested in this research to yield a holistic understanding of the phenomenon under study. These benefits are even more apparent in developing economies than other economies.

Results from PLS-SEM show interesting results that will be discussed later in the results section.

Catherine Bruneau
Professor, University of Paris 1 Panthéon-Sorbonne, France
&
Pierre-Luis Girard
Project Manager, France Stratégie, France

Labor Productivity in France: Is the Slowdown of its Growth Inevitable or are there Levers to Fight it?

Labour productivity in most advanced countries has slowed in successive stages since the 1970's and, after the 2008 crisis, it has reached its lowest level since World War II. In this paper we focus on the evolution of the French labour productivity over the last four decades with two main questions. Is the slowdown of labor productivity growth a process which began far before the Great Recession and is expected to continue? Or is the last decrease observed after the 2008 crisis just temporary and, in this case, are there levers to reverse the current trend? To answer these questions, we propose two complementary characterizations of the trend labor productivity, both describing a long run target, first as a simple piecewise linear function of time, involving so-called structural breaks, and, second, without breaks, as a linear function of fundamentals derived from an augmented growth model including Human capital. We propose a thorough econometric investigation with multiple robustness analyses which leads to conlude, first, that the effect of the 2008 crisis is rather temporary and, second, that investing in Human capital in tight relation with innovations should be an efficient lever to fight the slowdown of the labour productivity growth.

Juan Carlos Chica
Associate Professor, Colombia National University, Colombia
Jose Luis Giraldo
MBA Student, Colombia National University, Colombia
Laura Patricia Giraldo
Associate Professor, Colombia National University, Colombia
&
Juan Manuel Castano
Associate Professor, Colombia National University, Colombia

Influence of Olfactory Marketing on Human Attention and Concentration for Marketing Decision Making

The sudden and unpredictable behavior of human beings has led the natural and social sciences that study them to be constantly updated and at the forefront of their study. Marketing has not been alien to this trend, where the need to understand their behavior in everyday life and even more, to understand the decision-making process leads to the creation of terms such as olfactory marketing. Olfactory marketing is derived from Neuromarketing and has as its main objective to enhance a purchase or to influence the process of customer care and concentration by means of odours. Through the reptilian brain, odors are fixed in the brain for more time, unlike hearing and sight, which have a shorter memory. Therefore, the purpose of the research is to evaluate the level of attention and concentration that can be generated from certain odors and how they affect a decision making process.

Large stores and brands generally develop their own scents, such as Zara or Sephora, this research will work with common aromas such as lavender, roses, cinnamon and citrus. Likewise, a control group that will not be subjected to any olfactory stimulus will be worked on. In the research development process, a group under study is subjected to the stimulation of some of the odors described above; an audiovisual is presented and a test is performed. According to the rating (from 0 to 10) of the test and contrasting with the data provided by the eeg, the odors with the highest levels of attention and concentration will be examined, classified. These data will be compared with the control group that was not subjected to any olfactory stimulus under similar conditions to assess the margin of influence of odors. Each group is made up of individuals who undergo the same stimulus for the same period of time, so the comparison process can be done, as it is kept as homogeneous as possible The research is carried out with the support of eeg Neuromarketing tools and the analysis software Neuro-

Experimenter Version 6.2. The study is relevant and has a greater value for the academia, because currently there are not a significant number of studies that corroborate olfactory marketing and its impact on human attention and concentration. The preliminary review of the literature allows us to conclude that large companies use novel and uncommon odours as a positioning strategy to attract customers and to build their loyalty. In addition to the above, olfactory marketing increases the value of products and services, making the customer want to pay a larger sum of money to have it.

Sureyya Dal
Assistant Professor, Trakya University, Turkey

Regional Disparities of Poverty in Turkey: Lessons from Family Characteristics

Poverty is a multidimensional social issue which affects all life domains. Therefore, it is important to understand roots of poverty. This study investigates poverty patterns by using Turkish Family Survey 2016 provided by Turkish Statistical Institute. For this purpose, the families who receive social transfers are examined by different aspects. Firstly, poor families are explored by demographic characteristics. Household size, tenure of accommodation, household income, age, gender, education level and marital status have been taken as demographic characteristics. Then importance of family is examined. In this context, attitudes towards traditional family values and attitudes towards marriage and social norms within low income families have been discussed by using results of quantitative methods. All investigations are carried out for 12 regions of Turkey.

Marcello De Miranda Borio
Researcher, Fluminense Federal University, Brazil
Emmanuel Paiva de Andrade
Teacher, Fluminense Federal University, Brazil
Claudia De Oliveira Mourao
Researcher, Fluminense Federal University, Brazil
&
Maria Cristina Matos da Costa
Researcher, Fluminense Federal University, Brazil

The Rights of Inclusion of People with Disabilities (Pwd) in the World of Work: An Overview in Brazilian Organizations

People with some kind of disability have obtained more citizenship and labor rights in Brazil as a result of the enactment of Law 13,146/2015. In the institutional field, rights were acquired, however in practical terms there is still much ground to be conquered. The present study looks into how Brazilian organizations and institutions have adapted in regard to hiring labor to complete their staffs and labor teams.

Through the analysis of 30 empirical cases reported in the literature produced between 2017 and 2019, an attempt has been conducted to monitor the hiring process of these professionals in all its stages, from job posting to recruitment and selection. The focus was set on uncovering the difficulties met by PwDs in their struggle for recognition and protagonism.

The result demonstrated that a significant number of companies investigated hired PwDs in accordance with legal standards and prepared properly to welcome these employees by offering them accessible facilities, building ramps, adjusting the different pieces of furniture, and adapting restrooms for wheelchair users among other things.

The legislation, however, was not enough to bring about a paradigm shift. Even at the risk of financial penalties, the number of companies that still fail to comply with the law is still high either owing to the problems of building infrastructure, lack of suitable furniture, or lack of interest of their leaders, which results in prolonged suffering of the PwDs and makes it obvious that the legislation is a necessary condition but not sufficient to implement a cultural change.

Cristina Dias
Adjunct Professor, New University of Lisbon and Polytechnic Institute of Beja, Portugal
Carla Santos
Adjunct Professor, New University of Lisbon and Polytechnic Institute of Beja, Portugal
&
Joao Tiago Mexia
Emeritus Professor, New University of Lisbon, Portugal

An Extension of the Concept of Common Structure for a Series of Studies

Today several techniques exist for treating a series of studies on the Joint Analysis of Tables. The presented formulation allows us to make inference about the series of studies, since the results presented in this work can be applied to matrices of Hilbert-Schmidt products that are very important in first step of the Statis methodology. The models we consider are based in the spectral decomposition of the mean matrices. These models gave the basis to perform inference for isolated matrices and for structured matrix families. In these families, the matrices, all of the same order, correspond to the treatments of base models. An application to legislative elections held in mainland Portugal is presented. Our results point towards to the existence of a common structure of degree one.

Maryam Dilmaghani
Associate Professor, Saint Mary's University, Canada
&
Margaret Robinson
Dalhousie University, Canada

The Blue of the Rainbow: Sexual Orientation and Hiring Discrimination in Blue-collar Occupations

According to a large interdisciplinary literature, gay males are more likely to be employed in female-dominated jobs, while they are substantially less present in blue-collar occupations than their heterosexual counterparts. Two non-mutually exclusive explanations are often advanced for this pattern. The first explanation is the employees' voluntary self-selection into specific occupations, based on their preferences for job characteristics. The second explanation is hiring discrimination. But, even the employees' voluntary sorting into certain jobs can be rooted in workplace discrimination. Particularly, sexual minorities may refrain from pursuing occupations in which they anticipate unfavorable treatment. Conversely, they may presume a higher level of tolerance in occupations with a greater concentration of sexual minority employees and adjust their vocational choices accordingly. Consequently, sexual minorities may over-invest in education and seek employment in more tolerant white-collar jobs. Additionally, sexual minorities who work in blue-collar jobs may have decided to conceal their sexual orientation to overcome the minority stress associated with their devalued identity in the workplace. If so, their numbers have not been accurately assessed in the surveys used to establish labour market patterns. The present paper assesses the extent of unfavourable treatment towards sexual minorities applying to blue-collar jobs in Canada. To empirically examine the extent of hiring discrimination, the "correspondence audit" is used. In this experiment, job applications from demographically different individuals with identical qualifications are sent in response to job advertisements. The differences in the interview invitation rates by applicant type provide evidence for discrimination. The paper is the first correspondence audit informed by the extant occupational segregation patterns and dedicated to the blue-collar sector. The data collection is underway and by the time of the conference, the results will be available to present.

Patricia Goncalves Pacheco
Researcher, Fluminense Federal University, Brazil
Emmanuel Paiva de Andrade
Professor, Fluminense Federal University, Brazil
Celia Cristina Pecini von Kriiger
Researcher, Fluminense Federal University, Brazil
&
Elaine Martins Campelo
Researcher, Fluminense Federal University, Brazil

Diversity, Equity, and Inclusion: A Case Study of a Brazilian SME

With the advent of globalization, the leadership of Brazilian organizations has intensified more and more its look when it comes to defining the profile of the right professional to fill a job opening. Whether recruiting or hiring new talents, what is at stake is the broadening of diversity from personal, professional or collective competencies of a more plural public, in an attempt to create an atmosphere more favorable to engagement and, naturally, innovation.

Boasting a population of more than 210 million, Brazil is full of contrasts and could make use of this characteristic to face up to the problem of inequity in terms of opportunities and inclusion of minorities that support the pillars of diversity: gender, ageism, people with disability, ethnic groups, and sexual orientation.

Inequality in society becomes apparent within its organizations. In Brazil, where 54% of the population is made up of blacks and 51% of women, the composition of the workforce in its 500 largest companies comprises only 13% of the executive positions held by women and 4.7% by blacks.

In this adverse scenario, the present study is meant to analyze and interpret a national family enterprise of medium size ranked by the Chambers Latin America 2020 as one of the best firms of the Word Intellectual Property Review. The business organization in question implemented successfully practices and affirmative actions with regard to the question of diversity and equality of gender and race.

The result revealed that the acceptance of plurality as well as support and tolerance of cultural multiplicities can favor, even in an unfavorable macro context, an exchange of experiences and the production of diversified knowledge, leading to the emergence of high performance teams in which such values as respect, cooperation, and

sense of belonging stimulate both motivation and engagement towards increasing results.

Carmine Gorga
President, The Somist Institute, USA

Concordian Economics: An Integration of Theory, Policy, and Practice

Keynes said that his ideas were "extremely simple and should be obvious." Concordian economics, fifty years in the making, fulfills that promise by filling the "black box" of modern economics with the process of (1) Production of real wealth, (2) Distribution of economic values of ownership rights over real and monetary wealth, (3) Consumption (expenditure) of financial wealth to acquire real wealth. Concordian economics re-integrates economic theory with economic justice as the Aristotelian guide to economic policy. Finally, Concordian economics highlights four economic rights and responsibilities that, in correspondence with four (modern) factors of production, translate economic justice into practice. Economic rights are universal rights, essential to life, liberty, and the pursuit of happiness. The implementation of Concordian economics will break the impasse between demands of extreme right and extreme left that poison our economic and political life. Concordian economics transforms economics from a linear, rational discipline into a complex, relational, chaotic field of analysis.

Saiyu Gu
Postgraduate Student, Shanghai International Studies University, China
&
Haowen Liu
Postgraduate Student, Shanghai International Studies University, China

Crafting a Confucian Culture in Chinese Corporations: A Case Study of Guangzhou Borche

Corporate culture is an important source of enterprise's soft power, while Confucian culture which contains more than thousands of years of wisdom has unique social value. In China, more and more private enterprises fully excavate and introduce management thought in Confucian culture. However, there are still many shortcomings in the study of how the Confucian culture penetrates through the enterprise culture concretely. This case study, taking Guangzhou Bo Chuang as the research object and collecting cases, speech and textual evidence to form evidence triangle verification. The study shows: On the one hand, the process of cultural infiltration is divided into three stages: cultural identity-strengthening identity-spontaneous behavior. Based on the stages, a cultural penetration model is created. On the other hand, corporate culture evolves with the life cycle of enterprise development and displays on four levels of spirit, institution, behavior, and matter. The results of this study can not only enrich China's local management theory, strengthen the construction mechanism and evolution process of corporate culture construction, but also contribute to the cultural construction of small and medium-sized private enterprises in China.

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On the Informational Efficiency of Decentralized Price Formation

This paper studies the informational efficiency in models of decentralized price formation. First, we show that a search equilibrium, a common model of decentralized price formation, requires an infinitely larger message space, and therefore infinitely less informationally efficient than the competitive equilibrium in a large economy. We propose here a model of price formation through marketmakers. This model of price formation attains the competitive allocation in the limit (as the search equilibrium). The case of monopolistic equilibrium where markets for each commodity are monopolized by a single marketmarkers as they deter the entry of competitors, we show that the equilibrium only re quires, in a quasilinear environment with L goods, a message space with L 1 more dimensions than the competitive process. This appears to be the most informationally efficient form of decentralized price formation process that implements the competitive al location at the limit.

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The Theory of Planned Behavior: An Exploration of the Role of Anticipated Emotions in Green Product Consumption

Drawing on the theory of planned behavior, this study develops and tests a model that incorporates both positive and negative anticipated emotions as an additional predictor of the intention to buy green alongside attitude, subjective norms, and perceived behavioral control. The data were collected from 302 UAE respondents via an online survey. The result from the structural analysis suggests that attitude toward green consumption has the highest impact on the intention to buy green followed by perceived behavioral control, subjective norms and positive anticipated emotions. Surprisingly, negative anticipated emotions did not have any effect on the intention neither the actual buying green behavior. Additionally, a mediating effect of green purchase intention was found between anticipated positive emotions, subjective norms, perceived behavioral control respectively, and buying green products. Overall, the findings of this study contribute to the evidence that emotions play a significant role in consumer decision to buy green products. Marketers should not only rely on cognitive appeal to persuade consumers to shift to green products, but they should also emphasize the positive emotions, such as pride, linked to the consumption of green products.

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Tax Challenges of the Digitalized Economy

The transformative process of digitalization has impacted our economies like few previous developments in history. Information and Communication Technologies (ICTs) and the digitalization process which they have supported have been the subject of economic analysis for many years, however the challenges they pose to economic growth, welfare and stability continue to intensify which has resulted in recent calls for action from people around the world and attempts by policymakers to respond. If one considers issues like rising income inequality, rising wealth inequality and rising populism, the role of digital dynamics cannot be ignored, and one key theme connects these issues: Taxation. The rapid spread of Information and Communication Technologies (ICTs) has seen to a revolution in terms of business models, consumption patterns and financial flows. Key new characteristics of the digital age enable firms to reduce their tax burden. Despite the challenges facing the international tax challenges being recognized very early, little was done. Thus the fiscal termites of globalization and technological progress, as identified by Tanzi in 2000, have continued to undermine national tax systems. Following the transatlantic banking crisis and the Euro crisis, calls grew amongst frustrated voters – facing rising taxes and reduced public spending over many years – for governments to act against multinationals, and in particular tech giants, who were seen as not paying their fair share. The Organisation for Economic Cooperation (OECD), together with the G20, initiated the Base Erosion and Profit Shifting (BEPS) project to coordinate international and multilateral responses to the challenges facing countries. Action 1 of the BEPS project focused on the Digital Economy. Despite early promise, progress in terms of Action 1 has been slow. This has resulted in individual countries implementing unilateral new taxes such as digital sales taxes designed to generate tax revenues until a more fundamental change to the international tax system can be agreed and implemented. However, despite the seemingly obvious detrimental nature of digitalization on tax revenues, little research has focused on the actual, specific effects – with effort instead expended on hypothetical investment decisions of firms to show the negative effect of digital firms. Another branch of the literature has argued that digital firms do not have a negative effect on tax revenues based on actual tax revenues. One reason for this is discord is that, contrary to Tanzi's early

prediction, the negative effects of digitalization are not immediately visible in tax revenue statistics. This paper will examine the effects of ICT on tax revenues in the literature. Moreover, it will reexamine measures such as Gross Domestic Product – commonly used as the denominator for tax revenue statistics – and seek to show that tax revenues are indeed lower than they could be, thus providing support for the actions of multilateral institutions such as the OECD and individual member states in seeking to tackle the challenge of digitalization.

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Cheating, Culture, and Incentives: Who Deserves a Bonus?

The purpose this research is examine the relationship of perceptions of organizational justice on the ranking of candidates for incentive bonuses and the impact of organizational culture on these perceptions.

A questionnaire was developed which asked respondents to rank a set of seven candidates for a sales bonus based on deservingness for the bonus. Descriptions of the candidates included information not only on whether they achieved a pre-established metric for the bonus, but on how they achieved (or failed to achieve) the metric. Hypotheses related compliance with norms of organizational justice, both by candidates and the organization, to candidate rank. The survey was administered to a sample of 204 employees of business organizations at all levels obtained through a survey research firm, as well as a sample of 52 employees of organizations in the Christian publishing industry. Nonparametric statistics were used to analyze the results. A comparison was made between the respondents sourced through the research firm, seen as representing the general population, and those from the Christian-oriented group.

Hypotheses that respondents will seek to punish violators of justice norms, reward compliers, and compensate victims of organizational unfairness were generally supported. More interesting were differences between the groups of respondents from the general population and the group representing Christian-based firms.

This article reveals the impact of organizational culture on the acceptance of incentive systems. The research employed a practitioner survey, rather than more common experimental approach.

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PS — Boolean Functions

In [14], authors presented new results on quaternary cryptographic function and their binary projection, bringing out a new approach of functions used in the security of pseudo-random generators of stream and blocks ciphers. This projection provides a large family of (2m)-variable boolean functions (respectively (2m+1)-variable) with good cryptographic properties. In the present paper, we propose a characterization of this binary projection by disregarding the conditions imposed by the quaternary construction. We show that these (2m)-variable derived boolean functions are PS− and their (2m+1)-variable homologous are semi bent. This characterization can be viewed as a Dillon type construction with a drastic simplification of the intern function and a large choice of suitable support according a particular partition of F22m (respectively of F22m+1).

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Holistic Marketing Approach in Literature Arts

The paper present theoretical and practical aspects of holistic marketing approach in literature arts. Focus of the paper is developing theoretical aspects of holistic marketing approach in literature arts. In empirical research the paper will present results about segmentation of target groups of literature art's events, as well as, their satisfaction with literature arts events and experience about books. The results of empirical research will lead to further theoretical and practical analysis of holistic marketing approach in literature arts. The theoretical improvement of holistic marketing approach in literature arts is important, as new concept of marketing approach. Theoretical aspects of holistic marketing approach in literature arts is based internal marketing, integrated marketing communications, internal communication, relationship marketing and social responsible marketing. The paper present modern ways of social communications, by social media, in order to develop holistic marketing and experience marketing in literature arts. Social media gives opportunities for raising literature art's experiences and get it interactive. Audience can comment literature art's events, books and talk with literature art's authors, what is unique experience. Audience become inspire with books, communications and literature arts events, what lead in develop of new literature art's experiences. It is very important for young generations to improve literature art's experiences, because the biggest impact on global world changes have education and arts.

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The Relationship between the Teaching of Mathematics and the Teaching of Statistics at High School Level in the South African Context

Originally, mathematics was developed to face ordinary problems. Numbers are found in everyday life in comparisons, tables, orders of magnitude, rounding, estimating, prices and other numerical messages. Statistics encompass much of these mathematical concepts and attempts to describe the world around us. The study of Statistics can be fully integrated into the Mathematics curriculum, giving it meaning to everyday life. Statistical activities in the classroom can be directly linked to the learners' personal interests and stimulate their motivation for numerical and quantitative studies. Hence, it is important to develop children's mental images of numbers parallel to their acquisition of counting and calculation skills; skills that mathematics and statistics present. The purpose of this study is to explore the relation between the teaching of mathematics and the teaching of statistics at high school level in the South African Context. Furthermore, the study examines and analyses examples of statistical teaching situations from both a mathematical and a statistical perspective with view to reveal the links between the teaching of mathematics and teaching of statistics. A non-empirical method or conceptual method was followed to achieve the purposes of the study. To this end, a literature review characterised by document analysis was used to answer to the critical aspects of the study. The study reveals the cardinal links between the teaching of mathematics and teaching of statistics. Hence the call to educators to acknowledge the symbiosis to enhance the teaching and promote an awareness of the ways in which statistics is presented and aligned in the South African Mathematics high school curriculum.

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What Luxury for the Silver Generation Market? Seniors' Motivations in Luxury Consumption

In a context marked by an increased competition and an economic crisis that is impacting the purchasing power of consumers, the luxury sector is one of the main sectors that haven't been affected by this crisis. On the contrary, it has even taken advantage of this phenomenon to record sales. With a turnover of 247 billion dollars in 2017, the luxury market is showing positive growth that will continue until 2025 (Bain and company, 2018). Several researchers have confirmed the fact that the global market for luxury brands has grown rapidly over the last two decades (Codignola, 2018; Kapferer and Valette-Florence, 2018; Shimul and Phau, 2018; Shao et al, 2019; Ko et al, 2019; Halwani, 2019). As a result of these developments, there has been a growing concern for researchers in understanding the behaviour of luxury goods' consumers and the management of luxury brands. However, the need for further research that explores other market segments for this area is imminent, especially in the case of seniors. Indeed, there are very few studies that have explored the seniors' consumption for luxury products (Amatulli et al, 2015), while there is a multitude of works on luxury that have focused on consumers of different ages including youth, adolescents. Yet, senior consumers have a different purchasing behavior (Yoon et al, 2005; Serrière, 2006; Amatulli et al, 2015), and they are heterogeneous in terms of physical and psychological changes (Guiot, 2006). This innovative theme constitutes a very interesting path for the future of research and business, as this segment, very often neglected, is growing (Le Serre et al, 2013; Malek et al, 2014; Lesakova, 2016; Lacroix and Jolibert, 2018; Le Serre et al, 2017; Balderas-Cejudo et al, 2019), and deserves special interest due to its strong purchasing power, brand loyalty and free time (Littrell et al, 2004; Amatulli et al, 2015). The seniors' market has become a real business and is experiencing a period of rapid expansion. Some professionals call it the "white gold" market because the current ageing of the population presents an interesting growth opportunity for many industries. In this

research, an exploratory approach has been conducted to identify the motivations of seniors in the consumption of luxury goods in order to provide managers with a better understanding of the motivations of seniors to better satisfy this target group. The results of this qualitative study (1) reveal that intrinsic motivations primarily support the behaviour of seniors and (2) underline a relationship between the purchase of luxury goods and the aspiration to be younger.

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Labor Market Integration of Migrants: Hidden Costs and Benefits

The Eastern enlargement and open borders significantly increased the size of the population in the European Union and also induced a major expansion of the labor market. What is a great step towards a unified Europe is at the same time a challenge for national policy makers. The opening of borders intensifies the pressure to put in place advanced mechanisms of labor market integration since collective bargaining and welfare state institutions might hamper the integration of migrant workers. However, the integration process of migrant workers is multidimensional and involves more than the principle of non-discrimination in the European treaties. Beside others, important determinants for the integrative capability of a system are the labor market effects of migration induced by (i) the welfare state and (ii) the behavior of the market players (trade unions, employers' associations). In our paper, we concentrate on two dimensions of integration. The first dimension is the nondiscrimination in national labor market institutions while the second is the integration into employment, e.g. enforced through migrant quotas in a member state. We further consider two types of union behavior. In the first scenario, the union embraces the interests of native and migrant workers, while, in the second, she exclusively incorporates the interests of the native workers. More precisely, our paper analyzes the two labor market integration strategies under differential union behavior by studying the following research questions: (i) What are the effects of the participation of migrant workers in a two-tier welfare system? (ii) What are the implications of a change in the participation rate of migrants in the workforce, e.g. through the introduction of a governmental quota? While the first question focuses on the impact of migration on the contribution rate to the unemployment system, the second spotlights the effects of governmental intervention. Independent from union preferences, we support previous findings concerning the negative impact of an inflow of migrants on the equilibrium contribution rate. More interestingly, it is shown that the effects of a change in the labor market participation rate of migrants are qualitatively affected by union behavior. In a two-tier welfare system, a larger share of migrants in the workforce decreases (increases) the contribution rate if the union

represents (does not represent) migrant workers, while this phenomenon is not observable in a welfare system with a unique social transfer. We thus detect hidden costs and benefits of labor market integration that are induced by the existence of different levels of benefit claims, respectively the design of the welfare program.

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Is Ogive's Interpretation Easy for College Students?

Faced with growing abundance of visual graphic representation in research articles, newspapers and internet, today's learners are expected not only to build various graphs but also to know how to interpret them. Interpretation of graphs and converting them to meaningful information is considered as an essential part of statistical literacy. Graphs are an excellent way to condense significant amounts of data, but often students that are able to create graphs, perform poorly on graph interpretation. Despite the perceived importance of an ogive-cumulative frequency distribution graph, most of the existing research in interpretation of graphs is related to bar graphs, histograms and box plots. The present study aims to partially fill this void by broadening the understanding of three levels of graph perception in student's interpretation of the cumulative frequency distribution graphs in descriptive statistics. The three levels of graph sense considered in this study are: (a) reading the data-questions that are supposedly answered on the graph, (b) reading between the data-interpolating and finding relationship in the data presented in a graph and (c) reading beyond the data-extrapolating or inferring from the graph in order to solve complicated questions. The main research question that this study focuses on is how students are dealing with interpretation of cumulative frequency distribution graphs for the three levels of graph sense. The research tool was a questionnaire of 8 true-false items: 4 of them examining the (a) level, 2 of them examining the (b) level and 2 of them examining the (c) level of graph sense understanding. All of the items referred to the same ogive-cumulative frequency distribution graph ("less than" type). Two groups of college students participated in this study. The first group included 56 business administration students and the second group included 85 industrial engineering and management students. The questionnaire was a part of the semester exam, so the students studied these topics and their motivation to answer as good as possible was very high. The average percentage of correct answers for all the items for all the participants was 78.2%; 77% for the engineering student and 79.4% for the business administration students. The averages for different levels were 86.7 for level a) items, 74.7 for level b) items and 64.5 for level c) items. The two-way ANOVA revealed significant differences between the mean

percentage of correct answers for the three levels ($F(2, 10) = 31.44$, $p<0.01$). No significant differences between the mean percentages of correct answers between the two groups were found ($F(1, 10) = 0.55$, $p=0.47>0.05$). The most difficult c) level questions required building a frequency distribution table from the ogive in order to calculate the average or to determine the shape of the distribution. Here converting the visual representation into an analytic representation was the first step and converting it into a numeric representation was the second step. Our results show that working within a multi-representational learning environment posed a difficult challenge for learners in linking representations and moving flexibly between them.

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Status Signalling with Luxury and Cultural Goods

As the world shifts towards greater consumerism, there is an increasing tendency for individuals to distinguish themselves from the others through the goods that they purchase – which assert the society of their taste and implicit social status. While the pursuit of social status has been well-explored, most studies in this area tend to focus on luxury consumption, limited research investigated the inclusion of cultural goods (books, etiquette classes, etc.) as another signaling tool. The main objective of the paper, therefore, seeks to understand and provide a theoretical grounding for individuals' choices between the status goods, and its implications for policy formulations and social mobility.

With some adaptations from Moav and Neeman (2008), the paper constructs a signalling game with the inclusion of cultural goods on top of luxury goods. The choice to signal status by purchasing either one of the goods is evaluated under two scenarios: when wage-enhancing benefits of cultural goods are not revealed and when they are. Individuals are found to always prefer luxury goods in the first instance, but upon satisfying certain conditions, there is possibility of those endowed with high cultural and social capital to consume cultural goods over luxury goods under the second scenario. Given equilibrium choices, the paper proposes a case for welfare-maximizing social planner to drive growth for cultural goods consumption. The results also offers an alternative explanation for the shrinking middle class, which is driven by differences in social and cultural capital endowment, while their equilibrium choices in status goods can lead to widening inequality gap that transits across generations, it is also possible for the rich to deteriorate due to insufficient consumption of cultural goods over time.

While the paper attempts to illustrate the choices made under more realistic setting by relaxing a few assumptions, it mainly serves to lay the groundwork for incorporation of cultural goods in the future analysis of social status signalling.

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Comparison of Archimedean Copula Models for Reliability

Here we compare some Archimedean Copulas to see which copula model is better for estimating the actual reliability of a Stress-Strength model when the stress-strength bivariate data follows:

(1) A bivariate exponential distribution
(2) A bivariate normal distribution

The results will be presented during the Conference.

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Analysis of the Results of a Pilot Test for an Online Course of Rational Numbers Designed using Variation Theory and Lesson Study

We designed an online course based on variation theory and lesson study. Variation theory was used in the sense of having multiple changes to one problem. And lesson study was used as a method to design the course in a systematic way. This method has four cyclic phases: Study, plan, teach and reflect. First one: the study, in this phase we identified goals and key components, in this phase we evaluated approximately 400 elementary school teachers and 400 students from two different universities of México. The average results concerning their knowledge about rational numbers was found deficient in both cases, even if some of the evaluations were perfect, they were a few. One of the most important goals of this phase was to identify which one didn't know it was different. So, we went to phase 2, plan, to establish goals and indicators of effectiveness for each lesson of the course. So, we defined the aim of the course, which was to give each participant the knowledge that they don't have about rational numbers. So, we decided to design the course in such a way that each participant has a personalized path of learning, the initial point is his or her own knowledge about the theme, along the course there are diagnostic evaluations that define the path of learning of the participant. Other important result of this phase was that we identified that the context is very important, sometimes in mathematical education we discovered that the context is considered implicit, but this leads to many misconceptions. So, one of the variations was the context, fixing some concept, we varied for example: number of parts, money, areas (in a non – traditional forms and divided in congruent parts or in parts with different form and equivalent areas, etc.), length, weight, volume measures, number line. The phase 3 was to teach. The course is not traditional, neither in its content nor in its format, the course is interactive. The main idea is that the participants think about rational numbers in different ways, the same problem in different contexts. They see videos where there is a brief explanation or a problem (less than 1 minute) and in the same video they answer different questions in

which they become aware of the context, the whole and the meaning of the question in this context. The online course had 150 students in a stage pilot and the results of this stage lead us to the phase 4 of the lesson study method. We analyzed the results of the personalized paths of learning of each one of the 150 students in the first module of the course to contrast if knowledge acquired in the course satisfied with the indicators established by us in the phase 2.

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The Link between International Remittances from Abroad and Households' Ability to Access Capital for Business Development: The Case of Nigeria

Despite the increasing flows of international remittances to Nigeria, its relationship as an alternative source of business capital for households has not been adequately studied. This paper therefore studies the link between international remittances (disaggregated into cash and gift) from abroad on households' ability to access capital for business development compared with domestic sources such as loans, profits and employment income. It also assesses the likelihood of remittances on households' ability to ingress the internet given the role the internet plays in the modern-day business space. Using the Nigeria General Household Survey data 2015/2016 wave 3 sourced from the World Bank, the study employs the probit model and the quantile regression techniques in the analysis. Contrary to expectations, findings show that cash remittances are positive and significant in explaining changes in capital but only effective at the 0.25 and median quantile. At the 0.75 and 0.90 quantiles, remittances are ineffective and negatively related to capital while internal sources of capital finance such as loans and profits were found to be positive and significant. One explanation for this is that, at the higher percentile of capital requirement, remittances receipts at the household level are inadequate and far less than desired capital. The study also finds a positive but insignificant relationship, between remittances and household' ability to access the internet with, rural households being about 0.4 worse off compared to their urban counterparts. This could be attributed to lack of critical ICT infrastructural development in the rural sector worsened by security threats and lack of in-depth understanding of the importance of the internet by rural dwellers. It is therefore recommended that, apart from tackling the security challenges in the Country, there is need for aggressive grassroots education for rural households and training on business ideas that will enable them channel remittances receipt to productive purposes rather than for consumption only.

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New and Efficient Combined Hard Fault and Algebraic Attack on Full Trivium

Hard fault attack is a powerful kind of attack to stream cipher. The major idea is to simplify the stream cipher equations by injecting or creating some faults to reveal the hidden secret key of the encryption machine. In this paper we present a new and efficient combined hard fault and algebraic attack on the Full version of the hardware-oriented synchronous stream cipher Trivium of the European project eSTREAM [1]. This combined hard fault reset based and algebraic attack has a complexity less than O(248) and can be made whenever during the cipher stream generation by finding both the 80-bit secret key and the 80-bit Initial Values. The main idea of this transient fault attack is to stick to a constant a particular register by targeting its reset wire and to make a cryptanalysis in order to recover the secret. The reset fault attack decreases the algebraic complexity of equations and the algebraic attack solves them. This attack is actually better in terms of complexity, than the best known attacks on the full version of Trivium.

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Value Orientations, Emotional Intelligence and International Pedagogical Innovations and Practices

The primary goal of this paper is to portray how the value orientations and priorities can direct us to new pedagogical cores and innovations and leadership. First of all, we will examine how the students' value orientations and priorities become a pertinent factor in conceiving new teaching practices that enhance the amiable learning atmosphere and guides us to new ideas and leadership. Second of all, we will focus on how value orientations and priorities expand our current knowledge and comprehension of the students' learning styles and demands and gravitate teachers and students to the concept of emotional intelligence; this then leads students and teachers to new international and interdisciplinary environment(s) and to new teaching and learning practices. In addition, our aim is to address the students' value orientations and priorities and apply them to steer us to design new learning environment(s) and to the transformational and primal leaderships. Furthermore, our intent is to render how value orientations guide to the emotional intelligence, which then directs to new practices, ideas and innovations. Moreover, we will share specific examples of successful pedagogical innovations that lead to the emotional intelligence and were guided by the students' value orientations and priorities. Throughout this paper we will remit the following vital question: how do we link the value orientations together with the emotional intelligence and the transformational and primal leaderships?

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Motivation for Craft Beer Consumption – A Means-End Approach

In recent years, sales of craft beer have increased substantially. Despite the considerable growth, corresponding motives for consumption have not yet been researched more closely. This paper examines Swiss consumers' motives and values underlying the consumption of craft beer. An empirical analysis was conducted based on the means-end chain approach. According to the means-end theory consumers link product attributes to consequences and to values. The perceived links between them determine the selection of attributes when making purchases. The data collection was based on a qualitative survey using the laddering method, which explicitly addresses the connections between concrete product attributes and higher order cognitive categories motivating behavior. The analysis of the laddering data showed that two predominant motives exist for the consumption of craft beer, both of which are individually oriented. First a desire for happiness by being cheerful and appreciating the good taste, and on the other a desire for an exciting life by being broad-minded and consuming something special. The results confirm the findings of other studies. Craft beer is not primarily consumed because of its functional benefits, but because of its meaning and identification with the product.

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The Effect of Product Design Novelty on Purchase Intention: The Mediating Role of Cognitive and Affective Attitudes

Product design, perceived by consumers at first glance, is of paramount importance for corporations to achieve their business success. From technology differentiation to intangible attributes differentiation, manifold design strategies are ubiquitous for modern enterprises. And of all intangible product designs, novelty must take pride of place. Some researchers understand the key role played by novelty in consumer's intention to purchase. However, a further elaboration concerning attitude from a two-dimensional perspective does not come to light, novelty-induced purchase intention viewed from consumer's psychological angle still need to be enriched. Specifically, based on stimulus-organism-response model theory, this research explores the mechanism for the effect of product design novelty on purchase intention with a total of 442 data from Chinese consumers. Attitude is considered as a mediate variable divided into cognitive and affective in a bipartite structure as well. As a consequence, a "product design novelty – consumer attitude response – purchase intention" model is proposed. Then in the process of empirical research, creative products from Palace Museum official Taobao store, characterized by their novel designs, are taken as an example, questionnaire and data analysis function as tools to examine the conceptual model. According to the results, mediated by cognitive and affective attitudes, product design novelty has a significant impact on purchase intention, and it also directly elicits a positive response to consumer's willingness to buy. Finally, the study culminates in implications for both scholars and entrepreneurs.

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Are the Organizations Ranked by the Great Place to Work a Great Place for All in Brazil? An Analysis of what is Being Done toward the Brazilian LGBTQI+ Minority

Affirmative actions as well as the inclusion of people that have a different sex orientation have been supported by social movements, academia and the media, leading to the creation and strengthening of public policies in favor of lesbian, gay, bi and trans-sexual people, queers, and others (LGBTQI+) This movement promotes a revision of values, ideas, and visions, implying in intensifying the crusade against homophobia and heteronormativity, which results not only in the inclusion of these minorities but also in the guarantee of human rights and consolidation of democracy and social jus-tice. Recent studies (IRIGARAY, 2011; FURLLERTON, 2013; CAPRONI NETO, 2014) dis-closed that LGBTQI+people, even those whose intellectual capital is recognized, are exposed to various barriers that make it hard for them to enter the job market through discriminatory practices, whether explicit or disguised. The possibility of admitting to being a homosexual in organizations that adopt affirmative actions and value diversity is a key factor for the worker to face more bravely the challenge of assuming their own identity and declaring themselves before his peers, which makes they feel more confident and, consequently, more productive (COLGAN, 2007; IRIGARAY, 2011). The current research has a qualitative nature and looks into what has been done in terms of inclusion, equity, and guarantee of rights of LGBTQI+ minorities in Brazilian organizations ranked as best companies to work by Great Place to Work (GPTW, 2019). The annual sustainability reports and the code of conduct and ethics reports released in 2019 and

accessed in October on the sites of the 30 leading companies were analyzed in context. The result demonstrated that only 23% of the organizations put into practice some kind of affirmative policy for the LGBTI+ group. Furthermore it is worth mentioning the poor result obtained by medium-sized Brazilian companies – only 10% of those listed adopt inclusion practices of this population – making it clear that the idea of promoting protagonism and inclusion of people with different sexual orientation is not yet seen as a relevant competitive value. The conclusion is that in Brazil, the LGBTI+ topic must still overcome prejudices, lift barriers, gain space, and integrate corporate agendas in a more proactive way in view of the evidence that a great place to work does not automatically ensure that the organization is a great place to work for everyone.

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Linear Mixed Models and Best Linear Unbiased Estimators for Estimable Vectors

The use of linear mixed models is suitable for correlated data due to, for example, repeated measurements. When the variance-covariance matrix of a linear mixed model is a linear combination of known pairwise orthogonal projection matrices that add up to the identity matrix, this mixed model belongs to the particular class of models with orthogonal block structure (OBS). OBS allow optimal estimation for variance components of blocks and contrasts of treatments. Requiring commutativity between the orthogonal projection matrix, on the space spanned by the mean vector, and the orthogonal projection matrices, involved in the expression of the variance-covariance matrix, we achieve a more restricted class of OBS, called COBS (models with commutative orthogonal block structure). In this work we study this commutativity condition of COBS, which is a necessary and sufficient condition for the least square estimators, LSE, to be best linear unbiased estimators, BLUE, whatever the variance components.

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Foreign Exchange Hedging of Bonds in Foreign Currency

In the literature, the risk reducing impact of currency hedging, measured as a reduction in the volatility of market values, is well documented, see e.g. Glen and Jorion (1993) or Campbell, Serfaty-De Medeiros and Viceria (2010). The instruments to hedge against currency fluctuations are predominantly short-term, regardless of the asset class to which the hedge is applied. If the target function of an investor is the hedging of cash flows as opposed to reducing variation in the market values, however, the application of short-term hedging instruments induces serious imprecisions, most strikingly observable in the context of fixed income assets. These inaccuracies are all related to the changing market conditions over the course of one rolling period.

First, this paper draws up a list of four effects which arise when applying short-term foreign exchange hedging instruments to bonds in foreign currency. The list encompasses an interest rate differential effect, a cross-currency basis effect, a cash-flow relevant rolling effect and a delta market value effect. We propose long-term cross-currency (XCCY) swaps as a possibility to eliminate these effects.

Second, on the example of a US Treasury portfolio, this paper empirically demonstrates the power of XCCY swaps as a hedging derivative. The application of long-term XCCY swaps as opposed to conventional short-term instruments results in an increased hedge effectiveness, measured as a reduction in the absolute portfolio variation and the relative variation versus a liability portfolio.

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Modelling with Evolution Cocycles

In recent years, concepts of the control theory, as stability, controllability or observability, were defined and developed, based on the fact that the dynamical systems, which describe processes from engineering, physics or economics, are extremely complex and the identification of the proper mathematical models is difficult. The possibility of reducing the non-autonomous case in the study of evolutionary families or skew-product flows to the autonomous case of evolution semigroups on various Banach function spaces can be considered an important way towards applications issued from the real world. It is of great interest to study the solutions of differential equations by means of evolution operators or skew-product semiflows because techniques from the domain of non-autonomous equations with unbounded coefficients in infinite dimensions were extended for the study of the previously mentioned categories. A classic subject in the domain of evolution equations and in the stability theory, frequently approached, is the theory of skew-product semiflows, which arises naturally when the linearization along an invariant manifold of a dynamical system generated by a nonlinear differential equation is considered. This paper presents the notion of skew-evolution semiflows, defined by means of evolution semiflows and evolution cocycles, as a natural generalization of the notion of skew-product semiflows. The major difference consists in the fact that a skew-evolution semiflow depends on three variables t, t0 and x, while the classic concept of cocycle depends only on t and x, thus justifying a further study of asymptotic behaviors for skew-evolution semiflows in a more general case, the non-uniform setting (relative to the third variable t0). Other remarkable particular cases are the evolution operators and semigroups of linear operators. Several examples are given, in order to emphasize the importance of the new concepts, as well as connections with the classic notions of operators commonly encountered in the theory of evolution evolutions.

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Efficiency of the Unorganised Sector's Supply Chain

The purpose of this paper is to study about the adaptability of supply chain of the unorganised sector to volatility in the market. In addition, to understand the efficiency of the unorganised sector's supply chain models, ability to thrive in the face of global competition through foreign direct investments by large MNC's, global economic slowdown, government policy changes and depleting resources.

A review of available literature were done in order to understand the effectiveness of the unorganised sector's supply chain. It is a descriptive study, which falls under the conclusive research pattern.

The outcome is to prove that the strength of the unorganised sector will lead to a stable and strong economy for a developing nation.

This study to the best of author's knowledge had not been undertaken earlier in India especially in the area of unorganised sector. There are not much research works pertaining to this sector. Though it has contributed so much for the economy, it is considered to be a neglected sector.

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Participation Indonesian Female Peacekeeper in UNIFIL Year 2015-2017: Implication to Defense Diplomacy

Female in peacekeeping mission is an essential need to support inclusive and sustainable peace. It encouraged United Nations for having concern on this issue to increase female participation and implement gender based mission through Security Council Resolution No. 1325 year 2000. In order to support the resolution, Indonesia gave its contribution by sending female peacekeeper to various missions, including United Nations Interim Forces in Lebanon (UNIFIL). This research aims to analyze participation of Indonesian female peacekeeper in UNIFIL year 2015-2017 and its impact to Indonesia's defense diplomacy. It used qualitative research method and descriptive analytic, with interview and literature study as data collection technique. The result of research shows that participation of Indonesian female peacekeeper in UNIFIL also experienced some obstacles and challenges related to preparation such as individual capacity, limited quantity of female military officers, permit from officer and/or husband, culture, possibility of losing previous job position, and the absent of gender composition policy. Furthermore, the job positions are dominated in Contingent troops than military staff. Finally, it impacted to Indonesia defense diplomacy to increase Confidence Building Measures and help personnel capacity building in term of professionalism through the provided trainings.

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The "Missing Middle" Problem and Small Firm Fragility: The Case of Food Processing in India

This paper investigates issue of firm fragility through the lens of density dependence/industrial ecology/organizational ecology, which is reflected in a skewed distribution of firm size distribution in the industry. The literature on resource misallocation has mostly examined reasons for a "missing middle", whereas we are more interested in the effect of this distortion of firm size on the survival possibilities of firms. To this extent, we first provide a theory about the role that middle-sized firms play in the organizational ecology. We argue that firm specific role in an industry can be determined strictly with firm size classification, which signifies that each firm size is mapped to manufacturing or/and marketing activity, allowing a division of specialization for survival. Essentially, our claim is that small firms business strategy focuses on upstream manufacturing activities, medium sized firms targets marketing processed products that is mostly sourced through industrial sales/ sub-contracting/ co-processing from small-sized firms. On the other hand, large firms are fully integrated into the supply chain and have the ability to produce their own manufactured items as well as market it themselves. Trade-offs are made between manufacturing and marketing when the size of the firm is small and medium, and this trade-off extinguishes when the firm becomes large. In the absence of an appreciable middle-size of firms, small firms loose the cheaper channel of industrial sales and either market their own produce by incurring additional costs of marketing or sell in the cheap wholesale segments with almost no profit margins. As this is most common in food processing industries (with all kinds of sales: wholesale, industrial sales and branded retail), we work out the implications of our theory for this industry for registered manufacturing in India from 2008-09 to 2016-17. We find evidence of firm fragility in the manner that our theory predicts. Not only do we find evidence of the missing middle (more markedly for grain milling than dairy units in India) but using the non-parametric two stage network Data Envelopment Analysis (NDEA): we also find that marketing inefficiency is the core driver of inefficiency for firms rather

than technical inefficiency, with high variability in marketing efficiency scores and less variability in technical efficiency scores across the firms in each year. Moreover, we also find mixed evidence for the trade-offs between production and marketing activities.

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A Development of a Conceptual Framework to Study Customer Buying Behaviour during a Pandemic Crisis

Given the dramatic COVID-19 pandemic-led changes that continue to take place around the world, societies are faced with challenging buying decisions. Due to the outbreak of COVID-19 most countries initiated lockdown measures, in order to curb the spread of the virus. This announcement of lockdown measures amplified aggressive buying behaviours from consumers towards essential products such as, food and sanitary products. This led to bulk buying behaviours which eventually resulted in shortages of these essential products. The emergence of such behaviour in both developed and developing economies is unprecedented and warrants in-depth investigation. However, there is paucity of studies especially in marketing literature to explain the drivers for this behaviour. Therefore, the purpose of this study is to develop a conceptual framework to explain panic buying behaviour in a pandemic crisis. Specifically, the study aims to develop a theoretical underpinning to explain the drivers for panic buying behaviour, and the motivation for the intentions for panic buying.

The study provides a synthesis of the extant literature on the Theory of Planned Behaviour and Theory of Panic Behaviour to further the understanding of panic buying behaviours during the COVID-19 pandemic through a conceptual framework. This is because the Theory of Panic Behaviour has been used in psychology literature to explain the characteristics of panic behaviour but does not identify the motivators of panic buying behaviour. Consequently, a conceptual framework is provided that extends the understanding of panic buying behaviour during the COVID-19 pandemic by examining the key characteristics of panic behaviour from the Theory of Panic Behaviour. The framework hypothesises that the antecedent for panic buying behaviour are based on the three determinants (attitude, subjective norm, perceived behavioural control) of the Theory of Planned Behaviour. Consequently, panic buying behaviour can be triggered from individualist (attitude) and collectivist factors (subjective norms). However, we hypothesise that perceived

behavioural control will play a minimal role in determining the antecedent for panic buying behaviour while attitude and subjective norms will play a major role.

This study has developed a novel conceptual framework by using the determinants of Theory of Planned Behaviour to identify the motivational drivers of pandemic buying situations. The results of this study can be tested using quantitative or qualitative data to validate the framework. In addition, researchers and practitioners in the field of marketing science can adopt this framework to provide further insight into the concept of consumer behaviour during pandemic situations. Having presented a cogent conceptual framework for understanding panic buying behaviour, the next step identified is to develop a valid and reliable scale with which to measure panic buying behaviour. This study is the first to explore panic buying behaviour in marketing literature and expanding on the Theory of Planned Behaviour through the Theory of Panic Behaviour.

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Improving Manufacturing Data Quality with Data Fusion and Advanced Algorithms for Improved Total Data Quality Management (TQDM)

The advent of artificial intelligence, data mining, robotics, etc., has become a standard for successful business endeavours and is known as the 'Fourth Industrial Revolution' or 'Industry 4.0'. Data quality is a key issue in the sustainable biomaterials industry. Untreated data from multiple databases are generally not in the right structure to perform advanced analytics. Some inherent problems of data from sensors that are stored in data warehouses at millisecond intervals include missing values, duplicate records, sensor failure data (data out of feasible range), outliers, etc. This data science focused research was to create a continuous real-time software algorithm for data cleaning that automatically aligns, fuses, and assesses data quality for missing fields and potential outliers. The program automatically reduces the variable size, imputes missing values, and predicts the destructive test data for every record in a database. The impact of outliers and missing data were tested on a dataset with 201 variations of outlier percentages and missing data percentages ranging from 0-50%. The software program was also validated on a real dataset from the wood composites industry. Overall, the data cleaning software program significantly decreased the NRMSEP ranging from 64% to 12% in accurately predicting quality control variables.

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Identifying Sustainability Efforts in Swiss Start-up Webpages using Machine Learning and Lexicon Based Approaches

Today's companies operate increasingly transparently, primarily because of the Internet. Firms are expected to fulfill their social responsibility and to engage socially, ecologically and economically. Large and established companies integrate Customer Social Responsibility (CSR) into their strategies and into the production process. The question arises as to whether start-ups that may be seeking investor capital should include CSR in their strategies. Sustainability represents initial costs, but in the long- term can make the company and its products more attractive to customers and investors. This study addresses the question of whether Swiss start-ups reports CSR practices on their websites and whether their reports can be detected automatically using text mining methods. The analysis was conducted as follows: Firstly, data was downloaded from the web pages of the start-up. The start-up was identified via a link from a ranking page and then its website content was copied. In addition, a data set was created with manually pre-classified web pages. The data was later used to set up and train the models. Regarding the CSR portion, A CSR dictionary by Pencle and Malaescu (2016) was used to identify CSRrelevant terms in the texts. Only the relevant terms were used in the analysis (non-relevant information was discarded). A fundamental assumption is that the greater the frequency of CSRrelevant terms in the text, the greater the CSR relevance of the text. The data collected were used to create documents which then were analyzed. This allowed the development of four models. One of the models was able to determine a threshold to classify the documents. The other three models used the learning algorithms Decision Tree, k-nearest-Neighbor and Naives Bayes. The best model (threshold) classifies 6% of the web pages as CSR relevant. This result confirms that text mining can be used to assess the sustainability strategy of Swiss start-ups. However, further research should be done to increase the accuracy of the classification models.

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A Gravity Approach to Analysing the Effects of Corruption on Foreign Direct Investment Flows within OECD Economies

In this paper the effect of corruption on foreign direct investment flows is analysed. The literature is divided regarding the effects of corruption. One hypothesis argues that corruption greases the wheels of government and therefore is beneficial while the other hypothesis argues that it sands the wheels of government leading to suboptimal results for an economy. For the empirical analysis a dataset consisting of bilateral FDI data from the OECD for the years 1996–2017 and the Control of Corruption measure from the World Governance Indicators of the World Bank is compiled. This paper then employs a PPML gravity model with dyadic and time-fixed effects to analyse the data. Early findings support the sand the wheels hypothesis meaning that corruption might have a negative effect on FDI inflows within OECD economies.

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Does Contract-Based Governance Lead to or Curtail Opportunism?

The relationship between contract completeness and partner opportunism is widely discussed in interfirm governance literature. However, consensus is lacking regarding whether contract completeness increases ex post opportunism, or such opportunism can be curtailed by contractual or social governance. Some state that a more detailed contract can provide safeguarding and coordinating functions, thereby preventing partner opportunism. Others argue that a complete contract signals a focal firm's distrust towards its partner, and hence, increases its partner's resentment or even opportunism. We believe such an inconclusive state is due to insufficient demarcation between different forms of opportunism, and a lack of temporal consideration of contract-based governance. In this study, we argue that ex ante contract completeness reduces ex post strong form opportunism while increasing weak form opportunism. Moreover, when opportunism occurs, we suggest that contractual punishment alleviates the negative impact of strong form opportunism on cooperation performance but worsens that of weak form opportunism, which is manageable through social punishment. Data collected from 227 firms confirm most of the hypotheses. This study makes three contributions. First, we distinguish between contract completeness and contractual punishment, and examine their roles in causing (or preventing) and alleviating (or worsening) opportunism at different time of an ongoing relationship, respectively. This differential treatment of contract completeness vs. contractual punishment advances our knowledge about contract-based governance. Second, by differentiating strong vs. weak form opportunism, our results reveal that contract completeness reduces strong form opportunism, yet, increases weak form opportunism, partly reconciling the mixed findings in prior research. Third, we specify what form of opportunism can be controlled by contractual or social punishment during the process of interfirm cooperation,

suggesting a match between forms of opportunism and types of punishment.

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A Better Family Member or a Better Female Leader? The Effects of Work-Family Enrichment and Female Leadership Effectiveness in the Mediating Role of Positive Mood

Based on conservation of resource theory and emotion broaden and build theory, this study examines the relationship between work-family enrichment (work-to-family enrichment and family-to-work enrichment) and female leadership effectiveness as well as the moderating effect of family support and work support. Taking a sample of 248 employees and 65 female leaders in a Chinese company, we investigated the relationship between work-family enrichment, positive mood and leadership effectiveness. The results of the study show that work-family enrichment is related to female leadership effectiveness; positive mood mediates work-family enrichment and female leadership effectiveness. Furthermore, work support moderates the relationship between work-to-family enrichment and positive mood, and family support moderates the relationship between family-to-work enrichment and positive mood. Therefore, companies and family should give more support to enhance female leadership and female leaders should positively balance work and family performance.