

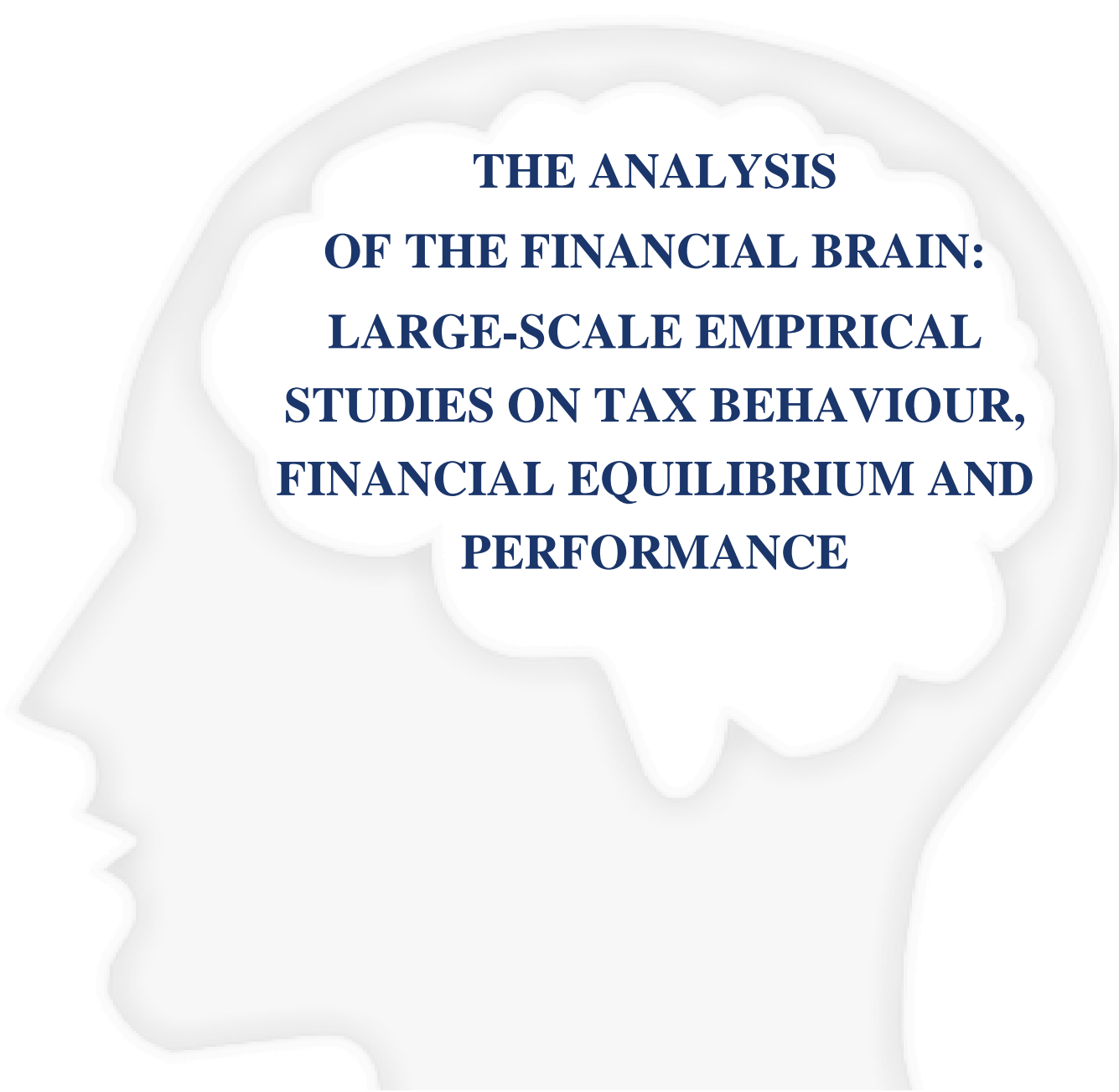


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TRADITIO ET EXCELLENTIA



Facultatea de Științe Economice și Gestiunea Afacerilor

# HABILITATION THESIS



## THE ANALYSIS OF THE FINANCIAL BRAIN: LARGE-SCALE EMPIRICAL STUDIES ON TAX BEHAVIOUR, FINANCIAL EQUILIBRIUM AND PERFORMANCE

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Cluj-Napoca  
2022

## SUMMARY OF THE HABILITATION THESIS

The present habilitation thesis, titled *The Analysis of the Financial Brain: Large-Scale Empirical Studies on Tax Behaviour, Financial Equilibrium and Performance*, summarizes the candidate's scientific contributions to the field of Finance since her PhD defence. The thesis is structured as follows:

- A synopsis of the candidate's scientific achievements;
- Part one, encompassing large-scale empirical studies developed and reported by the candidate along the years;
- Part two, pinpointing the candidate's future research and teaching goals, which are also set under the aegis of large-scale investigations and projects.

## SYNOPSIS OF THE CANDIDATE'S SCIENTIFIC ACHIEVEMENTS

As preamble, the habilitation thesis features a synopsis of the candidate's scientific achievements concerning relevant aspects such as: 1) education and consistent interdisciplinary training; 2) research experience and research directions; 3) national and international teaching experience; 4) research and teaching awards, medals and distinctions.

In terms of education, Larissa Bătrâncea has a solid formal background in Economics and Mathematics. She obtained a BA and an MA in Economics, both as class valedictorian (GPA 10/10), a BSc and an MSc in Mathematics and a PhD in Economics, all granted by the Babeş-Bolyai University, Cluj-Napoca (Romania). Moreover, the candidate completed a postdoctoral programme in Economics coordinated by the Romanian Academy, Bucharest (Romania) and she ranked 1<sup>st</sup> (GPA 9.99/10) among the 134 researchers from major universities and research institutes across Romania. Recently, she graduated a full-time postgraduate MSc programme in Cognitive Neuroscience (with merit) at the University of York, York (United Kingdom).

Larissa Bătrâncea has been constantly interested in the latest advances in interdisciplinary scientific research. Consequently, she has attended various summer schools, workshops, crash courses and has conducted studies during research visits on the following topics: Tax Behaviour (University of Vienna), Behavioural Economics (National Research University Higher School of Economics Moscow; Swedish University of Agricultural Sciences in Uppsala), Experimental Economics (Colorado State University; Humboldt University of Berlin; Pompeu Fabra University; University of Economics Bratislava; University of Brescia), Economic Psychology (University of Vienna), Neuroeconomics (Heidelberg University; University of Amsterdam), Neuroanatomy (University of York), Eye Tracking (University of Copenhagen), z-Tree programming (National Research University Higher School of Economics Moscow; University of Bologna), Statistics (University of York). These research experiences have acted as veritable building blocks for the candidate's research directions.

Throughout the years, the candidate has acquired a considerable research experience in using methods of analysing the financial brain from *an outward* and *an inward* perspective, thus resulting three research directions. The first research direction, stemming from the *outward* perspective of analysing the financial brain, comprises studies on *Tax Behaviour*. Hence, by using primary data collected via laboratory experiments and questionnaires, these studies focus on the analysis of perceptions, attitudes, beliefs, tax literacy level, (non)compliance behaviour of individual taxpayers, corporate taxpayers and self-employed taxpayers. The second research direction, stemming from the *outward* perspective of analysing the financial brain, comprises studies on *Financial Analysis*. Hence, by using secondary data retrieved from company financials and comprehensive annual reports as well as from databases compiled and commissioned by international bodies, these studies focus on the analysis of short- and long-term financial equilibrium and performance of companies from different industries. The third research direction, emanating from the *inward* perspective of analysing the financial brain, focuses on using Cognitive Neuroscience methods of scrutinising the neural and physiological mechanisms that underpin financial decisions.

As a result of an intense research activity, the publication record of Larissa Bătrâncea comprises scientific articles, books and book chapters, for which she acted as author, editor, book reviewer and translator.

Until now, the candidate has published 129 scientific articles, among which 35 articles are featured in journals indexed in *Web of Science Core Collection* – Social Sciences Citation Index (SSCI), Science Citation Index Expanded (SCIE) or Emerging Sources Citation Index (ESCI), after her PhD thesis defence. Out of these 35 articles:

- 29 articles are published in journals featured in *Web of Science Core Collection* – Social Sciences Citation Index (SSCI) or Science Citation Index Expanded (SCIE), among which:
  - all 29 articles appear in journals with an Absolute Influence Score (AIS) > 0.15;
  - 9 articles appear in journals indexed in *Web of Science Core Collection*, **Core Economics**, while 20 articles appear in journals indexed in *Web of Science Core Collection*, **Social Science & Science**;
  - 13 articles are published in journals that belong to the first quartile (Q1), 8 articles to the second quartile (Q2), 7 articles to the third quartile (Q3) and 1 article to the fourth quartile (Q4), according to the 2022 official publication rankings based on AIS or RIF issued by the Romanian Ministry of Education;
- 6 articles are published in journals featured in *Web of Science Core Collection* – Emerging Sources Citation Index (ESCI).

The candidate has published 39 books and book chapters in English, Portuguese and Romanian, out of which 28 after the PhD thesis defence. The topics of these publications include: Financial Analysis, Tax Behaviour, Experimental Economics, Intellectual Capital, Company Valuation, Financial Audit, Game Theory, Business Ethics.

In regards to the impact, the candidate's publication record has generated 344 citations in *Web of Science Core Collection* (h-index 13), 1,513 citations in Google Scholar (h-index 20) and 388

citations in Scopus (h-index 11). The *Web of Science Core Collection* citations cover various categories: Economics; Business, Finance; Business; Management; Psychology; Mathematics; Interdisciplinary Social Sciences; Multidisciplinary Sciences; Political Science; Political Administration; Computer Science, Artificial Intelligence; Computer Science, Theory & Methods; Engineering, Industrial; Energy & Fuels; Environmental Sciences; Law. Among all her publications, three articles are singled out as highly cited by the journals in which they appeared. The study Batrancea et al. (2019) published in the *Journal of Economic Psychology* is listed as the most cited article of this journal since 2019 and among its most popular manuscripts. The study Batrancea (2021a) published in *Mathematics* is listed among the most cited articles in the field of Mathematics based on the publication year. According to *Web of Science Core Collection* citation data, the study Batrancea, Rus, Masca and Morar (2021) published in *Energies* has a number of citations that is “beyond the average citations of all publications in the same year”.

In terms of research grants, Larissa Bătrâncea has acted as Principal Investigator or member in 37 international and national research grants, out of which 36 were obtained after the PhD defence. These grants have been financed by the: World Bank; European Union; Brazilian Council for Scientific and Technological Development – CNPq, Brasília (Brazil); Portuguese Council for Scientific and Technological Development, Lisbon (Portugal); Mackenzie Presbyterian University, São Paulo (Brazil); Romanian National Council for Scientific Research in Academic Level (CNCSIS), Babeş-Bolyai University.

The candidate has a rich experience in coordinating international teams of researchers originating from a variety of economic, social, political and cultural backgrounds. Overall, along the years Larissa Bătrâncea has collaborated on multiple projects with academics and professionals affiliated with 123 universities, institutes and organisations, as follows: *Europe* (e.g., Tilburg University, University of Vienna, London School of Economics and Political Science, Nottingham University, University of Leeds, University of Cologne, University of Trento), *North America* (e.g., Princeton University, University of Michigan, Texas A&M University), *South America* (e.g., Mackenzie Presbyterian University, Universidad de las Américas Puebla, Universidad Nacional de Colombia – Sede Medellín), *Africa* (e.g., American University in Cairo, University of Cape Town, University of Pretoria), *Asia* (e.g., Bar-Ilan University, Dongguk University – Seoul, Kochi University of Technology), *Australia and Oceania* (e.g., Queensland University of Technology, Victoria University of Wellington). At the same time, the candidate has fostered collaborations with researchers from five prestigious British universities belonging to the Russel Group: London School of Economics and Political Science, University of Exeter, University of Leeds, University of Nottingham, University of York.

Among these projects, *large-scale studies* involved researchers affiliated with a total of 101 universities, institutes and organisations worldwide. From the perspective of this habilitation thesis, *large-scale studies* are considered the research endeavours defined along several coordinates: 1) they comprise large samples (i.e., individual and corporate taxpayers; academics; business professionals; undergraduates, graduates and postgraduates), ranging from nearly seven hundred

observations to almost 15,000 observations; 2) observations are drawn from a multitude of countries (e.g., 11, 44) around the world, in the case of *primary data*, and from three countries to 193 countries and territories, in the case of *secondary data*; 3) regarding the period of analysis, these large-scale studies are both cross-sectional and longitudinal, the latter spanning several decades; 4) studies entail the coordination of international research teams and some teams included tens of renowned academics from top worldwide universities, established professionals and early-career researchers, many of them having contributed substantially to the fields of Finance and Economics.

Some of the most relevant *large-scale* studies are the following:

- The largest worldwide empirical study in the Tax Behaviour area testing the slippery slope framework, run in 44 countries across 5 continents and published in the *Journal of Economic Psychology* in 2019 (candidate listed as first and corresponding author);
- The largest worldwide empirical study on self-employed taxpayers, using the slippery slope framework and business owners from 11 countries across 4 continents, published in *Financial Innovation* in 2022 (candidate listed as first and corresponding author);
- A research study in the Tax Behaviour area conducted on more than 1,000 self-employed taxpayers and students and published in the *Journal of Economic Behavior & Organization* in 2022 (candidate listed as first author);
- A co-edited book titled “Behavioural Public Finance: Individuals, Society, and the State” (together with M. Erdoğan and S. Çevik), published by *Routledge* in 2021 and gathering 48 high-profile international contributors, as authors and endorsers (candidate listed as second editor).

While coordinating large-scale studies, Larissa Bătrâncea has gained expertise in preparing the official documentation needed to obtain ethical clearance for organising scientific research investigations with human participants and collecting primary data in a cross-cultural framework. In some countries from her cross-cultural studies (i.e., Australia, Brazil, Canada, Egypt, Ireland, Pakistan, South Africa, UK, UAE, USA), the candidate together with the respective co-authors had to apply and obtain clearance from the universities’ Ethics Committees for the purpose of starting the data collection process. In addition, for collecting data at the American University of Sharjah (UAE), the candidate had to pass the National Institutes of Health Office of Extramural Research (NIH) exam requested by the university’s Research Ethics Committee. The candidate was also involved in the process of obtaining ethical clearance from the YNiC Research Ethics Committee, University of York, York (UK), for running a Cognitive Neuroscience experimental study on human participants.

The candidate serves as academic editor for PLOS ONE, as guest editor for the *Mathematics* and *Sustainability* outlets and IJOPEC publication. She also serves as a reviewer for 45 top academic publications, including: *Journal of Economic Psychology*, *Journal of Economic Behavior & Organization*, *Financial Innovation*, *American Political Science Review*, *PLOS ONE*, *Frontiers in Psychology*, *Journal of International Development*, *BMC Public Health*, *Social Indicators Research*, *Journal of the Knowledge Economy*.

In addition, the candidate has been keynote speaker, invited speaker, conference delegate, chair or convenor for more than 100 scientific events, ranging from international conferences, congresses, book launch events, workshops, webinars, summer schools to research seminars, panels, crash courses and round table talks. As a result, she has delivered onsite or online presentations in campuses from various locations around the world (e.g., Barcelona, Brescia, Brno, Bucharest, Cluj-Napoca, Copenhagen, Fort Collins, Granada, Istanbul, Lahore, Marseilles, Moscow, Puebla, São Paulo, Vienna, Uppsala), using English, French, Italian, Portuguese and Spanish as working languages.

Larissa Bătrâncea has an extensive teaching experience at national and international level acquired as Visiting Professor, Invited Lecturer, trainer and organizer of scientific events for students. She was invited by different universities from North America, South America and Europe to be Visiting Professor (outside the Erasmus framework). She has been Visiting Professor at Universidad de las Américas Puebla, Department of Banking and Investments, Puebla (Mexico), in the period 2021–2022. Additionally, she was Visiting Professor at Mackenzie Presbyterian University, São Paulo (Brazil), in 2015 and 2017 and at the University of Brescia, Brescia (Italy), in the period 2008–2011. The candidate was also Invited Lecturer at various summer schools organized for Romanian and international students and professionals by University of Brescia, West University of Timișoara, Babeș-Bolyai University Centre for International Cooperation, having English, Romanian and Italian as working languages.

In order to actively involve undergraduates, graduates and postgraduates in the academic life, to increase their financial literacy and to foster entrepreneurship skills for current and future business people, Larissa Bătrâncea has initiated and coordinated more than 60 projects and scientific events spanning from international and national conferences, workshops, webinars, book launch events, national student competitions, crash courses, internships, student clubs, interviews, roundtable talks and support projects for students' access to scientific materials and coursebooks. Nationally and internationally renowned academics, researchers, business owners and professionals were the keynote speakers who attended these events.

The candidate conducted in the first part of 2022 a series of five online interviews with high-profile international researchers and professionals in the economic and business areas. These interviews were addressed to students interested in acquiring entrepreneurial and Financial Analysis skills in order to successfully run businesses within the global market. The special guests shared insights from their extensive experience on financial skills and other business skills necessary for future entrepreneurs. The series of interviews included the following guests:

- **VITO TANZI**, Honorary President of the International Institute of Public Finance, Munich (Germany);
- **JAMES ALM**, Professor Emeritus, Tulane University, New Orleans (USA), President of the US National Tax Association, Washington, DC (USA);
- **MORRIS ALTMAN**, Dean & Chair Professor of Behavioural and Institutional Economics & Co-Operatives, University of Dundee, School of Business, Dundee (United Kingdom);



- **SCOTT MOELLER**, Professor in the Practice of Finance, City University of London, Bayes Business School, London, United Kingdom, former long-term executive at Morgan Stanley (Germany, Japan, USA), Deutsche Bank and Booz Allen & Hamilton Management Consultants;

- **DANIEL CORNEL POP**, Chief Executive Officer at Guinea Alumina Corporation, Conakry (Guinea), having prior extensive experience with major companies in the mining industry across the globe such as Rio Tinto, BHP, London Mining, African Minerals and being a member of the Institution of Engineers Australia, a renowned organization of engineering professionals at international level.

All in all, research and teaching activities have brought the candidate a total of 40 awards, medals and distinctions from the: Toronto International Society of Innovation & Advanced Skills (TISIAS), International Federation of Inventors' Association (IFIA), Organising Committee of the International Conference on Research in Business, Management and Economics (ICRBME), Romanian Ministry of Education, Romanian Departments of Economics Association (AFER), Romanian Alliance of Students Associations (ANOSR), Babeş-Bolyai University and Babeş-Bolyai Student Council. Of the total number of awards and distinctions, 28 were received after her PhD thesis defence for various achievements:

- 11 awards and distinctions for outstanding research and publishing research outcomes in top journals;
- 7 awards and distinctions for excellence in teaching and students coordination;
- 4 gold medals, 1 silver medal and 1 bronze medal for innovation in research;
- 1 award for the best presentation during the ICRBME 2022 Conference in Vienna;
- 1 award for incorporating digital technology into teaching and fostering entrepreneurial skills among students;
- 1 distinction for early career teaching achievements;
- 1 distinction for actively supporting the internationalisation of Babeş-Bolyai University.

The following paragraphs will detail on the structure of the two main parts of the thesis.

## PART 1: SCIENTIFIC CONTRIBUTIONS TO TAX BEHAVIOUR, FINANCIAL EQUILIBRIUM AND PERFORMANCE

Part 1 of the habilitation thesis incorporates the scientific contributions of the candidate on research topics in connection with tax perceptions, attitudes and behaviour, financial equilibrium, financial performance and financial decision-making summarized throughout three chapters.

### CHAPTER 1: LARGE-SCALE CROSS-COUNTRY EMPIRICAL STUDIES ON TAX BEHAVIOUR

Chapter 1 tackles research investigations with respect to Tax Behaviour on the ground that taxes play a pivotal role in the development of societies since they finance the very standards of citizens' living. In this line of thought, Tax Behaviour could be defined as the way in which

taxpayers, whose perceptions and attitudes are shaped under the influence of endogenous and exogenous factors, choose to *act* toward tax obligations, to *react* to tax policies and authorities' measures regarding public money and to *interact* with authorities and peers within this perpetual cycle.

The first section of the chapter provides empirical results on a relevant tax compliance model from the realm of Tax Behaviour, namely the slippery slope framework. This is a conceptual tool that incorporates different perspectives on tax compliance along two dimensions: trust in authorities and power of authorities. According to the framework, the dimension of trust in authorities is defined as taxpayers' perception that tax authorities are guided by benevolence in their actions and operate for the common good of citizens. The dimension of power of authorities is defined as taxpayers' perception that tax authorities have the potential to detect and punish tax evasion. The core assumption of this model is that each dimension generates a certain type of compliance with tax laws and regulations. Consequently, trust in authorities generates *voluntary tax compliance*, while power of authorities generates *enforced tax compliance*. The literature acknowledges that there are multiple reasons for which taxpayers may choose to comply voluntarily or enforced and that such reasons are incorporated into one of the framework dimensions.

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## FIRST STUDY

The most extensive worldwide empirical study on the slippery slope framework was published in the *Journal of Economic Psychology* and was coordinated by the candidate. The study comprised an international team of 59 co-authors from 62 universities, institutes and organisations around the globe united under the same scientific umbrella. It entailed an overall sample of 14,509 participants from 44 countries across 5 continents, who were surveyed in 25 different languages. The countries were chosen so that they covered the widest range of economic, sociodemographic, political and cultural characteristics. Regarding the data collection approach, an experimental scenario technique was applied, which varied the levels of trust in and power of authorities between low and high.

In terms of statistical analyses, the study used multilevel modelling with fixed and random effects. Empirical results supported the assumptions of the slippery slope framework across the entire sample and the fundamental influence of trust and power on tax compliance. Across almost all countries, a combination of high trust in authorities and high power of authorities increased voluntary tax compliance. In the case of enforced tax compliance, combining high trust with high power yielded lower compliance levels as compared to the situation in which high power was the only variable of influence. The same combination of high levels considerably mitigated tax evasion intentions. The results elicited by the multilevel analysis approach suggest that voluntary compliance rationales are more generic at global level than enforced compliance rationales. The takeaway message for government authorities is that they should tailor compliance strategies in accordance with national circumstances. Namely, countries experiencing low trust and power may register higher levels of tax evasion should authorities not cater to taxpayers' basic needs of welfare or equity. Countries known to have trusted and powerful authorities should continue to preserve efficient and



less bureaucratic taxpaying systems, to support business-oriented regulations and to engage taxpayers (individual, corporate, self-employed) in the process of adapting tax policies to society needs.

The 44-country study has been acknowledged in an editorial article signed by Alós-Ferrer and Yechiam (2020), the current Editors-in-Chief of the *Journal of Economic Psychology*, occasioned by the 40<sup>th</sup> anniversary of the journal. The article is the most cited article among all the articles published in this journal since 2019 (<https://www.journals.elsevier.com/journal-of-economic-psychology/most-cited-articles>) and is listed among the most popular manuscripts of this journal. So far it has gathered over 118 citations in various top journals and *Web of Science Core Collection* categories. The publication of the article has been also noted in the *Universitaria Consortium Newsletter* (January 2020 edition) and the *Kemmy Business School Research Bulletin*, University of Limerick, Ireland (February 2020 edition).

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## SECOND STUDY

A similarly extensive study testing the assumptions of the slippery slope framework on self-employed taxpayers, also coordinated by the candidate, was featured in *Financial Innovation*, journal which ranks 1<sup>st</sup> in the *Web of Science Core Collection – Social Sciences, Mathematical Methods* category and 8<sup>th</sup> in the *Web of Science Core Collection – Business, Finance* category based on the impact factor. The study numbered an international team of 19 co-authors affiliated with 18 institutions across four continents. This investigation surveyed 2,786 self-employed taxpayers from eleven countries, making it the largest research endeavour run on the slippery slope framework with this category of taxpayers from Europe, South America, Western and Eastern Africa or Western Asia. Data collection was based on varying levels of trust in authorities and power of authorities through an experimental scenario.

From the statistical analysis standpoint, taxpayers' compliance attitudes with the tax system were examined with frequentist and Bayesian analyses of variance. Besides the novelty of this methodological approach, the study is relevant since it focuses on self-employed contributors, who have regular interactions with tax authorities, as compared to individual taxpayers. Moreover, this research reports on differences in tax compliance between self-employed taxpayers from post-communist countries (five nations in the sample) and those from non-post-communist countries (six nations in the sample). As expected, the framework assumptions were supported by the empirical results and interesting differences were identified. Namely, participants from non-post-communist countries reported higher tax evasion intentions and lower intended tax compliance than participants from post-communist countries. In the light of these results, tax authorities could understand the reasons behind self-employed taxpayers' decisions (not) to pay taxes and design adequate policies based on deterrence and/or cooperation. With a clear view on what strategies better accommodate self-employed taxpayers, tax authorities could save substantial resources of time and money in the long run.

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### THIRD STUDY

Another study that tested the assumptions of the slippery slope framework was published in the *Journal of Economic Psychology*. It comprised a sample of 1,319 individuals from Austria, Hungary, Romania and Russia, four European countries with distinct economic and cultural backgrounds. This is the most referred study from the candidate's publication record, since so far it has gathered over 375 citations in various top journals and *Web of Science Core Collection* categories.

In terms of statistical analyses, the approach favoured multivariate analysis of variance with and without covariates. By means of an experimental scenario technique that varied the levels of trust in and power of authorities between low and high, the study captured participants' tax compliance attitudes and found support for the assumptions of the slippery slope framework. Overall, trust in authorities and power of authorities emerged as main drivers of tax compliance. When it comes to the countries in the sample, results indicated that Russian participants reported the lowest level of voluntary tax compliance, while Romanians reported the lowest level of tax evasion. Austrian participants showed the highest level of enforced tax compliance and their willingness to pay taxes remained constant across experimental conditions. This study emphasizes the idea that tax authorities should improve trust and power perceptions while keeping an eye on national contexts. Overall, authorities are encouraged to boost citizens' trust via tax systems that encompass fairness considerations and service-oriented policies. In such systems, voluntary taxpaying could prevail and state budgets could benefit a great deal from the ensuing long-term compliance.

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### FOURTH STUDY

A fourth study related to the slippery slope framework was published in the *Journal of Economic Behavior and Organization*. It was conducted on a sample of 422 self-employed taxpayers and 599 students from Poland. The study aimed to analyse potential attitudinal differences regarding tax evasion between self-employed taxpayers and students within the slippery slope framework, i.e., in response to changes of trust in authorities and power of authorities levels.

The set of statistical analyses comprised analysis of variance (ANOVA) and ordinary least squares (OLS) regression. Empirical results elicited differences in tax evasion attitudes, with students reporting more tax evasion propensity than entrepreneurs. In this context, raising power of authorities could considerably increase tax compliance among students, while raising trust in authorities would have a similar effect on entrepreneurs. Starting from the empirical results, tax authorities could consider tailoring compliance strategies in accordance with the category to which taxpayers belong (self-employed taxpayers vs. students). Moreover, monitoring strategies of collecting tax levies should not be based solely on deterrent measures because such approaches can trigger the so-called "backfiring effect" of excessive power (i.e., adverse reactions to tax penalties). The solution for counteracting this effect lies in the hands of tax authorities that can adopt a long-term vision mainly based on increasing trust perceptions and, to a lesser extent, on increasing power perceptions.

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## FIFTH STUDY

The study published in *Eastern European Economics* investigated the degree to which tax literacy can influence tax compliance attitudes on a sample of 358 Romanian taxpayers. It employed a complex methodological approach that ranged from correspondence analysis, polarity indices, neutrality indices to the compiling of a tax literacy index and moderation analysis. Empirical results indicated that taxpayers possessed enough knowledge in order to distinguish between “tax”, “fiscal fee” and “mandatory social contribution”, three core concepts of the national tax system. The compiled tax literacy index measured a moderate level of tax knowledge and skills among participants, who scored less when inquired on the taxation of consumption, income and company profit (in keeping with the literature). Overall, participants who elicited neutral social representations of taxation performed better in terms of tax literacy and voluntary tax compliance. Empirical results suggest that a boost in voluntary tax compliance serves as an efficient strategy for tax authorities interested in optimising long-term benefits and costs of compliance. For that matter, higher levels of voluntary tax compliance engender stable financial markets that can further develop by attracting investors. Since the results elicited a connection between tax literacy and voluntary tax compliance, an increase in tax literacy could generate multiple benefits for citizens and societies at large.

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## SIXTH STUDY

Moreover, the first chapter discusses the relationship between tax compliance and various socio-economic indicators, which was investigated by the candidate and co-authors in peer-reviewed research articles featured in top outlets. Hence, the study published in *Social Indicators Research* examined how shadow economy impacts on corruption for a sample of 193 countries and territories worldwide. The methodological approach entailed the use of moderation analysis with bias-corrected and accelerated (BCa) bootstrapping. According to the empirical results, the relationship between shadow economy and corruption was complementary and significant when judicial independence, reliability of police services, the level of human development and business freedom were considered moderating variables. Therefore, analyses showed that, in countries and territories experiencing independent judicial systems, efficient law enforcement, upgraded human development levels and streamline business environments, a small shadow economy is mirrored by a low corruption level.

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## MANUSCRIPTS UNDER THE AEGIS OF ROUTLEDGE AND SPRINGER

This first chapter concludes by giving account of a co-edited book and a co-authored book chapter, released by the leading international publishers *Routledge* and *Springer*.

The edited *Routledge* book tackled the emerging field of Behavioural Public Finance by considering political, social and behavioural dimensions of economic decision-making. Divided into three parts, the book comprises: 1) theoretical considerations on Behavioural Public Finance; 2) instances of behavioural responses to regulations, with inputs from the legal field; 3) eight empirical

studies scrutinizing Tax Behaviour in Austria, Germany, Ireland, Italy, Romania, Sweden, Turkey, United Kingdom and United States of America.

The *Springer* book chapter made the case for a sustainable tax compliance behaviour with a particular focus on Romania and Brazil, as future and current emerging markets.

## CHAPTER 2: LARGE-SCALE EMPIRICAL STUDIES ON FINANCIAL EQUILIBRIUM AND PERFORMANCE

Chapter 2 addresses results from investigations on financial equilibrium and financial performance of top companies operating in various industries.

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### FIRST STUDY

The chapter starts with a research study featured in *Mathematics*, which analysed the influence of fiscal pressure on the financial equilibrium state of 88 companies within the electricity, gas and oil sectors. This publication has been listed in the *Web of Science Core Collection* database as a “highly cited paper” that “received enough citations to place it in the top 1% of the academic field of Mathematics based on a highly cited threshold for the field and publication year”. Since companies were traded on the New York Stock Exchange, they were selected based on market capitalization. The study examined the relationships between various relevant financial indicators for the period 2005–2020. In this context, fiscal pressure was estimated with the help of a set of indicators computed using company taxation data. Financial equilibrium of companies was measured with financial liquidity and solvency indicators. Empirical results estimated via panel least squares with cross-section weights indicated that the impact of fiscal pressure on the equilibrium of electricity and oil companies was stronger than the impact on the equilibrium state of gas companies. Based on the econometric models estimated in this study, managers will have the possibility of assessing their companies’ capacity to cover their short- and long-term liabilities and implement proactive strategies that safeguard economic activities against liquidity shortages, solvency challenges or any other financial bottleneck.

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### SECOND STUDY

A second publication, appeared in the outlet *Mathematics*, investigated the relationship between financial equilibrium and financial performance on a sample of 34 healthcare companies from Puerto Rico, United Kingdom and the United States of America. The companies were chosen based on market capitalization and were analysed for the time frame 2005–2020. In this study, relevant financial liquidity and solvency indicators were used as proxies of financial equilibrium. In terms of analyses, the methodological approach was based on two-stage least-squares panel and generalized method of moments panel. Empirical estimates supported the research hypotheses and revealed that the financial ratios current liquidity, quick liquidity and debt to equity played a major role in shaping financial performance. The study’s insights aimed at assisting businesspeople, who should have a long-term perspective and propensity toward obtaining higher profit while tracking company liquidity and solvency.

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### THIRD STUDY

The relationship between economic growth and various economic and financial indicators for countries not belonging to the Basel Committee on Banking Supervision (BCBS) is the topic of an article published by the candidate and co-authors in the *Journal of the Knowledge Economy*. The sample included seven non-BCBS countries from Europe, South America and Southeast Asia (i.e., Bolivia, Czech Republic, Estonia, Malaysia, Peru, Poland, Thailand) that aimed to implement the Basel framework and principles within national contexts. The period of analysis considered was 1990–2019 and the outcome variable was proxied by the gross domestic product annual growth rate. With the help of pooled OLS, fixed effects and random effects econometric models, the investigation revealed a significant connection between GDP growth rate and bank capital to assets ratio and a non-significant connection between the outcome and inflation.

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### A MANUSCRIPT UNDER THE AEGIS OF ELSEVIER

Moreover, this section features a book chapter released by *Elsevier* that addresses the topic of intellectual capital and the economic impact of human resource management on company performance, with a particular focus on the Brazilian market. As a case study, the chapter analysed the investments in management training made by a well-known Brazilian company (Natura Cosméticos), which were echoed by the company's market position and performance. The chapter tackled the concept of intellectual capital from the perspective of accounting entries, presented an example of computing its value and registering it in the company balance sheet.

### CHAPTER 3: THROUGH THE EYES TO THE FINANCIAL BRAIN: LARGE-SCALE AND LABORATORY STUDIES ON THE UNDERLYING NEURAL AND PHYSIOLOGICAL MECHANISMS OF DECISION-MAKERS

Chapter 3 addresses the link between financial decision-making and fundamental neural and physiological mechanisms by means of cutting-edge Cognitive Neuroscience methods (e.g., eye tracking, electroencephalography, functional magnetic resonance imaging, magnetoencephalography). The chapter elicits relevant insights stemming from the candidate's long-time interest into Cognitive Neuroscience research and its application to the field of Finance. The relevance of this line of studies resides in that it can assist researchers to examine and understand better what happens in people's brains when they make financial decisions. The third chapter also reports the findings from a systematic literature review co-authored by the candidate and published in the *Journal of Vacation Marketing*. This publication analyses the empirical results of 70 scientific studies retrieved from well-known international databases and featured in highly ranked Tourism outlets on the use of the eye tracking method in Tourism research. In this context, the chosen methodological approach was the standard one for preferred reporting items for systematic reviews and meta-analyses (PRISMA).

This analysis of eye tracking studies emphasized relevant information regarding attention level, consumer behaviour, memory and perceptions through the looking glass of demographics such as age, ethnicity and gender. Overall, the insights stemming from a thorough literature review benefit

researchers focused on employing the eye tracking method and companies operating in the Tourism industry. Starting from the reported empirical results, companies can improve their marketing strategies and visual stimuli choices regarding the design of adequate promotional pictures, menus, websites, guidebooks and brochures, exhibitions or sustainability labels.

## PART 2: CAREER DEVELOPMENT PLAN

Part 2 of the habilitation thesis outlines the main upcoming research and teaching directions from the candidate's career development plan. The section puts a particular emphasis on the candidate's research goals and projects that target current and future business administration undergraduates, graduates and postgraduates. Namely, besides carrying on with her large-scale research studies in Finance, Larissa Bătrâncea will continue the editorial and peer-reviewing service and will remain an actively involved member of international and national associations such as the Society for the Advancement of Behavioral Economics (SABE), International Association for Research in Economic Psychology (IAREP), Economic Science Association (ESA), Eurasia Business and Economics Society (EBES), Romanian Society of Economic and Financial Analysis (SRAEF), Romanian Association of Financial-Banking Analysts (AAFBR). In this sense, she will keep on promoting their activities, events, ongoing projects and initiatives. In terms of both curricular and extracurricular teaching activities, the candidate will further provide informed, interactive and innovative courses and seminars along with organising cutting-edge conferences, workshops, webinars, summer schools, crash courses and roundtable talks.

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