DOI: 10.1111/twec.13461

#### INTRODUCTION



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# New challenges in international economics and finance

## Rebeca Jiménez-Rodríguez<sup>1</sup> María A. Prats<sup>2,3</sup>

<sup>1</sup>Department of Economics, University of Salamanca, Salamanca, Spain

<sup>2</sup>Department of Applied Economics, University of Murcia, Murcia, Spain

<sup>3</sup>European Institute, London School of Economics and Political Science, London, UK

#### Correspondence

Rebeca Jiménez-Rodríguez, Department of Economics, University of Salamanca, Campus Miguel de Unamuno, E-37007 Salamanca, Spain.

Email: rebeca.jimenez@usal.es

#### Abstract

This Special Issue brings together 13 papers that examine a variety of central topics in the field of international economics and finance. These papers were presented at the 23rd Conference on International Economics held in Málaga (Spain) on 16th–17th June 2022. The conference was organised by the Spanish Association of International Economics and Finance (AEEFI) and the University of Málaga. The selected papers make up an interesting and revealing set of information to study the new challenges of the international economics and finance in a context especially marked by the aftermath of the 2008 financial crisis, the climate change, the challenge posed by the COVID-19 crisis and the instability unleashed after the invasion of Ukraine in 2022. From different perspectives, the papers analyse how events that have particularly affected the evolution of the world economy have substantially altered the rules of international trade, foreign direct investment, as well as monetary, fiscal or sectoral policy. The conference included two keynote lectures by Per Krusell (Institute for International Economic Studies, Stockholm University) and Fabio Canova (Norwegian Business School and Budapest School for Central Banking Studies), as well as 97 selected contributions.

#### K E Y W O R D S

international economics, international finance

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This Special Issue contains 13 selected papers that were presented at the 23rd Conference on International Economics held in Málaga (Spain) on 16th-17th June 2022 and organised by the Spanish Association of International Economics and Finance (AEEFI) and the University of Málaga. Events such as Brexit, the outbreak of COVID-19, the global warming or the Ukrainian War are examples of both political and economic uncertainty, which point to new challenges in the analysis of the situation of the international economics and finance. Thus, the first seven papers in this Special Issue focus on shedding light on the different challenges facing international trade, contemplating different perspectives such as the link between uncertainty and trade flows, the new digital channels that would enable countries to participate in global value chains, the effect of natural resource exports on economic growth, the stability of the import-export relationship over time or the effect of climate change on international trade and its interactions with domestic trade. One of the central aspects of trade policy is to find solutions that maximise a country's advantages over others (Revealed Comparative Advantage) and it is, in this context, that the application of novel technologies derived from machine learning has the potential to bring enormous value. It is also essential to recognise that trade policy, accompanied by social and tax policy measures, can have positive effects on the conditions of workers.

The following six papers take an insightful look at different areas of economic policy. The context of quantitative easing (QE) opened after the 2008 financial crisis, and especially with the outbreak of the COVID-19 pandemic, is the fundamental scenario for the analysis of the interrelationships between structural reforms with fiscal and monetary policies. This context is also essential to understand why financial stability has come to be considered an essential aspect to ensure price stability in any economy. The scenario of uncertainty that the world economy is currently facing, derived from global geopolitical instability, also provides the opportunity to analyse different aspects related to tax competition, consumer preferences or how the tourism sector can be a key driver of a country's economic development.

The first paper by Anna Matzner, Birgit Meyer and Harald Oberhofer analyses the link between uncertainty and trade flows by combining two approaches that allow (i) assessing the effects of uncertainty on average cross-border trade costs and (ii) studying the direct bilateral trade volume effects of unilateral changes in uncertainty. The authors conduct two counterfactual scenario analyses for the UK's Brexit referendum and the outbreak of the COVID-19 pandemic. The estimation results indicate that the sign and magnitude of the effect on average trade costs depend on whether uncertainty originates from the exporting or importing country, while the direct cross-border trade effects are always negative. Thus, for instance, the counterfactual scenario analysis reveals that the surge in uncertainty following the Brexit referendum's outcome accounts for up to 87% of the total decline in UK's foreign trade.

In the second paper, Leticia Blázquez, Carmen Díaz-Mora and Belén González-Díaz clarify the determinants of bilateral intermediate digital services flows, since their growth suggests a new channel through which countries are participating in global value chains. In doing so, the authors apply a novel methodology in which, in addition to the standard factors incorporated in gravity models, the highly complex and heterogeneous interdependencies within this trade network are added. The results corroborate that those intricate relationships have a significant impact on the volume of bilateral trade flows, and indicate that both, direct and indirect relationships that countries maintain within the digital network, are crucial to penetrate new markets, both in the search for new customers and in the diversification of their import base. Connecting with well and strongly connected partners substantially reduces entry and expansion costs into unfamiliar territories, especially in the digital services market, where regulations are stricter than in other markets. These results are consistent with others previously obtained in the literature for exporting firms, although their analysis complements previous works by incorporating more complex structural relationships between partners and accounting not only for the existence but also for the intensity of these connections.

Alejandra Martínez-Martínez, Silviano Esteve-Pérez, Salvador Gil-Pareja and Rafael Llorca-Vivero analyse the association between temperature rise and extreme weather events with international trade flows. The authors make two main contributions to the literature on trade and climate change. First, they examine the effect of climate change on trade using the gravity equation following the theoretical basis of the gravity model and dealing with all known biases, including domestic trade flows. Second, they rely on an output-based measure of climate change rather than an input-based measure, as is commonly considered. The authors find that higher temperatures boost international trade with respect to domestic trade, while the opposite occurs with extreme weather events. However, there is great heterogeneity across countries and types of events. Specifically, China for storms and Japan for both storms and especially extreme temperatures are crucial in driving the total effect on trade. They also perform a general equilibrium analysis in line with recent developments in the gravity model. In general terms, disasters resulting from climate change have a negative impact on well-being, especially in the case of insect infestations and extreme temperatures.

The fourth paper by Francisco Requena, Guadalupe Serrano and Raúl Mínguez uses Spanish firm-level data over the period 1997–2018 to investigate (i) whether imports of intermediate inputs directly enhance exports, (ii) whether the choice of the sourcing country matters and (iii) whether the import–export relationship is stable over time. The authors find a direct positive, though modest in magnitude, connection between firm's imported inputs from non-EUEFTA countries and firm exports to EU-15, both in value and portfolio size, once they address endogeneity issues and control for firm's size and productivity. Unlike previous studies, the country of origin of imports does not affect the exports performance of Spanish manufacturing firms differently. Moreover, the authors do not observe any difference in the evolution of the import–export nexus before and after the financial crisis, nor do they observe changes in the relative importance of the technological channel (importing from high-income countries) and the price channel (importing from low-income countries) in enhancing exports before and after the crisis.

In the fifth paper, Zuzanna Helena Zarach and Aleksandra Parteka analyse the general view that the growth of developing countries is hampered by overspecialisation in natural resources, while technological advance drives growth in the developed world. To do so, the authors use a sample of 160 economies (1996–2018), including both developed and developing countries. They compare 'traditional' mechanisms based on natural resource endowments and 'modern' forces related to the development of countries' technological capacity. Unlike other studies, they consider different types of natural resources and different types of technology (including ICT and digital solutions), quantified via newly elaborated product-level taxonomies. They obtain that while in general natural resource exports weakly slow down growth, exports of metals and forestry products enhance catch-up process. Technological specialisation, in turn, reinforces productivity growth, but does not affect its relationship with natural resources. Panel data analysis is complemented by specific case studies of countries (at various stages of development) that have managed to diversify away from high natural resource dependence towards technological specialisation.

Giorgio Gnecco, Federico Nutarelli and Massimo Riccaboni address the interpretability of a machine-learning method recently employed for the analysis of economic complexity. In this paper, a supervised machine-learning method (matrix completion) is combined with a classical solution concept from cooperative game theory (the Shapley value), to find subsets of countries

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that best predict the Revealed Comparative Advantage values of other countries of interest in different product categories. Due to computational issues, a Monte Carlo approximation is performed for the Shapley values. The methodological framework proposed in the paper is expected to be beneficial for policymakers, in the sense that, based on that approach, any country of interest for a trade policy analysis (e.g. a developing country) could be suggested to examine at the export capabilities' history of a subset of other countries, which are automatically detected to be the most similar to that country. In this case, similarity is expressed in terms of approximate Shapley values, which are deemed to provide a more reliable similarity measure (in view of its application to international trade) than other more traditional approaches.

In the seventh paper, Jonas F. Rudsinske provides a theoretical analysis of the distributional effects of unilateral import tariffs under oligopoly. The author shows that unilateral import tariffs have an anti-competitive effect reducing production incentives for firms and thereby decreasing labour demand. The general equilibrium model demonstrates that this results in falling wages. Even in the most favourable circumstances without a retaliating foreign country, increasing real income by unilaterally raising import tariffs comes at the cost of favouring profit recipients as compared to workers. The ratio of labour to profit income declines in both countries. Accordingly, theory suggests that trade policy needs to be accompanied by social policy measures or even by profit taxation when the policy objective is to improve the situation of workers in a globalising world where firms have market power.

Juan Cristóbal Campoy and Juan Carlos Negrete explore the interrelations of structural reforms with fiscal and monetary policies when a shock hits a monetary union's economy as the euro area and QE is implemented. The authors introduce two important novelties: the analysis of the strategic effects of these three policies in a single game theoretic framework and the type of spillovers considered, namely structural reforms in one member country make it less dependent on fiscal deficits and QE, which lowers inflation and the risk of financial instability in the whole union. Therefore, without an adequate design of the community institutions, structural reforms will be too low and inflation too high with respect to the union's first best. The root of this inflation bias is also a novel attribute of their model: the suboptimality of uncoordinated structural reforms and budget deficits in a monetary union. However, the authors show that the joint optimum is not guaranteed if member countries cooperatively decide their structural reforms. By contrast, they prove that a rule over QE does provide the right incentives for governments to conduct the fiscal and structural reforms policies required to maximise the whole union's welfare.

The ninth paper by Juan F. Rendón, Lina M. Cortés and Javier Perote proposes a model to accurately estimate the probability of intervention faced by financial institutions as they approach the minimum regulatory capital threshold. To do so, they assume a flexible Gram-Charlier probability distribution to account for relevant indicators, such as the changes in the Solvency Ratio, the prudential capital Tier and the Risk-Weighted Assets. This probability density function features the non-normal stylised facts associated with solvency risk, for example skewness and kurtosis, thus improving the fitting and forecasting of the probability of intervention. As a result, the model helps prudential policy implementation and, particularly, decision-making on the provisions required to limit the risk of regulatory intervention. As an application case, the authors evaluate the impact of the expansionary monetary policy applied by the Colombian Central Bank at the beginning of the COVID-19 crisis on the probability of breaching the minimum capital threshold and estimate the capital level that the Colombian banking system requires according to the solvency risk levels.

The paper by Dmitry Erokhin delves into the factors that influence indirect foreign direct investment (FDI), with a specific emphasis on tax-related aspects. The research is based on the

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OECD's Fourth Edition of the Benchmark Definition of FDI database and employs the standard gravity equation for FDI and the Poisson pseudo-maximum likelihood estimation model. The findings reveal that real economic factors primarily determine ultimate FDI, while higher bilateral effective average tax rates between home and host countries negatively impact immediate FDI. A rise in bilateral effective average tax rates leads to more FDI entering the host country indirectly. The research sheds light on FDI diversion by scrutinising the underlying structures of indirect FDI and presenting a more accurate distribution of FDI. The results suggest that taxes do not affect the location decisions, but rather, the route of investing—whether direct or indirect. The paper's contribution to the literature lies in demonstrating that prior studies may have overstated the tax elasticity of FDI and highlights the importance of comprehending indirect FDI drivers. The implications of the findings are relevant for policymakers interested in creating sustainable and effective investment policies, identifying significant investors in an economy and comparing countries in terms of their investment attractiveness.

Isabel Albaladejo, Juan Gabriel Brida, María Isabel González and Verónica Segarra assert that many of the recent studies examining the tourism-led growth hypothesis (TLGH) use panel data to consider a large sample of countries and make the analysis more global. However, the validity of TLGH often depends on the country-specific characteristics, such as its degree of economic and tourism development. Thus, when the sample includes a large and diverse group of countries, their heterogeneity must be addressed. This study contributes to the literature on TLGH with panel data by applying a non-parametric methodology to divide the sample of countries into homogeneous groups according to two criteria simultaneously, tourism and economic development, while previous studies used a single criterion. This methodology is applied to a panel data set of 144 countries identifying four groups of homogeneous countries according to their tourism and economic development. The causality tests show significant differences between them. Thus, the relationship between tourism and economic growth is influenced by both economic development and tourism development of the destination. The TLGH is validated only for the group of low-income countries with low tourism.

The paper by Francesco Guerra delves into the role of consumer taste for food in shaping trade patterns of vertically differentiated products. Prior research has identified various cultural factors that may act as trade facilitators or barriers. However, differences in consumer preferences can also generate variations in the perceived quality of products. This study employs data on French exports of food products at the firm-product level to analyse how differences in taste proximity across destination markets affect the export revenues according to the quality of the exported product. To measure taste proximity between countries, the author uses data from TripAdvisor on the type of cuisine offered in restaurants all over the world. The findings highlight the importance of taste proximity in driving export revenues for high-quality food products. Specifically, countries with similar tastes to French consumers place greater value on the quality of French products and are willing to pay more for high-quality goods. These results suggest that the impact of consumer preferences on trade is contingent on product quality and that high-quality products can generate higher revenues in markets with greater taste proximity.

In the last paper, Julimar da Silva Bichara, Sandro E. Monsueto and Ana I. Vinas contribute to the debate on the role of trade unions and collective bargaining in introducing innovations at establishment level. The authors provide new evidence for companies in the 15 European Union, approaching the analysis beyond the existing empirical literature, where most studies are focused on the country level or use a two-country comparison. To deal with this issue, the methodology used could be considered as a novelty, taking into account that the estimated probability models allow the incorporation of instrumental variables to correctly estimate the impacts of collective

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bargaining on the probability of introducing innovations by firms. Two relevant outcomes for the literature are reached: (i) collective bargaining has a non-linear effect on innovation, and, besides, its impact is more relevant in those establishments with less tendency to innovate; consequently, unions in low-innovative companies are more committed to contributing to firms' introduction of new technologies than in higher innovative companies; and (ii) the nonlinearity is confirmed by showing evidence that collective bargaining at the company level reduces the probability of introducing changes, while wage bargaining at superior level favours it.

In summary, the papers included in this Special Issue constitute a compelling and enlightening collection of research addressing the new challenges of the international economics and finance in a context especially marked by the aftermath of the 2008 financial crisis, the climate change, the challenge posed by the COVID-19 crisis and the instability unleashed after the invasion of Ukraine in 2022. From different perspectives, these papers analyse how events occurred in the world economy have substantially altered the rules of international trade, foreign direct investment, as well as monetary, fiscal or sectoral policy.

We thank all authors that have submitted their papers to this Special Issue. We are also grateful to all members of both the Scientific and the Organizing Committees of the 23rd Conference on International Economics, as well as all the reviewers that have generously dedicated their time to review all the submitted papers and have helped us select the most appropriate ones for this Special Issue and improve them with helpful comments and suggestions. Finally, we especially thank the editors of The World Economy, Chris Milner and David Greenaway, for accepting our Special Issue proposal.

### DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

#### ORCID

Rebeca Jiménez-Rodríguez D https://orcid.org/0000-0002-7669-2467 María A. Prats D https://orcid.org/0000-0002-0410-446X

**How to cite this article:** Jiménez-Rodríguez, R., & Prats, M. A. (2023). New challenges in international economics and finance. *The World Economy*, *00*, 1–6. <u>https://doi.org/10.1111/twec.13461</u>