



### Organized by



Turkish Economic Association



Muğla Sıtkı Koçman University

### Supported by

Foundation of Turkish Economic Association  
World Economic Research Institute (WERI)  
Atılım University

### Publication opportunities

Econometrics Letters  
Ekonomi-TEK  
International Econometric Review  
World Journal of Applied Economics  
Yıldız Social Science Review

<https://tek.org.tr/>



## Programme & Abstracts

### The 31<sup>st</sup> TEA Conference on Economics

October 31 - November 2, 2024

Fethiye Faculty of Business Administration

Fethiye, Muğla, Türkiye

<https://tek.org.tr/conference/2024>



**TEA2024**

The 31<sup>st</sup> Conference on Economics  
October 31 – November 02, 2024  
Fethiye Faculty of Business Administration  
Muğla, Türkiye



# TEA2024

**31<sup>st</sup> Conference on Economics of  
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# Programme

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# Program



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## General Information

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## Genel Bilgi



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### ORGANIZATION COMMITTEE

**Serkan Çiçek** – Muğla Sıtkı Koçman University, Türkiye  
**H. Alper Güzel** – Ondokuz Mayıs University, Türkiye  
**Hasan Kazdağlı** – Turkish Economic Association, Türkiye  
**Oya Kent** – İstanbul Okan University, Türkiye  
**Yılmaz Kılıçaslan** – Anadolu University, Türkiye  
**Tolga Omay** – Atılım University, Türkiye  
**Serdar Sayan** – TOBB-UET, Türkiye  
**Cihan Yalçın** – CBRT, Türkiye

### CONFERENCE SECRETERIAT

**Büşra Demirci**- Turkish Economic Association, Türkiye

### PRESS&COMMUNICATION

**Enes Can Uzunel**- Turkish Economic Association, Türkiye  
**Yasin Tosun**- Turkish Economic Association, Türkiye





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### KEYNOTE SPEAKERS

[Kostas Karantininis](#) – Swedish University of Agricultural Sciences, Sweden

[Ayhan Köse](#) – The World Bank, USA

[Fatih Özatay](#) – TOBB-UET, Türkiye

[Gülçin Özkan](#) – King's College London, UK

[Kamil Yılmaz](#) – Koç University, Türkiye



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### SCIENTIFIC COMMITTEE

**Nicholas Apergis** – University of Piraeus, Greece  
**K. Peren Arin** – Zayed University, UAE  
**Diego Romero-Ávila** – Pablo de Olavide University, Spain  
**Micheal Berlemann** – Helmut-Schmid University, Germany  
**Selim Çağatay** – Akdeniz University, Türkiye  
**Murat Donduran** – Yıldız Technical University, Türkiye  
**Ahmet Kibar Çetin** – Hacı Bayram Veli University, Türkiye  
**Maria Dolores Gadea Rivas** – Zaragoza University, Spain  
**Ercan Eren** – Yıldız Technical University, Türkiye  
**Ozan Eruygur** – Hacı Bayram Veli University, Türkiye  
**Alpay Filiztekin** – Sabancı University, Türkiye  
**Semih Koray** – Bilkent University, Türkiye  
**Angeliki N. Menegaki** – University of Applied Sciences, Greece  
**Fatih Özatay** – TOBB-UET, Türkiye  
**Gülçin Özkan** – King's College London, UK  
**Fahriye Öztürk** – Hacı Bayram Veli University, Türkiye  
**Şevket Pamuk** – Boğaziçi University, Türkiye  
**Audrey Saget** – Université Paris-Nanterre, France  
**Ayşen Sivrikaya** – Hacettepe University, Türkiye  
**Ramazan Sarı** – Technical University of Denmark, Denmark  
**Selami Sezgin** – Anadolu University, Türkiye  
**Uğur Soytaş** – Technical University of Denmark, Denmark  
**Nicola Spagnolo** – Brunel University London, UK  
**Chris Steward** – Kingston University London, UK  
**Yeşim Üçdoğruk Gürel** – Dokuz Eylül University, Türkiye  
**A. Yasemin Yalta** – Hacettepe University, Türkiye  
**Jülide Yildirim Öcal** – TED University, Türkiye  
**Kamil Yilmaz** – Koç University, Türkiye



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### PROGRAMME COMMITTEE

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**Çisel Ekiz Gökmen** – Muğla Sıtkı Koçman University, Türkiye  
**Mustafa İnci** – Muğla Sıtkı Koçman University, Türkiye  
**Mustafa İsmihan** – The Eastern Mediterranean University, TRNC  
**Ümit İzmen** – Namık Kemal University, Türkiye  
**Sevilay Küçüksakarya** – Anadolu University, Türkiye  
**Aykut Lenger** – Ege University, Türkiye  
**Oytun Meçik** – Eskişehir Osmangazi University, Türkiye  
**Nesrin Özataç** – Eastern Mediterranean University, TRNC  
**Mustafa Özşarı** – Konya Food and Agriculture University, Türkiye  
**Didem Pekkurnaz** – Başkent University, Türkiye  
**Semra Purkis** – Muğla Sıtkı Koçman University, Türkiye  
**Mustafa Terzioğlu** – Muğla Sıtkı Koçman University, Türkiye  
**Ünal Töngür** – Akdeniz University, Türkiye  
**Filiz Yeşilyurt** – Pamukkale University, Türkiye  
**Hakan Yetkiner** – İzmir Ekonomi University, Türkiye  
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## ORGANIZERS



**Turkish Economic Association**



**Muğla Sıtkı Koçman University**

## SPONSORS

The Organization Committee gratefully acknowledges  
financial support from the following institutions:

**Atılım University**  
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**World Economic Research Institute (WERI)**

The Organization Committee also gratefully acknowledge  
academic support from the following institutions:

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**Ekonomi-TEK (ULAKBİM TRDizin)**  
**International Econometric Review**  
**World Journal of Applied Economics (ULAKBİM TRDizin)**  
**Yıldız Social Science Review**



## DATES & VENUE

**Dates** 08.30, Thursday, October 31, 2024 – 18.00, Saturday, November 02, 2024.  
**Venue** Fethiye Faculty of Business Administration, Fethiye, Muğla, Türkiye

## REGISTRATION

Registration and Information Desk is located at the Fethiye Faculty of Business Administration, from 08:30 Thursday, October 31 to 13:30 Saturday, 02 November 2023. The desk is open at the following times:

Thursday, October 31	08:30-18:00
Friday, November 01	08:30-18:00
Saturday, November 02	08:30-13:00

## BADGE

Participants should kindly wear personal name badges at all times during the Conference. Name badges will be provided in participants' conference bags at the Registration Desk.

## SESSIONS

All sessions at TEA2024 conference are in-person. Sessions are moderated by convenors. Each contributed paper will be presented orally for about 15 minutes, and followed by maximum 5 min discussion. The convenor may decide and change the order of presentations. Each conference room is equipped with a PC and a data projector.

## LUNCH

The lunch is served at Fethiye Faculty of Business Administration on October 31-November 02, 2024. Lunch voucher will be provided in participants' conference bags.

## TEA DINNER

All participants of TEA2024 Conference are invited to TEA Dinner to be held on Thursday, October 31, 2024 at 19.30-22.00 at Orka Sunlife Resort Hotel, Fethiye, Muğla. The dinner is free for those participants staying at Orka Sunlife Resort Hotel. He dinner fee is EURO20 for the other participants.

## COMMUNICATION

## İLETİŞİM

### TEA2024

#### **Turkish Economic Association**

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### TEA2024

#### **Türkiye Ekonomi Kurumu**

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# TEA2024

**31. İktisat Kongresi**  
31 Ekim- 02 Kasım 2024  
Fethiye İşletme Fakültesi  
Muğla, Türkiye



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# Short Programme

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## Kısa Program





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## PROGRAMME AT A GLANCE

**Thursday, October 31, 2024**

**Perşembe, 31 Ekim 2024**

**08:30-17:30 Registration**

**09:30-10:00 Opening Ceremony / Açılış Töreni**  
**Opening Speech / Açılış Konuşması**

*Hasan Kazdağlı (President, Turkish Economic Association, Türkiye)*  
*Turhan Kaçar (Rector, Muğla Sıtkı Koçman University, Türkiye)*

**10:00-10:50 Keynote Address / Davetli konuşmacı**  
**Fatih Özatay (TOBB-UET, Türkiye)**

**10:50-11:10 Coffee Break / Kahve Arası**

**11:10-12:30 Sessions / Oturumlar**

T1A CENTRAL BANK REVIEW SESSION: MACROECONOMICS

T1B LABOR ECONOMICS

T1C ENVIRONMENTAL ECONOMICS

T1D DEMOGRAPHIC ECONOMICS

T1E INTERNATIONAL CONFLICTS and POLITICAL ECONOMY

**12:30-13:30 Lunch / Öğle Yemeği**

**13:30-14:50 Sessions / Oturumlar**

T2A INTERNATIONAL FINANCE

T2B WOMAN INITIATIVE IN ECONOMICS DISCIPLINE

T2C FIRM PERFORMANCE and MARKET STRUCTURE

T2D PARASAL İKTİSAT

T2E ENVIRONMENT AND DEVELOPMENT

**14:50-15:10 Coffee Break / Kahve Arası**

**15:10-15:55 Keynote Address / Davetli konuşmacı**  
**Kamil Yılmaz (Koç University, Türkiye)**

**15:55-16:15 Coffee Break / Kahve Arası**

**16:15-17:35 Sessions / Oturumlar**

T3A EDUCATION, HEALTH and ECONOMIC DEVELOPMENT

T3B FINANCIAL ECONOMICS - I

T3C EKONOMİ POLİTİKASI

T3D İŞGÜCÜ PİYASASI

T3E DIŞ TİCARET I

**19:30-23:00 Gala Dinner / Gala Yemeği**



**Friday, November 1, 2024**

**Cuma, 1 Kasım 2024**

**09:00-10:20 Sessions / Oturumlar**

- F1A APPLIED MICROECONOMICS
- F1B PRICES AND INFLATION
- F1C MAKROEKONOMİ
- F1D EĞİTİM, SAĞLIK ve KALKINMA
- F1E INDUSTRIAL POLICY and SUSTAINABLE DEVELOPMENT

**10:20-10:40** Coffee Break / Kahve Arası

**10:40-11:25 Keynote Address / Davetli konuşmacı**

**Kostas Karantininis** (*Swedish University of Agricultural Sciences, Sweden*)

**11:25-11:45** Coffee Break / Kahve Arası

**11:45-13:05 Sessions / Oturumlar**

- F2A İKTİSAT BİLİMİNDE KADIN İNİSİYATİFİ
- F2B FINANCIAL ECONOMICS - II
- F2C LABOR MARKET and WAGES
- F2D REGIONAL ANALYSES
- F2E PARA POLİTİKASI
- F2F MONEY, FINANCE AND THE FIRM

**13:05-14:00** Lunch / Öğle Yemeği

**14:00-14:50 Keynote Address / Davetli konuşmacı**

**Ayhan Köse** (*The World Bank, USA*)

**14:50-15:10** Coffee Break / Kahve Arası

**15:10-16:10 TEA Panel / TEK Paneli: İktisat Biliminde Yayın ve Ekonomi-TEK Dergisi**

**16:10-16:20** Coffee Break / Kahve Arası

**16:20-18:00 Sessions / Oturumlar**

- F3A EDUCATION AND RESEARCH IN PRESENT AND FOR THE FUTURE
- F3B FINANCIAL MARKETS AND INSTITUTIONS
- F3C INTERNATIONAL TRADE
- F3D SÜRDÜRÜLEBİLİRLİK VE ÇEVRESEL EKONOMİ
- F3E İKTİSATTA SEÇME KONULAR
- F3F FİYAT



**Saturday, November 2, 2024**

**Cumartesi, 2 Kasım 2024**

**09:00-10:20 Sessions / Oturumlar**

- S1A INFORMATION, UNCERTAINTY and DECISION-MAKING
- S1B GENDER STUDIES
- S1C FİYAT ve ENFLASYON
- S1D ENERJİ VE ÇEVRE
- S1E BÖLGESEL ÇALIŞMALAR

**10:20-10:40** Coffee Break / Kahve Arası

**10:40-11:40 Keynote Address / Davetli konuşmacı**

**Gülçin Özkan** (*King's College, London, UK*)

**11:40-13:00** Lunch / Öğle Yemeği

**13:00-14:20 Sessions / Oturumlar**

- S2A MICROECONOMICS: HOUSEHOLD BEHAVIOUR
- S2B ECONOMIC POLICY
- S2C TARIM VE DOĞAL KAYNAKLAR
- S2D WCTRS – TEA JOINT SESSION: FACING THE FUTURE: PROS AND CONS
- S2E TOPICS in ECONOMICS

**14:20-14:40** Coffee Break / Kahve Arası

**14:40-15:40 PANEL: Para Politikaları ve Enflasyon**

**Erhan Aslanoğlu** (*İstanbul Topkapı University, Türkiye*)

**Ege Yazgan** (*İstanbul Bilgi University, Türkiye*)

**Sadi Uzunoğlu** (*Trakya University, Türkiye*)

**Burak Arzova** (*Marmara University, Türkiye*)

**15:40-16:00** Coffee Break / Kahve Arası

**16:00-17:20 Sessions / Oturumlar**

- S3A PANEL DISCUSSION: *The Future of Our Planet: Conventional or Unconventional?*
- S3B TOPLUMSAL CİNSİYET ÇALIŞMALARI
- S3C WELFARE ECONOMICS
- S3D FİNANSAL PİYASALAR ve KURUMLAR



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# Programme

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# Program



## DAY 1

### OPENING SESSION

October 31 / 31 Ekim

**09:30-10:00**

Umut Ertürk Conference Hall

**Hasan Kazdağlı** (*President, Turkish Economic Association, Türkiye*)

**Turhan Kaçar** (*Rector, Muğla Sıtkı Koçman University, Türkiye*)

Convenor: **Yılmaz Kılıçaslan** (*Anadolu University, Türkiye*)

### T1KA KEYNOTE ADDRESS I

October 31 / 31 Ekim

**10:00-10:50**

Umut Ertürk Conference Hall

*Currency depreciation and productivity*

**Fatih Özatay** (*TOBB-UET, Türkiye*)

Convenor: **Kamil Yılmaz** (*Koç University, Türkiye*)

### T1A CENTRAL BANK REVIEW SESSION: MACROECONOMICS

October 31 / 31 Ekim

**11:10-12:30**

Umut Ertürk Conference Hall

*Technology Overload? Macroeconomic Implications of Accelerated Replacement*

**Seda Basihos** (*University of Cambridge, UK*)

*Is there a threshold on money growth?*

**Erdem Başçı** (*TED University, Türkiye*)

**Hakan Emekci** (*TED University, Türkiye*)

**Mehmet Orkun Apaydın** (*TED University, Türkiye*)

Convenor: **H. Mahir Fisunoğlu** (*Çağ University, Türkiye*)



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### T1B LABOR ECONOMICS

October 31 / 31 Ekim

11:10-12:30

Building A - Classroom 1

*Tariffs, Taxes and Wages in the Age of Artificial Intelligence*

**John Gilbert** (Utah State University, USA)

**Onur A. Koska** (University of Canterbury, New Zealand)

**Reza Oladi** (Utah State University, USA)

*The causal effect of maternal employment on school enrollment: Evidence from a wage subsidy program in Türkiye*

**Zeynep Yılmaz** (Bilkent University, CBRT)

**Merve Demirel Derebasoglu** (European University Institute)

*Do Unemployed and Neet Have Time to Sleep? Evidence from a Developing Country*

**Burcu Düzgün-Öncel** (Marmara University, Türkiye)

Convenor: **Güneş Aşık** (TOBB-UET, Türkiye)

### T1C ENVIRONMENTAL ECONOMICS

October 31 / 31 Ekim

11:10-12:30

Building A - Classroom 2

*Just transition away from coal: A priori evidence from Türkiye*

**Sinem Ayhan** (Leibniz-Institute for East and Southeast European Studies (IOS), Germany)

**Hartmut Lehmann** (Leibniz-Institute for East and Southeast European Studies (IOS), Germany)

**Jan C. Steckel** (Mercator Research Institute on Global Commons and Climate Change (MCC), Germany)

*Circular Economy, Exposure to environmental risks and Growth: An Empirical Analysis for Sustainable Development in Türkiye*

**Maya Moalla** (Türkiye)

Convenor: **Ayşen Sivrikaya** (Hacettepe University, Türkiye)





### T1D DEMOGRAPHIC ECONOMICS

October 31 / 31 Ekim

**11:10-12:30**

Building A -Classroom 3

*Weather and children's allocation of time: Evidence from India*  
**Bhaskar Jyoti Neog** (IIT Guwahati, India)

*Social Protection for the Elderly and Inter-household Transfers in Türkiye:*  
*An Empirical Analysis Based on Panel Data*  
**Selin Pelek** (Galatasaray University, Türkiye)  
**Sezgin Polat** (Galatasaray University, Türkiye)

*Religious Adherence and Economic Outcomes: Evidence Based on Family Structure in Türkiye*  
**Burcu Düzgün-Öncel** (Marmara University, Türkiye)  
**Sinem Sefil Tansever** (Istanbul Ticaret University, Türkiye)

*Differences in the modern contraceptive use by ethnicity of couples, number and gender of children*  
**Didem Pekkurnaz** (Başkent University, Türkiye)

Convenor: **Oya Kent** (İstanbul Okan University, Türkiye)

### T1E INTERNATIONAL CONFLICTS and POLITICAL ECONOMY

October 31 / 31 Ekim

**11:10-12:50**

Building A - Classroom 4

*Understanding Perspectives of Ukrainian Refugees and Potential Labour Market Impacts*  
**Esra Karapınar Kocağ** (Gümüşhane University, Türkiye)

*The Impact of Syrian Influx on Native Fertility Rates in Türkiye: An Instrumental Variables Method*  
**Burak Arslan** (Anadolu University, Türkiye)  
**Enes Pınar** (Anadolu University, Türkiye)  
**Hakan Ulucan** (Anadolu University, Türkiye)

*Crises and Elections in a Competitive Authoritarian Regime: District-Level Evidence from Türkiye*  
**M. Aykut Attar** (Hacettepe University, Türkiye)  
**Ayça Tekin-Koru** (TED University, Türkiye)

*The Changing Electoral Landscape: Spatial Analysis of AKP's Decline in the 2024 Turkish Local Elections*  
**Fırat Gündem** (Dokuz Eylül University, Türkiye)

*Entrepreneurs need wisdom, ethical skills, and empathy to promote a sustainable capitalism*  
**Ronald Jean Degen** (International School of Management (ISM) Paris, Brasil)

Convenor: **Cem Dişbudak** (Muğla Sıtkı Koçman University, Türkiye)



**T2A INTERNATIONAL FINANCE**

October 31 / 31 Ekim

**13:30-14:50**

Umut Ertürk Conference Hall

*Volatility Index and the Global Financial Cycle: A FAVAR Approach*

**Nesrin Demirbaş** (METU, Türkiye)

**Elif Akbostancı** (METU, Türkiye)

*Drivers of Exchange Market Pressure (EMP) in Emerging Economies*

**Idil Uz Akdoğan** (University College London, UK)

**Ferda Halicioğlu** (University of Bradford, UK)

*Cooperation vs Monetary Union: The Effect of Inefficient Shocks*

**Cem Görgün** (Koç Holding, Türkiye)

Convenor: **Onur A. Koska** (University of Canterbury, New Zealand)

**T2B WOMAN INITIATIVE IN ECONOMICS DISCIPLINE**

October 31 / 31 Ekim

**13:30-14:50**

Building A - Classroom 1

*State of Women Leadership in Turkish Firms*

**Ünay Tamgaç Tezcan** (TOBB-UET)

*The Signaling Value of Government Action: The Effect of Türkiye's Withdrawal from the Istanbul Convention  
on Female Homicide*

**Güneş Aşık** (TOBB-UET)

**Naci Mocan** (Luisiana State University, USA)

*Risk, Ambiguity, and the Gender Gap in Tournament Entry*

**Luke Boosey** (Florida State University, USA)

**Mürüvvet Büyükbayacı** (Middle East Technical University, Türkiye)

**Merve İntişah** (Middle East Technical University, Türkiye)

Convenor: **Nergiz Nazire Dinçer** (TED University, Türkiye)



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### T2C FIRM PERFORMANCE AND MARKET STRUCTURE

October 31 / 31 Ekim

13:30-14:30

Building A - Classroom 2

*The Markup-Inflation Nexus in Türkiye: Insights from Firm-level Data*

**Şamil Pişma** (Turkish Competition Authority, Türkiye)

**Onur Yeni** (Hacettepe University, Türkiye)

*Licensing in a Differentiated Product Duopoly with Price and Quantity Contracts*

**Mehmet Ercoşkun** (TOBB-UET, Türkiye)

**Serhat Gökçekli** (TOBB-UET, Türkiye)

**İsmail Sağlam** (TOBB-UET, Türkiye)

**Gizem Yılmaz** (TOBB-UET, Türkiye)

*Zombie Firms in Network: Congestion and Evergreening*

**Okan Akarsu** (CBRT, Türkiye)

**Emrehan Aktuğ** (CBRT, Türkiye)

**Huzeyfe Torun** (CBRT, Türkiye)

Convenor: **Seyit Mümin Cilasun** (TED University, Türkiye)

### T2D PARASAL İKTİSAT

October 31 / 31 Ekim

13:30-14:50

Building A - Classroom 3

*Türkiye’de Merkez Bankası Dijital Parası: Geleceğin Para Sistemi Olabilir mi?*

**Derya Türker Yöntem** (Çukurova University, Türkiye)

*Kısa Dönem Faizler ile Uzun Dönem Faizler Arasındaki İlişki: Türkiye Örneği*

**Ayşe Tuncer** (Pamukkale University, Türkiye)

*Türkiye’de Reel Sektör Firmalarının Satış, İhracat ve Enflasyon Oranlarına İlişkin Beklenti Hatalarının Belirleyicileri*

**Petre Caraiani** (Bucharest University, Romania)

**Nazlı Karamollaoğlu** (MEF University, Türkiye)

**Cihan Yalçın** (CBRT, Türkiye)

*Kurumsal Firmaların Döviz Pozisyonu Takibi*

**Aylin Aslan** (CBRT, Türkiye)

Convenor: **Başak Tanyeri-Günsür** (Bilkent University, Türkiye)



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### T2E ENVIRONMENT AND DEVELOPMENT

October 31 / 31 Ekim

13:30-14:50

Building A - Classroom 4

*Harnessing the Sun: Welfare Gains and Economic Incentives for Prosumers*

**Tunç Durmaz** (Yıldız Technical University, Türkiye)

**Aude Pommeret** (University Savoie Mont Blanc, France)

**Ian Ridley** (City University of Hong Kong, Hong Kong)

*The Impact of Environmental Regulations on Waste Trade*

**Kemal Türkcan** (Akdeniz University, Türkiye)

**Hilal Koçlu** (Akdeniz University, Türkiye)

*Nickel-Powered Sustainability: Revolutionizing the Energy Economy Through Lithium Batteries*

**Sıdıka Başçı** (Ankara Yıldırım Beyazıt University, Türkiye)

**Kayla Shevadena** (University of Bologna, Italy)

*The Relationship Between Happiness and Pro-environmental Behavior: Evidence from Europe*

**N. Merve Hamzaoglu** (Istanbul Kültür University, Türkiye)

Convenor: **Fatma Doğruel** (Ekonomi-TEK, Türkiye)

### T2KA KEYNOTE ADDRESS II

October 31 / 31 Ekim

15:10-15:55

Umut Ertürk Conference Hall

*Kahramanmaraş Depremlerinin Mikro Veriye Dayalı Ekonomik Etki Analizi*

**Kamil Yılmaz** (Koç University, Türkiye)

Convenor: **Erol Taymaz** (METU, Türkiye)

### T3A EDUCATION, HEALTH and ECONOMIC DEVELOPMENT

October 31 / 31 Ekim

16:15-17:35

Umut Ertürk Conference Hall

*The Long Shadow of PKK Conflict in Türkiye*

**Mevlude Aknulut Yuksel** (Dalhousie University, Canada)

**Dozie Okoye** (Dalhousie University, Canada)

**Belgi Turan** (TOBB-UET, Türkiye)

*Taller and higher in status: The Impact of Height on Occupational Prestige Scores in Türkiye*

**Ekin Çalıcı Kıyak** (Galatasaray University, Türkiye)

**Sezgin Polat** (Galatasaray University, Türkiye)

*The Effect of Rental Prices on Student Mobility*

**Merve B. Gökçe** (Boğaziçi University, Türkiye)

*Pathways to Progress: The Gender Roles and Intergenerational Educational Mobility in Türkiye*

**Elif Erbay** (Istanbul University, Türkiye)

Convenor: **Bilge Eriş-Dereli** (Marmara University, Türkiye)



**T3B FINANCIAL ECONOMICS - I**

October 31 / 31 Ekim

**16:15-17:35**

Building A - Classroom 1

*How did UK firms use the COVID loans during the pandemic?*

**Ahmet Deryol** (King's College London, UK & CBRT, Türkiye)

**Christiane Kneer** (Bank of England, UK)

*Do the De-dollarization Regulations Affect Interest Rates? Evidence from Türkiye*

**Halil İbrahim Aydın** (CBRT, Türkiye)

**Tuba Pelin Sümer** (CBRT, Türkiye)

*Modeling and Forecasting Yield Curves: A Comparative Analysis of Parametric vs. Machine Learning Techniques*

**Cemal Öztürk** (Pamukkale University, Türkiye)

*An Analysis of Exchange Rate Jumps in Türkiye: A Two-Phase Approach Before and After the Currency-Protected Deposit System*

**Savaş Gayaker** (Ankara Hacı Bayram Veli University, Türkiye)

**Hasan Türe** (Ankara Hacı Bayram Veli University, Türkiye)

**Erkan Ağaslan** (Kütahya Dumlupınar University, Türkiye)

Convenor: **Gülçin Özkan** (King's College, London, UK)

**T3C EKONOMİ POLİTİKASI**

October 31 / 31 Ekim

**16:15-17:35**

Building A - Classroom 2

*İhracata Dayalı Büyüme Modelinin Yoksullaştırma Etkisi: Türkiye Ekonomisi için Nardl Modelinden Kanıtlar*

**Hatice Bozkurt** (Ordu University, Türkiye)

*Türkiye Ekonomisinde Makro İhtiyati Politikaların Etkinliği: SVAR Ve Dinamik Bağlantılılık Yaklaşımı*

**Burhan Biçer** (Çukurova University, Türkiye)

**Fikret Dülger** (Çukurova University, Türkiye)

**Uğur Akkoç** (Pamukkale University, Türkiye)

*Dostlar Alışverişte Görsün:*

*Türkiye'nin Dış Ticaret Kompozisyonunda Dost Ülkelerden Tedarik Yaklaşımı*

**Feridun Tur** (TSKB, Türkiye)

**Buket Alkan** (Fenerbahçe University, Türkiye)

Convenor: **Serkan Çiçek** (Muğla Sıtkı Koçman University, Türkiye)



### T3D İŞGÜCÜ PİYASASI

October 31 / 31 Ekim

16:15-17:35

Building A - Classroom 3

*Türkiye’de İşsizlik ve Dışa Açıklık Oranı İlişkisi (2013-2021)*  
**Fatimatuzzehra Turkoglu** (TOBB-UET and Katip Çelebi University, Türkiye)

*Kahramanmaraş Depremleri Sonrası İş Geçişleri: Birey Düzeyinde Bir Analiz*  
**Muhammet Enes Çıraklı** (CBRT, Türkiye)

*Türkiye’de İşgücü Piyasası Uyumsuzluğu*  
**Deniz Plevneli Düzçay** (CBRT, Türkiye)  
**Meltem Dayıoğlu Tayfur** (METU, Türkiye)

Convenor: **Burcu Düzgün Öncel** (Marmara University, Türkiye)

### T3E DIŞ TİCARET I

October 31 / 31 Ekim

16:15-17:35

Building A - Classroom 4

*Gelişmiş ve Gelişmekte olan Ülkelerin İhracat Fiyat Endekslerinde Kalıcılık Değişimlerinin Analizi*  
**Almila Burgaç Çil** (Çukurova University, Türkiye)  
**Fikret Dülger** (Çukurova University, Türkiye)  
**H. Mahir Fisunoğlu** (Çağ University, Türkiye)

*Küresel Sanayi Ürünleri Dış Ticaretindeki Gelişmeler Çerçevesinde Türkiye’de Sanayi Sektörünün Üretim Ve İhracat Yapısının Sürdürülebilirliği*  
**Mevlüt Çetinkaya** (Socar, Türkiye)  
**Yaşar Uysal** (Dokuz Eylül University, Türkiye)

*Ejderhaya Meydan Okumak: Türkiye’nin Çin’in AB Pazarındaki Genişlemesine Karşı İhracat Görünümü*  
**Mert Can Duman** (Hacettepe University, Türkiye)

Convenor: **Ferda Halıcıoğlu** (University of Bradford, UK)



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## DAY 2

### F1A APPLIED MICROECONOMICS

November 1 / 1 Kasım

09:00-10:20

Umut Ertürk Conference Hall

*Identification in Social Sciences Using Observational Data*

**Fırat Bilgel** (MEF University, Türkiye)

*Identifying the Socioeconomic Factors for Low Seafood Consumption in a Coastal Nation: The Case of Türkiye*

**Volkan Güngör** (Yıldız Technical University, Türkiye)

**Hüseyin Taştan** (Yıldız Technical University, Türkiye)

*Tradeoffs in Choosing Nicotine Products in Türkiye: Evidence from a Discrete Choice Experiment*

**Asena Caner** (TOBB-UET, Türkiye)

**Belgi Turan** (TOBB-UET, Türkiye)

**Yenal Can Yiğit** (TOBB-UET, Türkiye)

**Donald S. Kenkel** (Cornell University, USA)

**Alan D. Mathios** (Cornell University, USA)

*Unravelling the cooperative performance: Factors influencing social capital in Sweden*

**Filiz Malkoc Kinikli** (Swedish University of Agricultural Sciences, Sweden)

**Kostas Karantininis** (Swedish University of Agricultural Sciences, Sweden)

Convenor: **Hüseyin Taştan** (Yıldız Technical University, Türkiye)

### F1B PRICES AND INFLATION

November 1 / 1 Kasım

09:00-10:20

Building A - Classroom 1

*Temperature, precipitation and food price inflation: Evidence from a panel of countries*

**Hülya Saygılı** (Atılım University, Türkiye)

**Meltem Chadwick** (South East Asian Central Banks Research and Training Centre, Malaysia)

*TV News and Inflation Expectations*

**Hamza Polattimur** (Turkish-German University, Türkiye)

**Semih Emre Çekin** (Turkish-German University, Türkiye)

*Non-response Bias in Household Inflation Expectations Surveys*

**Jaqueson K. Galimberti** (Australian National University, Australia)

**Meltem Chadwick** (South East Asian Central Banks Research and Training Centre, Malaysia)

**Rennae Cherry** (Reserve Bank of New Zealand, New Zealand)

*An Analysis of Volatility of Oil Prices and Exchange Rates for the Türkiye*

**Yusuf Yalçınkaya** (Artvin Çoruh University, Türkiye)

**İpek Kurt** (Artvin Çoruh University, Türkiye)

Convenor: **Burçhan Sakarya** (Başkent University, Türkiye)





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### F1C MAKROEKONOMİ

November 1 / 1 Kasım

09:00-10:20

Building A - Classroom 2

*Türkiye’de İş, Kredi ve Finansal Döngüler Arasındaki Senkronizasyon*

**Ayşegül Özkan** (Uşak University, Türkiye)

*Okun Yasası Cinsiyetlere Göre Farklılaşır mı? Türkiye Ekonomisi Üzerine Ampirik Bir Analiz*

**Muhammed Talha Şen** (Hasan Kalyoncu University, Türkiye)

**Mehmet Hanifi Aslan** (Hasan Kalyoncu University, Türkiye)

*Türkiye'nin GSYH'sinin Çeyreklikten Aylığa Dönemsel Ayrıştırılması: Durum-Uzay Modeli Yaklaşımı*

**Özlem Yiğit** (TurkStat, Türkiye)

Convenor: **Cihan Yalçın** (CBRT, Türkiye)

### F1D EĞİTİM, SAĞLIK ve KALKINMA: SUUT DOĞRUEL'İN ANISINA

November 1 / 1 Kasım

09:00-10:20

Building A - Classroom 3

*2018 Yılı Pisa Sonuçları Bağlamında Seçili Doğu Avrupa ve Orta Asya Ülkeleri'nin Eğitim Sonuçlarının Analizi*

**Aynur Uçkaç** (Aydın Adnan Menderes University, Türkiye)

*Eğitimde Fırsat Eşit(siz)liği: OECD Ülkeleri Çerçevesinde Değerlendirme*

**Şansel Özpınar** (Aydın Adnan Menderes University, Türkiye)

*Covid-19 sonrası Türkiye’de Ruh Sağlığının Belirleyicileri*

**Tuğçe Çevik Kılboz** (İstanbul Medeniyet University, Türkiye)

**Etem Hakan Ergeç** (İstanbul Medeniyet University, Türkiye)

*Tüketim Eşitsizliğine İlişkin Beş Büyük Soru ve Türkiye Ekonomisinden Yanıtlar*

**Uğur Akkoç** (Pamukkale University, Türkiye)

Convenor: **Mahmut Tekçe** (Marmara University, Türkiye)



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### F1E INDUSTRIAL POLICY and SUSTAINABLE DEVELOPMENT

November 1 / 1 Kasım

09:00-10:20

Building A - Classroom 4

*Economic Analysis of CCUS: Market Dynamics and Policy Implications*

**Tunç Durmaz** (Yıldız Technical University, Türkiye)

**Jülide Ceren Ahi** (Norwegian Research Centre (NORCE), Norway)

**Atle Blomgren** (Norwegian Research Centre (NORCE), Norway)

*Rethinking Income Inequality and Subjective Well-being Paradox for Türkiye*

**Yeşim Üçdoğruk Gürel** (Dokuz Eylül University, Türkiye)

*THE Achievement of SDG 15 in view of Biodiversity Loss and New Industrial Policy in Türkiye*

**Türkan Turan** (Istanbul University, Türkiye)

*Regime Switching Dynamics of Electricity from Hydropower Production in High-Income Economies*

**Burak Arslan** (Anadolu University, Türkiye)

**Fatma Arslan** (Anadolu University, Türkiye)

**İsmail Onur Baycan** (Anadolu University, Türkiye)

Convenor: **Hasan Murat Ertuğrul** (Anadolu University, Türkiye)



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### F1KA KEYNOTE ADDRESS III

November 1 / 1 Kasım

10:40-11:25

Umut Ertürk Conference Hall

*Food System Transformations for Sustainable Development*  
**Kostas Karantininis** (Swedish University of Agricultural Sciences, Sweden)

Convenor: **Alper Güzel** (Ondokuz Mayıs University, Türkiye)

### F2A İKTİSAT BİLİMİNDE KADIN İNİSİYATİFİ

November 1 / 1 Kasım

11:45-13:05

Umut Ertürk Conference Hall

*İktisat Biliminde Kadın İnisiyatifi (İBKİ): Eşitlik İçin Bir Araya Gelme ve Değişim Talepleri*

**Ayça Tekin-Koru** (TED University, Türkiye)

**Elif Akbostancı** (METU, Türkiye)

**Emel Memiş Parmaksız** (Ankara University, Türkiye)

**Nergiz Nazire Dinçer** (TED University, Türkiye)

**Pınar Derin-Güre** (METU, Türkiye)

**Ünay Tamgaç Tezcan** (TOBB-UET, Türkiye)

*Türkiye'de İktisat Biliminde Cinsiyet Eşitsizliği: Kadınların Üniversite İçindeki Konumu*

**Elif Akbostancı** (METU, Türkiye)

**Pınar Derin-Güre** (METU, Türkiye)

**Ünay Tamgaç Tezcan** (TOBB-UET, Türkiye)

*Kadın İktisatçıların Küresel Durumu: Eşitsizlikler, Fırsatlar ve Mücadeleler*

**Ayça Tekin-Koru** (TED University, Türkiye)

**Nergiz Nazire Dinçer** (TED University, Türkiye)

**Meltem Dayıoğlu Tayfur** (TED University, Türkiye)

*Türkiye'de İktisat Biliminde Kadınların Karşılaştığı Eşitsizlikler: Mülakatlarla Vurgulanmış Farklılıklar*

**Ayça Tekin-Koru** (TED University, Türkiye)

**Nergiz Nazire Dinçer** (TED University, Türkiye)

**Pınar Derin-Güre** (METU, Türkiye)

**Ünay Tamgaç Tezcan** (TOBB-UET, Türkiye)

Convenor: **Gülay Günlük-Şenesen** (İstanbul Üniversitesi, Türkiye)



### F2B FINANCIAL ECONOMICS - II

November 1 / 1 Kasım

11:45-13:05

Building A - Classroom 1

*Financial Crisi, Global Liquidity and Trade Credit Channel: Evidence from Türkiye*

**Can Kadirgan** (CBRT, Türkiye)

**Pınar Özlü** (CBRT, Türkiye)

*Are SMEs Ready for Climate Action? A Discussion of Access to Finance and Sustainability Reporting Challenges*

**Canan Özkan** (CBRT, Türkiye)

**Nesrin Okay** (Boğaziçi University, Türkiye)

*Why Do Firms Strategically Delay Payments of Corporate Loans?*

**Ahmet Deryol** (King's College London, CBRT, Türkiye)

*Aggregate Earnings and Global Equity Returns*

**Yigit Atilgan** (Sabanci University, Türkiye)

**K. Ozgur Demirtas** (Sabanci University, Türkiye)

**A. Doruk Gunaydin** (Sabanci University, Türkiye)

**Aynur Dilan Tosun** (Sabanci University, Türkiye)

**Duygu Zirek** (Montclair State University, USA)

Convenor: **Kamil Yılmaz** (Koç University, Türkiye)

### F2C LABOR MARKET and WAGES

November 1 / 1 Kasım

11:45-13:25

Building A - Classroom 2

*The Impact of Minimum Wage Shock on Robot Adaption in Türkiye*

**Yusuf Emre Akgündüz** (Sabanci University, Türkiye)

**Uğur Aytun** (Dumlupinar University, Türkiye)

**Seyit Mümin Cilasun** (TED University, Türkiye)

*Prison Work Programs and Wages in the US*

**Fadime İrem Doğan** (Bahçeşehir University, Türkiye)

*Domestic Outsourcing and Wages in Türkiye*

**Eren Gürer** (Middle East Technical University, Türkiye)

**Erol Taymaz** (Middle East Technical University, Türkiye)

*Firm-level Effects of Minimum Wages*

**Yusuf Emre Akgündüz** (Sabanci University, Türkiye)

**Uğur Aytun** (Dumlupinar University, Türkiye)

**Seyit Mümin Cilasun** (TED University, Türkiye)

*Key Factors Influencing Household Incomes and the Impact of Inequality in Türkiye*

**Raziye Selim** (İstanbul Technical University, Türkiye)

**Suat Kucukcifci** (İstanbul Technical University, Türkiye)

Convenor: **Sinem Sefil Tansever** (İstanbul Ticaret University, Türkiye)



### F2D REGIONAL ANALYSES

November 1 / 1 Kasım

11:45-13:25

Building A - Classroom 3

*Impact of the places that we live in: Analyzing the influence of regional conditions on individual unemployment*

**Burhan Can Karahasan** (MEF University, Türkiye)

*Geography and Economic Development: Subnational Evidence from Türkiye*

**M. Aykut Attar** (Hacettepe University, Türkiye)

**Seda Başhoş** (University of Cambridge, King's College, UK)

*Skilled Labor Convergence across Turkish regions: A Club Convergence Algorithm Approach*

**Bilge Eris-Dereli** (Marmara University, Türkiye)

**Mehmet Pinar** (Universidad de Sevilla, Spain)

*Effect of Agglomeration on Productivity in Türkiye*

**Çiğdem Ekiz** (UNU-MERIT, Netherlands)

**Sıla Erikci** (Bilkent University, Türkiye)

*Productivity Benefits of Denser Cities:*

*Agglomeration and Firm Selection in Manufacturing Sector in Türkiye*

**Enver Sait Kurtaran** (CBRT, Yıldız Technical University, Türkiye)

**Hüseyin Taştan** (Yıldız Technical University, Türkiye)

Convenor: **Fırat Bilgel** (MEF University, Türkiye)

### F2E PARA POLİTİKASI

November 1 / 1 Kasım

11:45-13:05

Building A - Classroom 4

*Türkiye’de Para Politikasının İşsizlik Üzerindeki Etkisi*

**Nagihan Aksoy** (Pamukkale Üniversitesi, Türkiye)

**Mehmet İvrendi** (Pamukkale Üniversitesi, Türkiye)

*Enflasyonun Belirleyicilerine Dair Yeni Paradigma: Ücret Artışları Mı Kâr Artışları Mı?*

**Hatice Bozkurt** (Ordu University, Türkiye)

**Seval Mutlu Çamoğlu** (Ordu University, Türkiye)

*Türkiye’de Döviz Kuru ve Politik Belirsizliğin Piyasa Faiz Oranları ve Enflasyon Üzerindeki Etkisi*

**Şiyar Canpolat** (Bitlis Eren University, Türkiye)

*Faiz İndiriminin Gölgesinde: Türkiye'nin Enflasyonla Mücadelesine Sentetik Bir Bakış*

**Metin Tetik** (Uşak University, Türkiye)

**E. Tuğbanur Cigeroğlu** (Türkiye)

Convenor: **Cihan Yalçın** (CBRT, Türkiye)



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### F2F MONEY, FINANCE AND THE FIRM

November 1 / 1 Kasım

11:45-13:05

Building B - Classroom 1

*Corporate vulnerability in Türkiye and its responsiveness to exchange rate and interest rate shocks*

**Utku Özmen** (World Bank, USA)

*We Are Different: The Drivers of Asset Quality in Loan Type and Sectoral Breakdowns*

**Mehmet Selman Çolak** (CBRT, Türkiye)

**Hüseyin Öztürk** (CBRT, Türkiye)

**Yavuz Kılıç** (CBRT, Türkiye)

**Mehmet Emre Şamcı** (CBRT, Türkiye)

*Reginal Cash Usage in Türkiye: Dynamics and Clustering Analyses of Provinces from 2018-2022*

**Nurten Sinem Keser** (CBRT, Türkiye)

*Determinants of Firm Exit: Empirical Evidence from Türkiye*

**Özge Kama Masala** (Yıldız Technical University, Türkiye)

**Tolga Aksoy** (Yıldız Technical University, Türkiye)

**Murat Donduran** (Yıldız Technical University, Türkiye)

Convenor: **Murat Donduran** (Yıldız Technical University, Türkiye)



**F2KA KEYNOTE ADDRESS IV**

November 1 / 1 Kasım

14:00-14:50

Umut Ertürk Conference Hall

*The Great Growth Challenge*  
**Ayhan Köse** (The World Bank, USA)

Convenor: **Gülçin Özkan** (King's College, London, UK)

**TEA Panel / TEK Paneli: İKTİSAT BİLİMİNDE YAYIN ve EKONOMİ-TEK DERGİSİ**

November 1 / 1 Kasım

15:10-16:10

Umut Ertürk Conference Hall

**Murat Donduran** (Yıldız Technical University, Türkiye)  
**Oya Kent** (İstanbul Okan University, Türkiye)  
**Yılmaz Kılıçaslan** (Anadolu University, Türkiye)  
**Oytun Meçik** (Eskişehir Osmangazi University, Türkiye)  
**Mahmut Tekçe** (Marmara University, Türkiye)  
**Cihan Yalçın** (CBRT, Türkiye)  
**Kamil Yılmaz** (Koç University, Türkiye)

Convenor: **Fatma Doğruel** (Ekonomi-TEK, Türkiye)

**F3A EDUCATION AND RESEARCH IN PRESENT AND FOR THE FUTURE**

November 1 / 1 Kasım

16:20-17:40

Umut Ertürk Conference Hall

**Hasan Kazdağlı** (TEA President)  
**Tae Oum** (WCTRS President)

*Research and Education in a World of Transformation*  
**Yücel Candemir** (Istanbul Technical University, Türkiye)  
**Dilay Çelebi** (Istanbul Technical University, Türkiye)  
**Fusun Ülengin** (Sabancı University, Türkiye)

*Enhancing Transport Policy Decision-Making through AI-Based Innovation System Analysis*  
**Daniel Weiss** (DLR, Germany)

*The identification of critical transport infrastructures (specific, incl. modeling)*  
**Werner Rothengatter** (KIT, Germany)

*Interdisciplinary Research Framework of Urban and Transportation Systems:  
Urbanimmunology and Transport-in-All-Policies Approach*  
**Junyi Zhang** (Southeast University, China)

Convenor: **Tae Oum** (University of British Columbia, Canada)



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### F3B FINANCIAL MARKETS AND INSTITUTIONS

November 1 / 1 Kasım

16:20-17:40

Building A - Classroom 1

*Boon or Bane? The Impact of Loan Supply and Demand Shocks on Loan Price Dispersion*

**Salih Zeki Atılgan** (CBRT, Türkiye)

**Tarık Aydoğdu** (CBRT, Türkiye)

**Hüseyin Öztürk** (CBRT, Türkiye)

**Muhammed Hasan Yılmaz** (CBRT, Türkiye)

*Brokerage house connections and information transmission*

**Murat Tiniç** (Kadir Has University, Türkiye)

**Başak Tanyeri-Günsür** (Bilkent University, Türkiye)

*Algorithmic Trading's Effect on Market Liquidity and Volatility in Borsa Istanbul*

**Mohamed Sarhan** (Bahçeşehir University, Türkiye)

**Umut Ugurlu** (Bahçeşehir University, Türkiye)

Convenor: **Tolga Omay** (Atılım University, Türkiye)

### F3C INTERNATIONAL TRADE: IN MEMORY OF GÜZİN ERLAT

November 1 / 1 Kasım

16:20-17:40

Building A - Classroom 2

*The Survival of Export Links for Türkiye*

**Didem Yazıcı** (CBRT, Türkiye)

**Elif Akbostancı Özkazanç** (Middle East Technical University, Türkiye)

*State Separation, Landlockedness, and Trade: Evidence from a Natural Experiment*

**Dessie Tarko Ambaw** (University of South Australia, Australia)

**Habtamu Edjigu** (The World Bank, USA)

**Nicholas Sim** (Singapore University of Social Sciences, Singapore)

*The Impact of Expectations and Uncertainty on Export Dynamics: Evidence from Türkiye*

**Nazire Nergiz Dinçer** (TED University, Türkiye)

**Yeliz Yalçın** (Ankara Hacı Bayram Veli University, Türkiye)

**Cengiz Arıkan** (OECD Istanbul Centre, Türkiye)

*Evaluating Türkiye's Export Performance:*

*The Impact of Product Complexity, Exchange Rates, and Economic Growth*

**Mert Can Duman** (Hacettepe University, Türkiye)

**Ayşen Sivrikaya** (Hacettepe University, Türkiye)

Convenor: **Yeşim Üçdoğruk Gürel** (Dokuz Eylül University, Türkiye)





### F3D SÜRDÜRÜLEBİLİRLİK VE ÇEVRESEL EKONOMİ

November 1 / 1 Kasım

16:20-17:20

Building A - Classroom 3

*Doğrusal Ekonomiden Döngüsel Ekonomiye Geçişte Mali Yerleşme: Türkiye için Bir Öneri*

**Yiğit Yıldız** (Ministry of Treasury and Finance, Türkiye)

**Mustafa Göktuğ Kaya** (Ministry of Treasury and Finance, Türkiye)

*Türkiye'de Çevresel Sürdürülebilirlik: Ekonomik Büyüme, Tarım, Yenilenebilir Enerji ve Ticaretin Roller*

**Şifa Özkan** (Doğuş University, Türkiye)

**Seyit Ali Miçooğulları** (Kilis 7 Aralık University, Türkiye)

*Sürdürülebilirliğin Sağlanması Bağlamında Çevresel Etkilerin Dinamiklerinin Araştırılması: OECD*

*Ülkelerinden Kanıtlar*

**Kadir Akgündüz** (İzmir Demokrasi University, Türkiye)

**Menekşe Çiçek** (İzmir Demokrasi University, Türkiye)

**Çağla Oduncular** (İzmir Demokrasi University, Türkiye)

Convenor: **Hakan Yılmaz** (TEPAV, Türkiye)

### F3E İKTİSATTA SEÇME KONULAR

November 1 / 1 Kasım

16:20-18:00

Building A - Classroom 4

*Adaletin Tesis Edilebilmesinde Özgecilik Kavramının Rolü*

**Yıldız Zeliha Hatipoğlu** (Istanbul Aydın University, Türkiye)

*İktisada Giriş I Dersinde Yaşanan Öğrenme Güçlüklerinin Belirlenmesi: İzmir Demokrasi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Örneği*

**Bedriye Tunçsiper** (İzmir Demokrasi Üniversitesi, Türkiye)

**Dilek Sürekçi Yamaçlı** (İzmir Demokrasi Üniversitesi, Türkiye)

*Cumhuriyetin Kuruluşundan Günümüze Türkiye'nin 100 Yıllık İktisadi Tarihi*

**Perihan Hazel Kaya** (Selçuk University, Türkiye)

*Womenomics: Japonya'da Bir Kalkınma Yaklaşımı Olarak Toplumsal Cinsiyet Eşitliği*

**Meltem İnce Yenilmez** (İzmir Democracy University, Türkiye)

Convenor: **Emine Tahsin** (İstanbul University, Türkiye)



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### F3F FİYAT

November 1 / 1 Kasım

16:20-17:20

Building B - Classroom 1

*Sinyal Mekanizmasının, Algıda Seçiciliğin ve Ataletin Durağan Yatırım Stratejisi Üzerindeki Etkilerinin  
Evrimsel Oyun Teorisi ile İncelenmesi*

**Aras Yolusever** (Istanbul Kültür University, Türkiye)

**Ercan Eren** (Yıldız Technical University, Türkiye)

*Ekmek Kavgası: Cumhuriyetin İlk Yıllarında İzmir’de Ekmek ve Buğday Fiyatları Üzerinden Burjuvazinin Sınıf  
İçi Çatışmalarını Anlamak (1922-1925)*

**Osman Akar** (İzmir Katip Çelebi University, Türkiye)

*Türkiye için Dinamik Enflasyon Ataleti Tahmini: Kalman Filtresi Analizi*

**Hasan Murat Ertuğrul** (Anadolu University, Türkiye)

**Onur Polat** (Bilecik Şeyh Edebali University, Türkiye)

**Burçhan Sakarya** (Başkent University, Türkiye)

*Pandemi Kısıtlamalarının Ödeme Alışkanlıklarına Etkisi*

**Dilan Teber Koçer** (CBRT, Türkiye)

Convenor: **İsmail Onur Baycan** (Anadolu University, Türkiye)



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## DAY 3

### S1A INFORMATION, UNCERTAINTY and DECISION-MAKING

November 2 / 2 Kasım

09:00-10:20

Umut Ertürk Conference Hall

*Learning with State-Dependent Preferences*  
**Cavit Görkem Destan** (TED University, Türkiye)

*Decentralized Many-to-One Matching with Random Search*  
**Günnur Ege Bilgin** (University of Bonn, Germany)

*Will Robots be Taxed?*  
**Hüseyin Can Hacıbebekoğlu** (İstanbul Ticaret University, Türkiye)  
**Burak Ünveren** (Yıldız Technical University, Türkiye)

*Deciphering Contagion in Turkish Financial Markets: A Novel R2  
Decomposed Connectedness Approach*  
**Onur Polat** (Bilecik Şeyh Edebali University, Türkiye)

Convenor: **Murat Donduran** (Yıldız Technical University, Türkiye)

### S1B GENDER STUDIES

November 2 / 2 Kasım

09:00-10:00

Building A - Classroom 1

*Women's Development from Perspective of Sustainable Development Goals: A Gender-Based Empirical  
Approach*

**Kevser İnce** (Erciyes University, Türkiye)  
**Fatma Ünlü** (Erciyes University, Türkiye)

*Female Employment and the Role of Structural Transformation Revisited*  
**Gönül Şengül** (The University of Texas at Austin, USA)

*Social Capital, Fertility Decision, and Economic Growth: Evidence from Türkiye*  
**Barış Alpaslan** (Social Sciences University of Ankara, Türkiye)  
**Nilay Yörük Toraman** (Social Sciences University of Ankara, Türkiye)

Convenor: **Ayşen Sivrikaya** (Hacettepe University, Türkiye)



### S1C FİYAT ve ENFLASYON

November 2 / 2 Kasım

09:00-10:20

Building A - Classroom 2

*Türkiye’de Döviz Kurlarının Sektörel Enflasyon ve İç Ticaret Hadleri Üzerine Etkisinin Analizi*

**Yaşar Uysal** (Dokuz Eylül University, Türkiye)

**Nilgün Acar Balaylar** (Dokuz Eylül University, Türkiye)

*Türkiye’de Enflasyon ve Küreselleşme: Phillips Eğrisi Perspektifi*

**Hande Erk** (Dokuz Eylül University, Türkiye)

**Hamdi Emeç** (Dokuz Eylül University, Türkiye)

*Kripto Paralar Portföy Çeşitliliği Midir? Kıymetli Metaller İle Arasında Doğrusal Olmayan Eşbütünleşme Analizi*

**Şencan Felek** (Pamukkale University, Türkiye)

**Reşat Ceylan** (Pamukkale University, Türkiye)

*Çevresel Phillips Eğrisinin Analizi: Yüksek Düzeyde Küreselleşmiş Avrupa Ülkelerinde Küreselleşme, Ekonomik Büyüme ve Kurumsal Kalitenin Yük Kapasitesi Faktörü Üzerindeki Etkisi*

**Süleyman Değirmen** (Mersin University, Türkiye)

**Seyit Ali Miçooğulları** (Kilis 7 Aralık University, Türkiye)

**Erdal Alancioğlu** (Harran University, Türkiye)

Convenor: **Uğur Akkoç** (Pamukkale University, Türkiye)

### S1D ENERJİ VE ÇEVRE

November 2 / 2 Kasım

09:00-10:20

Building A - Classroom 3

*Türkiye’de Enerji Güvenliği Riskinin Belirleyicileri*

**Ergün Aktürk** (Atatürk University, Türkiye)

**Sena Gültekin** (Atatürk University, Türkiye)

*Jeopolitik Riskin Yatırımcıların Yenilenebilir Enerjiye Olan İlgisi Üzerindeki Etkileri: Küresel Düzeyde ve Türkiye’de Kanıtlar*

**Özge Kandemir Kocaaslan** (Hacettepe University, Türkiye)

**Ayşegül Uçkun Özkan** (KTO Karatay University, Türkiye)

*Finansal İnovasyon ve Yenilenebilir Enerji Tüketimi Çevresel Kaliteyi İyileştiriyor mu? Avrupa Birliği Ülkelerinden Kanıtlar*

**Mehtap Tunç** (Dokuz Eylül University, Türkiye)

**Ahsen Emir Bulut** (Dokuz Eylül University, Türkiye)

Convenor: **Tunç Durmaz** (Yıldız Technical University, Türkiye)



### S1E BÖLGESEL ÇALIŞMALAR

November 2 / 2 Kasım

09:00-10:00

Building A - Classroom 4

*İlave 6 Puanlık Bölgesel Sigorta Prim Teşvikinin İstihdama ve Kayıtlılığa Etkisi*

**Muhammet Enes Çıraklı** (CBRT, Türkiye)

*Bölgesel ve Sektörel Perspektiften Türkiye’de E-Ticaretin Ekonomik Etkileri*

**Pınar Özcanlı Baran** (Istanbul Technical University, Türkiye)

**Ferhan Gezici** (Istanbul Technical University, Türkiye)

*Taşra Üniversitelerinin Bölgesel Ekonomik Etkisi: Muğla Üniversitesi Örneği*

**Ahmet Salih İkiz** (Muğla Sıtkı Koçman University, Türkiye)

Convenor: **H. Mahir Fisunoğlu** (Çağ University, Türkiye)

### SKA1 KEYNOTE ADDRESS V

November 2 / 2 Kasım

10:40-11:25

Umut Ertürk Conference Hall

*Anatomy of macroeconomic policy and redistribution:  
the case of monetary, fiscal and macroprudential policy*

**Gülçin Özkan** (King’s College, London, UK)

Convenor: **Erdem Başçı** (TED University, Türkiye)

### S2A MICROECONOMICS: HOUSEHOLD BEHAVIOUR

November 2 / 2 Kasım

13:00-14:20

Umut Ertürk Conference Hall

*Hand-To-Mouth Households in Türkiye: Evidence from Household Finance and Consumption Survey*

**Okan Akarsu** (CBRT, Türkiye)

**Emrehan Aktuğ** (Sabancı University, Türkiye)

**Müşerref Küçükbayrak** (CBRT, Türkiye)

*Analyzing Gold as a Saving Instrument through Household Budget Survey: “Altın Günü” in the Economy*

**Burçhan Sakarya** (Başkent University, Türkiye)

**Mubina İpek** (TR Presidency of Strategy and Budget, Türkiye)

*Revenge Consumption and Financial Behavior Post-Crisis: The Role of Saving Incentives and Risk Tolerance*

**Ye Zhang** (Koç University, Türkiye)

**Fahri Bağır** (Istanbul Atlas University, Türkiye)

**Özlem Arzu Azer** (Istanbul Atlas University, Türkiye)

*Socio-Economic Determinants of Household Consumption Expenditures in Türkiye*

**Emre Yüksel** (TR Presidency of Strategy and Budget, Türkiye)

**Dilek Başar** (Hacettepe University, Türkiye)

Convenor: **Didem Pekkurnaz** (Başkent University, Türkiye)



### S2B ECONOMIC POLICY

November 2 / 2 Kasım

13:00-14:20

Building A - Classroom 1

*Analysis of Disinflationary Policies in Türkiye within the Framework of Inflation Theories by ARDL Bounds Test*

**Bilge Çipe** (Türkiye)  
**Dilek Usanmaz** (Türkiye)

*Does the Inverse Interest Rate-Investment Nexus Hold in the USA?*  
**Mustafa İsmihan** (Eastern Mediterranean University (EMU), Türkiye)  
**Mustafa Can Küçük** (Atılım University, Türkiye)  
**Fatma M. Utku İsmihan** (METU, Türkiye)

*Türkiye's Economic Trilemma: Inflation, Inequality, and Growth*  
**Caner Özdurak** (Beykoz University, Türkiye)  
**Bilge Çipe** (Türkiye)

**Convenor: Erhan Aslanoğlu** (İstanbul Topkapı University, Türkiye)

### S2C TARIM VE DOĞAL KAYNAKLAR

November 2 / 2 Kasım

13:00-14:40

Building A - Classroom 2

*Sözleşmeli Tarımın Yayılma Etkileri*  
**Mustafa Özseri** (Konya Food and Agriculture University, Türkiye)  
**Yılmaz Kılıçaslan** (Anadolu University, Türkiye)

*Türkiye'de Tarım Dış Ticaretin Sektörel Büyümeye Etkisi*  
**Seval Mutlu Çamoğlu** (Ordu University, Türkiye)

*İklim Değişikliğinin Tarım Sektörü Üzerine Etkisi: Ampirik Bir Analiz*  
**Çağatay Tunçsiper** (Centrade Fulfillment Services, Türkiye)  
**Fatma Dahin** (İzmir Demokrasi University, Türkiye)

*Türkiye'de Hayvan Yemi Endüstrisinde Asimetrik Fiyat İletimi Var mı? NARDL Yaklaşımı*  
**Özgür Bor** (Başkent University, Türkiye)  
**Nihat Dağıstan** (Başkent University, Türkiye)  
**Ceyda Aktan** (The University of Turkish Aeronautical Association, Türkiye)

**Convenor: Sıdıka Başçı** (Yıldırım Beyazıt University, Türkiye)



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### S2D WCTRS – TEA JOINT SESSION: FACING THE FUTURE: PROS AND CONS

November 2 / 2 Kasım

13:00-14:20

Building A - Classroom 3

*Prospects for Logistics and Transportation Education in Türkiye and Greece*

**Dilay Çelebi** (İstanbul Technical University, Türkiye)

**Georgia Ayfantopoulou** (Hellenic Institute of Transport – CERTH, Greece)

*Air Connectivity Effects on Bilateral Service Export and Import Trade:*

*Focus on OSA Lead and Lag effects*

**Tae Oum** (University of British Columbia, Canada)

*Complexity management inspired by nature for managing existential risk in the economy and in transportation (more general, without formal parts)*

**Werner Rothengatter** (KIT, Germany)

*Strengthening Disaster Response through Global Collaboration: A case study aiming to be a Success Story*

**Bekir Bartın** (Özyeğin University, Türkiye)

**Zeynep Nuhoğlu** (UND, Türkiye)

**Kaan Özbay** (New York University, USA)

Convenor: **Yücel Candemir** (İstanbul Technical University, Türkiye)

### S2E TOPICS in ECONOMICS

November 2 / 2 Kasım

13:00-14:20

Building A - Classroom 4

*The Moderate Steps in the Leaps: A Complexity Analysis of the Past Structural Transformation Cases*

**Taylan Yenilmez** (İstanbul University, Türkiye)

*Mapping E-Wom ans Purchase Intention in Times of Digital Era*

**Berna Balcı İzgi** (Gaziantep University, Türkiye)

*Poverty and Employment Dependency in OECD Countries: A Comparative Empirical Analysis of Different Convergence Clubs*

**Gizem Acet Dönmez** (Marmara University, Türkiye)

**Ahmet Yılmaz** (Marmara University, Türkiye)

Convenor: **Tolga Omay** (Atılım University, Türkiye)





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### PANEL: PARA POLİTİKALARI VE ENFLASYON

November 2 / 2 Kasım

14:40-15:40

Umut Ertürk Conference Hall

**Erhan Aslanoğlu** (İstanbul Topkapı University, Türkiye)

**Ege Yazgan** (İstanbul Bilgi University, Türkiye)

**Sadi Uzunoğlu** (Trakya University, Türkiye)

**Burak Arzova** (Marmara University, Türkiye)

Convenor: **Fatih Özatay** (TOBB-UET, Türkiye)

### S3A PANEL DISCUSSION: The Future of Our Planet: Conventional or Unconventional?

November 2 / 2 Kasım

16:00-17:20

Umut Ertürk Conference Hall

**Georgia Ayfantopoulou** (Hellenic Institute of Transport – CERTH, Greece)

**Yücel Candemir** (İstanbul Technical University, Türkiye)

**Dilay Çelebi** (İstanbul Technical University, Türkiye)

**Zeynep Nuhoğlu** (UND, Türkiye)

**Tae Oum** (University of British Columbia, Canada)

**Werner Rothengatter** (KIT, Germany)

**Fusun Ülegin** (Sabancı University, Türkiye)

**Daniel Weiss** (DLR, Germany)

Convenor: **Werner Rothengatter** (KIT, Germany)

### S3B TOPLUMSAL CİNSİYET ÇALIŞMALARI

November 2 / 2 Kasım

16:00-17:00

Building A - Classroom 1

*Kayıt-Dışı İstihdamda Toplumsal Cinsiyet Ayak İzi: Girdi-Çikti Modeli ile Bulgular*

**Gülay Günlük-Şenesen** (İstanbul Üniversitesi, Türkiye)

**M. Banu Yobaş** (İstanbul Teknik Üniversitesi, Türkiye)

*Türkiye’de Evli Kadınların Yerleşim Yerine Göre Göç Sayısı Farklılıkları: Ayırıştırma Analizi*

**Sibel Selim** (Manisa Celal Bayar University, Türkiye)

**Derya Bilgin** (İstanbul Kültür University, Türkiye)

**Sevgi Sülükçüler** (Manisa Celal Bayar University, Türkiye)

*Bölgesel Finansal Kapsayıcılığın Kadınlar Özelinde Analizi ve Karşılaştırması*

**Tansu Kartal** (Ankara Hacı Bayram Veli Üniversitesi, Türkiye)

**Hüseyin Günsüz** (Muğla Sıtkı Koçman Üniversitesi, Türkiye)

Convenor: **Ali Rıza Aktaş** (Muğla Sıtkı Koçman University, Türkiye)



### S3C WELFARE ECONOMICS

November 2 / 2 Kasım

**16:00-17:00**

Building A - Classroom 2

*How does tax progressivity affect inequality when fertility is endogenous?*

**Osman Küçükşen** (Hacettepe University, Türkiye)

*How Ageing Will Affect the Pension System in Türkiye? An Analysis of Public Transfers for the Elderly*

**Nazlı Şahanoğulları** (İstanbul Kültür University, Türkiye)

*Social welfare indicators of poverty and pro-poor development in Türkiye*

**Emine Tahsin** (İstanbul University, Türkiye)

Convenor: **Hasan Kazdağlı** (Turkish Economic Association, Türkiye)

### S3D FİNANSAL PİYASALAR ve KURUMLAR

November 2 / 2 Kasım

**16:00-17:20**

Building A - Classroom 3

*Finansal Endişeler ile Türkiye Finansal Piyasaları Arasındaki Risk ve Bağlantılılık: Kantil Vektör Otoregresif Yaklaşımı ile Bir İnceleme*

**Ali Akgül** (Anadolu University, Türkiye)

**Burcu Yürük** (Uşak University, Türkiye)

*Jeopolitik risklerin banka performansı üzerinde etkisi banka sahiplik yapısına göre farklılaşıyor mu? Türkiye'den kanıtlar*

**Nilgün Acar Balaylar** (Dokuz Eylül University, Türkiye)

**Ahsen Emir Bulut** (Dokuz Eylül University, Türkiye)

*Makine Öğrenmesi Teknikleriyle Kredi Riski Analizi*

**Kübra Bölükbaş** (CBRT, Türkiye)

**Ertan Tok** (CBRT, Türkiye)

**Şener Özdöner** (Boğaziçi University, Türkiye)

*Türkiye'de Firmaların Özel Durum Açıklamalarının Hisse Senedi Fiyatlarına Etkileri: Sektöründe Yeni Olan Şirketler*

**Nazlı Ceylan Sungur** (Atılım University, Türkiye)

**M. Mithat Üner** (Atılım University, Türkiye)

**Elif Eşiyok** (Atılım University, Türkiye)

Convenor: **Serkan Çiçek** (Muğla Sıtkı Koçman University, Türkiye)



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# ABSTRACTS

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# ÖZETLER



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# Technology Overload? Macroeconomic Implications of Accelerated Replacement

**Seda Basihos<sup>1</sup>**

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## **Abstract**

This study documents an increase in the technology replacement pace—defined as the rate at which older technologies are replaced with newer ones—following the mid-1990s computing revolution, based on U.S. firm-level data (1970-2018). It explores the potential long-run distributional and efficiency implications of this change. The findings reveal that the technology replacement rate has increased by 50% over the last two decades. The acceleration is pervasive across multiple major industries, particularly pronounced in the information and goods-producing sectors. Industry-level regressions indicate a link between the increased rate of technology replacement and a decline in labor share, as well as sluggish productivity growth. Endogenous growth modeling, calibrated to U.S. data, suggests that while rapid technology replacement may initially boost productivity, it ultimately leads to a capital-biased reallocation of productive resources. Consequently, this dynamic results in a lower labor share and a slowdown in long-run productivity growth. The quantitative model outputs align with observed macroeconomic trends in productivity growth and labor share since the mid-1990s.

**Keywords:** Technology Lifespan, Productivity Growth, Labor Share

**JEL Codes:** E10, O30, O41

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## Is there a threshold on money growth?

**Erdem Başçı**

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**Hakan Emekci**

TED University, Türkiye

**Mehmet Orkun Apaydın**

TED University, Türkiye

### Abstract

The recent global surge in inflation has revived academic interest on broad money growth in its relation to nominal GDP growth, and hence inflation. In this paper, we explore the non-linearity of the relationship between broad money growth and nominal expenditure growth for the G20 countries. We focus on the 21st century data for the G20 countries with floating exchange rate regimes. We use an ARX model for nominal GDP growth, where the X variable is nominal broad money growth. We test the null of a linear model against the alternative of a threshold on money growth with an unknown threshold level, using the test and estimation method developed by Hansen (2017). Our results indicate a strong rejection of the null hypothesis of linearity and a presence of two different regimes for high and low money growth rates.

**Keywords:**

**JEL Codes:**



# Tariffs, Taxes and Wages in the Age of Artificial Intelligence

**John Gilbert**

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**Reza Oladi**

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## Abstract

Recent developments in artificial intelligence (AI) have raised the prospect of an ever-wider array of tasks being performed by machines, even in sectors that have previously been insulated from the effects of traditional automation. Many countries face challenges associated with AI, and those challenges interact (and are frequently conflated) with those associated with trade and globalization. This paper formulates an elaborate model of a small open economy in which AI may replace high-skilled labor. This economy produces three tradable finished goods, one of which uses a continuum of tasks as inputs. High-skilled labor or AI can conduct these tasks. AI is also produced in this economy using skilled labor and capital. We explore the effects of technical progress in AI on factor markets, with a focus on the labor market. We show how AI may compete with humans in a range of tasks because of this type of technical progress, and describe the ensuing consequences for wage inequality. We show that not all workers would be affected similarly by AI. In fact, skilled wages fall while unskilled wages rise, hence reducing the skilled-unskilled wage gap. We then explore the impacts of trade tariffs and a direct AI tax to counter the potential negative impacts of progress in AI technology.

**Keywords:** Artificial intelligence (AI); wages; inequality; tariffs.

**JEL Codes:** D5; F1; O3

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# The causal effect of maternal employment on school enrollment: Evidence from a wage subsidy program in Türkiye

**Zeynep Yılmaz**

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## **Abstract**

This study investigates the impact of maternal employment on children's high school enrollment in Türkiye, emphasizing gender differences and income group variations. We deal with endogeneity issues caused by reverse causality arising from mothers' and their children's joint labor supply and high school enrollment decisions and unobserved characteristics in mothers by implementing a two-stage least squares estimation method, leveraging the 2008 Employment Subsidy Program as an instrumental variable. Our findings reveal that maternal employment positively influences sons' high school enrollment but has no significant effect on daughters, suggesting the income benefits for sons outweigh the negative substitution effects. Additionally, the impact is most pronounced in low-income households. In these households, the additional income from maternal employment can alleviate financial constraints and reduce the opportunity cost of sending daughters to school. Our findings underscore the need for policies that consider socio-economic contexts to enhance educational outcomes for children, particularly girls. These results highlight the complexity of maternal employment's effects on children's education.

**Keywords:** Public Policy, Education and Inequality

**JEL Codes:** J38, I24



## Do Unemployed and Neet Have Time to Sleep? Evidence from a Developing Country

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### Abstract

In this article, I investigate how being unemployed or being neet is associated with the sleep durations in Turkey. I employ a recursive bivariate probit model to account for the lack of treatment randomization in labor force status, aiming to uncover how the probability of having short or long sleep varies with different labor force statuses. Data is from the Turkish Time Use Survey 2014. This study provides important contributions. Firstly, I distinguish treatment group as unemployed and neet, recognizing the potential differences in sleep behaviour between these two groups. Secondly, rather than relying on self-reported sleep duration, which may introduce bias, I define short and long sleep as binary variables to minimize potential misclassifications. Thirdly, I analyze the behaviour of males and females separately, considering the significant differences in labor market structure between genders in Turkey.

The results show that females have longer daily sleep durations compared to males, both on workdays and weekends, and this gender gap diminishes with age. Share of short and long sleepers for unemployed males and females are similar. Conversely, there are notable differences in these proportions between genders for neet individuals. The results from the recursive bivariate probit estimation also vary depending on the specific treatment variables used. Being unemployed is largely insignificant in determining the probability of experiencing short or long sleep for both genders. On the other hand, being neet decreases the likelihood of experiencing short sleep and increases the likelihood of experiencing long sleep for both genders. The average treatment effect of being neet on the probability of short sleep is greater for males than for females, while the average treatment effect of being neet on the probability of long sleep is greater for females.

**Keywords:** sleep duration, unemployed, neet, recursive bivariate probit

**JEL Codes:** C31, J01, I12



## Just transition away from coal: A priori evidence from Turkey

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### **Abstract**

Considering the global pressure to reduce fossil fuel emissions to combat climate change, many coal-investing countries have declared plans to exit coal. Despite ranking third in constructing new coal-fired power plants after China and India, and being the 16th largest carbon emitter, Turkey lacks an official coal phase-out plan. However, several NGOs and scientists are advocating for this issue with Turkish policymakers. A key element of this policy debate is the potential employment losses in the coal sector. Significant earnings losses are expected, not only during unemployment but also due to intersectoral mobility. Understanding the magnitude of these costs for miners is crucial to providing insights into the policy instruments needed for a ‘just transition’ and making the transition politically viable. This paper aims to contribute to the ongoing debate by providing evidence on the costs of job loss in coal mining based on labor market transitions. Using employer-employee data from the Entrepreneur Information System (EIS), we estimate earnings losses through difference-in-differences, combined with fixed-effects and propensity score matching. Our results indicate a decline in earnings starting a year before displacement (Ashenfelter’s dip), dropping sharply at displacement. Income losses decrease after the first year but remain around 20 percent even after five years.

**Keywords:** Job loss, earning loss, coal phase-out, just transition

**JEL Codes:** J63, J65, Q58



# **Circular Economy, Exposure to environmental risks and Growth: An Empirical Analysis for Sustainable Development in Türkiye**

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## **Abstract**

To tackle global challenges such as overpopulation, industrial progression, metropolitan growth, and climate change; sustainable and pragmatic solutions are required. These challenges lead to increased consumption, excessive waste production along with environmental problems putting significant pressure on natural resources and environmental sustainability and adversely affect human welfare and economic development. The approach of a circular economy aims to reduce the production, consumption, and disposal of commodities while concurrently boosting well-being. This study aimed at econometrically investigating the impact of circular economy on the Turkish economy taking into consideration the exposure to environmental risks index since the human welfare and economic development are based on a more environmentally friendly structure. The results revealed a positive relationship between GDP growth and circular economy and between GDP growth and exposure to environmental risks both in the short run and the long run during the period spanning from 1996Q1 to 2019Q4. The positive relationship between the economic growth and the circular economy highlights the crucial role of Türkiye's circular economy to achieve sustainable growth goals. The positive relationship between GDP growth and exposure to environmental risks suggests that economic growth often leads to increased industrialization and urbanization increasing, in its turn, the exposure to environmental risks. For policy makers, the study recommends accelerating the transition to a circular economy, investing in technological innovations and infrastructure, organizing awareness and education programs, fostering public-private collaboration, adopting innovative financing, and establishing comprehensive legal regulations.

## **Keywords:**

**JEL Codes:** Q53-C22



## Weather and children's allocation of time: Evidence from India

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### Abstract

How individuals spend their time has a crucial bearing on their well-being. Climate change—by modifying the environmental determinants of time disposition—can alter time- use patterns among individuals. The present paper contributes to the limited literature in this direction. Utilising data from the Time Use Survey, 2019, the present paper investigates the influence of weather on time allocation to learning and leisure among children. The results suggest that individuals substitute leisure for learning during days with extreme temperature. Hot days lower time allocation to learning by around 8 per cent, driven primarily by a reduction in school/university attendance. The impact of hot days is muted in places with a warmer climate suggesting evidence of longer-run acclimatisation. However, I fail to find any conclusive evidence of short-run adaptation to unpleasant weather. The findings further reveal interesting heterogeneities in the impact of extreme temperature across gender, education and income. The study concludes with some policy suggestions.

**Keywords:** time-use; weather; temperature; education; leisure; adaptation; gender.

**JEL Codes:** C01, I2, J13, J22, J24

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# Social Protection for the Elderly and Inter-household Transfers in Turkey: An Empirical Analysis Based on Panel Data

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## **Abstract**

The global phenomenon of an aging population stands out as a paramount social transformation in the twenty-first century. This demographic shift towards an aging population requires specific policy considerations across various domains, including labor and financial markets, care-giving services, transportation, social protection, family structures, and inter-generational ties. In this paper, we examine the social protection mechanisms for the elderly population in Turkey, where the elderly dependency ratio increased from 12.6% in 2017 to 14.5% in 2022 and is projected to reach 19.6% in 2030. While old-age pensions have the largest share of social transfers in this country, an ongoing debate persists regarding the coverage and generosity of the pension system. Using multiple 4-year panels (2007–2019) from the Survey of Income and Living Conditions (SILC) microdata, we explore the public and private transfer dynamics of the elderly. We assess the magnitude and persistence of inter-household transfers to the elderly in Turkey, specifically examining whether upstream private transfers are altruistically motivated and whether retirement and old-age benefits have a crowding-out effect on private transfers. Our findings reveal that individual pensions tend to crowd out upstream private transfers, while a crowding-in effect of household-level social transfers has been identified.

**Keywords:** Aging population, Social protection, Inter-household transfers, Crowding out/in effects

**JEL Codes:** J14, J18, H55

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## Religious Adherence and Economic Outcomes: Evidence Based on Family Structure in Türkiye

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### Abstract

We examine the relationship between religious adherence and economic outcomes in Türkiye, with a focus on the mediating role of family structure. We use Family Structure Survey (2021) by Turkish Statistical Institute (Turkstat). Key indicators of religious adherence such as participation in religious marriage ceremonies, voting behavior influenced by religious beliefs, and the strength of religious practices are examined in relation to economic variables, including occupation, household income, and female labor force participation. The analysis also considers how household size and the educational level of the household head correlate these relationships. The findings reveal that religious practices and beliefs are significantly correlated with economic outcomes, and these effects are moderated by family structure characteristics. We believe that this study may provide a detailed understanding of the interaction between religious and socio-economic factors in influencing economic conditions in Türkiye, offering valuable insights for designing specific social and economic policies.

**Keywords:** religious adherence, family structure, economic outcomes

**JEL Codes:** C21, J12, J19

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## Differences in the modern contraceptive use by ethnicity of couples, number and gender of children

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### Abstract

This study aims to evaluate the effects of ethnicity of couples, and number and gender of their children on the use of modern contraceptive methods. The data set was obtained from the 2018 Turkey Demographic and Health Survey. Ethnicity of couples were defined as Turkish, Kurdish, Arabic and all other combinations. Number and gender of the children were combined together in a six-category variable. The categories were no children (1), at least one son and no daughter (2), at least one daughter and no son (3), equal number of sons and daughters with the numbers being at least one (4), more sons than daughters and at least one daughter (5), and more daughters than sons and at least one son (6). Linear probability model results showed that Kurdish, Arabic and all other couples were statistically significantly less likely to use modern methods than Turkish ones. Models with interactions of ethnicity and gender and number of children revealed that Kurdish couples with more sons than daughters were statistically significantly less likely to use modern methods than Turkish couples while the difference in the probability of modern method use was not statistically significant when Kurdish couples had more daughters than sons.

**Keywords:** Modern Contraceptives, Ethnicity, Gender of Children

**JEL Codes:** I10, J13, J16

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## Understanding Perspectives of Ukrainian Refugees and Potential Labour Market Impacts

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### Abstract

An ongoing war between Ukraine and Russia has deeply affected many countries. Even though the war between those countries started almost a decade ago, Russia's large scale invasion of Ukraine in February 2022 has escalated the conflict tremendously. As a result, a large number of civilians had to flee their home and they need protection and relief. The UN-estimated numbers show that 12 million people need humanitarian support within Ukraine, while more than 4 million might need assistance in neighbouring countries. Nowadays, the impact of refugees in the hosting labour market is an increasing concern for several countries that have faced immigration. Although the literature in this field presents examples of labour market consequences, contexts of country, time, or individual characteristics raise important questions about whether a universal lesson exists from such labour shocks. Therefore, this study aims to provide some perspectives on Ukrainian refugees hosted in neighbouring countries. Using three waves of Survey of Intentions and Perspectives of Refugees from Ukraine data from UNHCR, this study is expected to exhibit important insights that might be useful in the near future with increasing numbers of Ukrainian refugees in the labour markets. The analysis in this paper is descriptive in nature, so not a formal test of causality is attempted. Nevertheless, it is still worth to examine the impact of this relatively new group of refugees.

**Keywords:** Refugees, Labour market, Ukraine, Microeconomic Data.

**JEL Codes:** J01, J61, J24, C81

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## The Impact of Syrian Influx on Native Fertility Rates in Türkiye : An Instrumental Variables Method

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### Abstract

This study investigates the impact of migration on native fertility rates in Türkiye, a country that has experienced a significant influx of Syrian migrants since the start of the Syrian civil war in 2011. Türkiye has seen a decline in fertility rates over recent years. Using an instrumental variables approach, we analyze data from 2009 to 2019 to examine how migration influences native fertility. Our dataset combines provincial-level migration statistics from the Turkish Ministry of Interior, fertility data from the Turkish Statistical Institute (TurkStat), and a comprehensive set of control variables. Preliminary results suggest that migration has a positive effect on native fertility rates. This effect is probably linked to a decrease in female employment within the informal sector, a phenomenon previously documented in the literature. These findings provide new insights into the demographic impacts of migration and highlight the complex interactions between migration, employment, and fertility in the Turkish context.

**Keywords:** Native Fertility, Syrian Influx, Instrumental Variables, Labor Market

**JEL Codes:** J11, J13, J61, R23

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# Crises and Elections in a Competitive Authoritarian Regime: District-Level Evidence from Türkiye

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## **Abstract**

With the referendum on constitutional change in 2017, the presidential system was accepted as Türkiye's new form of government and Recep Tayyip Erdoğan was elected as the president of the new regime in June 2018. Since then, Türkiye has had to contend with three different crises. Persistent economic hardship with high inflation and high unemployment, the COVID-19 pandemic that only worsened the situation, and the devastating earthquakes in February 2023. In this paper, we present a novel political economy narrative of how Erdoğan and his governments have dealt with these crises, and we complement this narrative with district-level econometric evidence by estimating different models for Erdoğan's vote shares in the 2023 elections. Our narrative approach is based on the idea that crisis management in a competitive authoritarian regime is fundamentally different from crisis management in a democracy. In a populist and competitive authoritarian regime, crisis management practices are intertwined with how the opposition is blocked or weakened, how the public is polarized, how the monopoly of information is exercised by the state, how crises are reinterpreted as national security issues, and how responsibility is transferred from the president to other actors and institutions. Our econometric results show that political preferences and identities at the district level exhibit strong historical persistence from 2018 to 2023. In particular, none of the crises mentioned above had a notable and statistically significant effect on Erdoğan's vote share. According to the models we can estimate at the district level, persistence is by far the most important and robust determinant of Erdoğan's electoral success in 2023.

**Keywords:** authoritarianism, economic crisis, COVID-19, natural disasters, electoral success

**JEL Codes:** D72, H12, C21

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# The Changing Electoral Landscape: Spatial Analysis of AKP's Decline in the 2024 Turkish Local Elections

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## **Abstract**

The Justice and Development Party (Adalet ve Kalkınma Partisi, the AKP) has been the ruling party in Turkey since 2002. Despite much political and economic turmoil since then, the AKP has managed to maintain its position as the leading party in both general and local elections. This has attracted scholarly attention from various fields in the social sciences, with explanations for the AKP's successive electoral victories referencing Economic Voting Theory, Center-Periphery, Competitive Authoritarianism, etc. However, in the most recent local elections held in March 2024, the AKP lost its leading position, becoming the second party after the main opposition, the Republican People's Party (Cumhuriyet Halk Partisi, the CHP). This phenomenon is largely explained by the economic unrest that has persisted for more than the past three years. However, these explanations often ignore the impact of spatial clustering and dispersal mechanisms on the AKP's voting rates. The AKP's electoral maps have changed since the last local elections, necessitating further analysis. In this study, a granular dataset has been created at the 973 sub-provincial level to visualize and analyze the changes in electoral support for the AKP. First, various machine learning algorithms such as k-nearest neighbors and k-means clustering will be employed to create regions to analyze support for the AKP. Then, the impact of space will be analyzed using Spatial Regimes Regressions, Geographically Weighted Regressions (GWR), and Multilayered Geographically Weighted Regressions (MGWR) at the sub-provincial level. Hence, the study will capture the local dynamics of voting behavior and scrutinize the spatial dissolution of the AKP in the latest local election in Turkey.

**Keywords:** Electoral Dynamics, Voting Behavior, Spatial Analysis, GWR-MGWR.

**JEL Codes:** C21, D72, R58

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## **Entrepreneurs need wisdom, ethical skills, and empathy to promote a sustainable capitalism**

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### **Abstract**

Schumpeter posits that entrepreneurs are the agents of innovation and creative destruction. Their projects are the wellsprings of new jobs, higher incomes, and general economic progress. However, in releasing their creative energies, rising entrepreneurs shove older ones aside, destroying their dreams and often their fortunes. Sooner or later, most businesses will fail victims of creative destruction, sometimes damaging whole communities and individuals. However, capitalism can be balanced with noble human purposes. In that case, it becomes the economic equivalent of the famous definition of democracy often attributed to Churchill, "the worst possible system except for all the others." To promote sustainable capitalism, entrepreneurs must understand that simply targeting profits (shareholders capitalism) is not enough in today's world to succeed. Today, more conscious consumers, investors, and shareholders expect that new ventures contribute positively to reducing inequality by giving all stakeholders of new ventures a fair share of gains (stakeholders capitalism), particularly collaborators and local communities, and contributing significantly to reducing environmental degradation, waste, and pollution. Entrepreneurs must use wisdom, ethical skills, and empathy to understand and evaluate how their decisions positively or negatively impact their stakeholders, society, and the environment. To understand the impact of their decisions, they must put themselves imaginatively in the place of their stakeholders and ordinary people to recognize how the decisions will affect them and the environment if another entrepreneur acts as they are planning to act.

**Keywords:** creative destruction, shareholder capitalism, stakeholder capitalism.

**JEL Codes:** A13, M10



# Volatility Index and the Global Financial Cycle: A Favar Approach

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## **Abstract**

Rey (2013) identifies a global financial cycle characterized by synchronized capital flows, asset prices, and credit growth, often linked to the VIX, a measure of market volatility and risk aversion and the US monetary policy. In literature, it is argued that this cycle influences national economies irrespective of their individual macroeconomic conditions, often leading to financial instability, such as asset price bubbles and excessive credit growth. Moreover, the impact of cross-border financial spillovers is found to be the same for countries with fixed or flexible exchange rates, challenging the traditional Mundell-Fleming Trilemma framework and suggesting that the exchange rate regime does not significantly alter the dynamics, leading to a "dilemma" where the primary policy trade-off is between capital mobility and monetary autonomy. In this context, this study aims to explore the dynamic relationship between risk aversion and uncertainty proxied by VIX and the global financial cycle by using the Factor Augmented Vector Autoregressive (FAVAR) model, including global real variables and financial variables that characterize the global financial cycle. We find that an increase in VIX leads to a decrease in global risky asset prices, leverage of global banks, global cross-border credit, global domestic credit, world trade and world production.

**Keywords:** Volatility index; Global financial cycle; International spillovers

**JEL Codes:** E44, E52, F33, F42



## Drivers of Exchange Market Pressure (EMP) in Emerging Economies

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### Abstract

This study derives the Exchange Market Pressure (EMP) index to signal the break-up of a crisis by using the weighted and scaled sum of exchange rate depreciation, official foreign exchange intervention, and interest rate (policy rate) differential. We consider various balance of payments components of the EMP for comparing and analysing capital flow pressures for the selected countries using the United States Dollar and Euro as reference currencies. The analysis covers Brazil, China, Egypt, India, Russia, South Africa, the United Arab Emirates, and Türkiye from 2000 to 2022. The analysis uses the elasticities of gross liability, and foreign asset flows to home interest rates and exchange rates to determine the weights used in the EMP. To calculate the elasticities, we use the home bias of each country's domestic assets in total assets, considering three asset categories: equity, debt, and bank loans, depending on the availability of data for the selected countries. Once the EMP is calculated, the analysis includes examining the behaviour of the EMP during the crisis and non-crisis periods. The Generalised Autoregressive Conditional Heteroskedasticity model is also used to analyse and forecast the volatility of the EMP.

**Keywords:** Exchange Market Pressure; Capital Flows, Exchange Rates, Foreign Exchange Intervention

**JEL Codes:** F32; F31; G11; G20



## Cooperation vs Monetary Union: The Effect of Inefficient Shocks

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### Abstract

In this paper, I examine the impact of inefficient shocks on the choice of monetary regime between monetary union and flexible exchange rates with cooperative monetary policy, from a country's perspective, and in the context of a two-country general equilibrium model. The key result of this study is that, from a country's perspective, monetary union regime can be welfare increasing, compared to flexible exchange rate regime in which countries cooperate to maximize welfare of the economy. Optimal monetary policy response to an inefficient shock in monetary union improves responses to domestic inefficient shocks compared to cooperation in flexible exchange rates, whereas worsens responses to foreign shocks. This means that welfare of a country in a monetary union compared to cooperation in flexible exchange rates decreases, as average magnitude of domestic inefficient shocks gets larger compared to foreign ones. If relative average magnitude of inefficient shocks are sufficiently large, then a monetary union can be welfare increasing. Nevertheless, the fact that a monetary union cannot be welfare increasing compared to cooperation in flexible exchange rates from a social planner's perspective, indicates that a monetary union cannot be a Pareto Improvement.

**Keywords:** monetary union, flexible exchange rate, monetary policy, national welfare, inefficient shocks

**JEL Codes:** E52, E58, F33, F41, F42

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## State of Women Leadership in Turkish Firms

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### Abstract

In recent decades, there has been a growing awareness of the importance of gender equality in women's representation in leadership positions. The research underscores that women in such roles offer invaluable perspectives, enriching decision-making processes with their insights. Their presence not only promotes diversity but also strengthens firms' resilience and adaptability. Despite this progress, women remain underrepresented in senior management globally, holding approximately 29% of such positions. In Turkey, where women's labor force participation is among the lowest in OECD countries, women hold just around 20% of senior management roles in Turkish firms. This study aims to explore the status of women's leadership in Turkish publicly traded companies on the Istanbul Stock Exchange from 1995 to 2022. We examine the evolution of women's leadership over time and employ a multinomial logit model to investigate the factors influencing women's representation in these leadership positions.

**Keywords:** Gender Diversity, ESG, Board of Directors, Female Executives, Firm Performance.

**JEL Codes:** G39, J16, L25

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# The Signaling Value of Government Action: The Effect of Turkey's Withdrawal from the Istanbul Convention on Female Homicide

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## **Abstract**

We analyze the expressive content of government action. The Istanbul Convention, which has been signed by 39 countries, aims to provide protection for women against violence. The Turkish government withdrew from the Istanbul Convention in 2021 on the grounds that “[it] was hijacked by a group of people attempting to normalize homosexuality- which is incompatible with Turkey’s social and family values.” Although the withdrawal did not modify laws or law enforcement in Turkey, advocates for women’s rights perceived it as a signal of tolerance towards violence against women. Utilizing two distinct datasets from two independent sources, we find that the withdrawal generated an additional 55-65 female murders per year, predominantly committed by intimate partners. A difference-in-differences analysis using male homicides confirms the results, indicating that government actions are interpreted as normative signals by society, regardless of whether the government intends to convey such a message.

**Keywords:** Istanbul Convention, domestic violence, female homicides, government action.

**JEL Codes:** I18, J12, J16, K14, K36

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## Risk, Ambiguity, and the Gender Gap in Tournament Entry

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### Abstract

Experimental evidence suggests that gender differences in tournament entry may be driven by differences in competitiveness, overconfidence, and risk or ambiguity attitudes. Recent work challenges the role played by a separate ‘competitiveness trait’, arguing that the gender gap can be explained primarily by risk aversion and overconfidence. We examine the issue using a novel experimental design that mitigates the role of overconfidence and varies the nature of uncertainty about participants’ final performance. Our experiment uses a rank-order tournament with calibrated ability, ensuring that variation in subjects’ performances is driven by the random noise component. When the distribution of the noise component is known (our risk treatments), we observe no gender gap in tournament entry. However, there is a significant gender gap in our ambiguity treatments, where the distribution of the noise component is unknown. A separate treatment-based measure of participants’ preference for competition indicates that both men and women exhibit substantial competitiveness in the risk treatments, with no difference across genders. Yet, in stark contrast, ambiguity suppresses the competitiveness of women without impacting the competitiveness of men. Altogether, our results suggest that greater transparency to minimize ambiguity may help to mitigate the gender gap in tournament entry.

**Keywords:** gender gap, tournament entry, competitiveness, risk, ambiguity, experiment

**JEL Codes:** D01, C90, J16

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# The Markup-Inflation Nexus in Türkiye: Insights from Firm-level Data<sup>18</sup>

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## Abstract

In this study, we empirically investigate the relationship between market power and inflation in Türkiye for the 2006-2021 period by estimating firm-level and aggregated markups using a dataset covering a vast majority of Turkish industries. We show that market power, as measured by markups, in Türkiye has risen since 2014, despite a general decrease in industry concentrations. The weighted average markup for the Turkish economy increased from 1.15 to 1.22 over the period analyzed. We use panel fixed-effects estimation for the analysis of a total of 80 NACE 3-digit industries and, considering potential endogeneity issues, employ two-step system generalized method of moments estimation as a robustness check. The results of the empirical analysis on the potential impacts of markups on inflation, however, do not provide a clear answer regarding the existence of such a relationship in the Turkish economy for the investigated period. Nevertheless, the simultaneous surge in markups along with inflation in 2021 in Türkiye and some other economies, together with the findings of existing studies, imply a vicious circle where market power fuels inflation and increasing inflation strengthens firms' market power. However, in our analysis the direction of causality remains uncertain suggesting further study on this subject.

**Keywords:** Market power, markups, inflation.

**JEL Codes:** E31, L16, L60

<sup>18</sup> This study was derived from Şamil Pişmaf's Master's thesis titled 'The Evolution of Market Power and Its Relation with Inflation in Türkiye', submitted to Hacettepe University Graduate School of Social Sciences.

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# Licensing in a Differentiated Product Duopoly with Price and Quantity Contracts

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## Abstract

In this paper, we extend the differentiated product duopoly model of Singh and Vives (1984) to a model where the firms are asymmetric with respect to their marginal costs and the more efficient firm can license its technology to the other firm. The model involves two stages. In stage one, each firm chooses a price or a quantity contract binding with consumers. In stage two, the firms engage in a price competition, a quantity competition, or a mixed competition depending upon the contracts they choose in stage one. Our numerical computations show that the unique (subgame perfect Nash) equilibrium of this two-stage game involves price competition if the goods of the firms are complements. However, if the goods are substitutes, then either quantity or price competition may arise as an equilibrium depending upon the size of the cost asymmetry and the degree of substitution. Moreover, we find that if the goods are complements, the firms as well as consumers become better off if licensing occurs. In contrast, if the goods are substitutes, then licensing can make the firms as well as consumers better off only if the degree of substitution and the size of cost asymmetry are sufficiently small.

**Keywords:** Licensing, differentiated goods, duopoly, cost asymmetry, contracts.

**JEL Codes:** D43, D45, L13, O30

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## Zombie Firms in Network: Congestion and Evergreening

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### Abstract

We explore the spillover impact of zombie firms in Türkiye by exploiting a rich administrative dataset that contains firm-level information on balance sheets, inter-firm sales, employment, and firm-bank level credit records. We document three key facts regarding zombie dynamics: (i) Leveraging matched firm-bank level credit registry data, we highlight the presence of an evergreening motive, leading to a misallocation of credit away from productive firms. (ii) Zombie firms, which are on average less productive than the nonzombie firms, impede investment and employment opportunities at healthier firms. Nonzombie firms operating in sectors with a high prevalence of zombie firms experience lower sales, assets, and productivity. (iii) Incorporating B2B sales data structured similarly to firm-level input-output data, our study reveals that firms with stronger upstream or downstream zombie connections tend to exhibit reduced sales, investment, and employment compared to firms without any zombie connections. Moreover, banks supply less credit to healthy firms operating in a zombie network than to firms with fewer zombie connections.

**Keywords:** Zombie Firms, Firm dynamics, Network Structure, Input-Output linkages, Credits

**JEL Codes:** E12; E24; E31; E52

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## Central Bank Digital Currency in Turkey: Could It Be the Monetary System of the Future?

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### Abstract

The 2008 global financial crisis shook confidence in the traditional banking system. Due to increasing technological developments, central banks started to intensify their research on digital currencies. In this process, especially as a result of the diversification of blockchain technology and the increasing demand for cryptocurrencies, central banks have accelerated their efforts to issue their own digital currencies. Over the last decade, various studies and discussions among technologists, economists, bankers and policy makers have contributed to the development and maturation of the idea of central bank digital currencies. Today, many central banks in many countries are continuing their work in this area and assessing the potential benefits and risks. As a result of these studies, some central banks are piloting digital currencies, some are in the research phase, while the remaining economies are passive. The Central Bank of the Republic of Turkey is one of the central banks that continue to work in the field of digital currency. In this context, this study will discuss the advantages of central bank digital currency, the challenges and potential risks of digital currency applications. It will also discuss what the role of central bank digital currency will be in the future and the potential impact of central bank digital currency on Turkey's economic future.

**Keywords:** central bank digital currencies, monetary policy.

**JEL Codes:** E40, E52

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## Türkiye’de Merkez Bankası Dijital Parası: Geleceğin Para Sistemi Olabilir mi?

### Özet

2008 küresel finansal kriz sonrası geleneksel bankacılık sistemine olan güvenin sarsılmasına neden olmuştur. Artan teknolojik gelişmeler nedeniyle merkez bankaları dijital para konusundaki araştırmalarına yoğunluk vermeye başlamıştır. Bu süreçte özellikle blockchain teknolojisinin ve kripto paraya yönelik artan talebe bağlı olarak çeşitlilik kazanması sonucunda merkez bankaları, kendi dijital para birimlerinin çıkarılmasına yönelik çalışmalarına hız vermiştir. Son on yıllık süre içinde teknoloji uzmanları, ekonomistler, bankacılar, politika uygulayıcılar arasında yapılan çeşitli çalışmalar ve tartışmalar, merkez bankası dijital para fikrinin gelişmesine ve olgunlaşmasına katkıda bulunmuştur. Günümüzde bir çok ülke merkez bankası, bu alandaki çalışmalarını sürdürmekte ve bu alandaki potansiyel faydaları ve riskleri değerlendirmektedir. Gerçekleştirilen bu çalışmalar sonucunda bazı ülke Merkez bankaları dijital para pilot uygulamalarına geçerken, bazıları araştırma aşamasındayken, geriye kalan ekonomiler pasif bir tutum sergilemektedir. T.C.M.B. dijital para alanında çalışmalarını sürdüren merkez bankalarından birisidir. Bu bağlamda bu çalışma ile merkez bankası dijital parasının avantajları, dijital para uygulamalarının zorlukları ve potansiyel risklerine değinilecektir. Ayrıca gelecekte merkez bankası dijital parasının rolünün ne olacağına, merkez bankası dijital parasının Türkiye’nin ekonomik geleceği üzerindeki potansiyel etkilerinin neler olabileceği konularına yer verilecektir.

**Anahtar Kelimeler:** merkez bankası dijital parası, para politikası

**JEL Kodları:** E40, E52





## Analyzing the Term Structure of Short Run and Long Run Interest Rates: A Case Study of Turkey

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### Abstract

The influence of interest rates on economic activities is considerable, extending to both the short and long term. An understanding of the term structure of interest rates allows policymakers and those responsible for economic decision-making to analyse the behaviors of market participants and enhance the efficacy of implemented policies. This research project aims to analyze the specifics of interest rates in Turkey, with a particular focus on the term structures of short-term and long-term government bonds. The research analyzed monthly data for three-month, six-month, two-year, five-year, and ten-year government bonds from February 2010 to June 2024. The empirical evidence indicates that short-term and long-term interest rates are cointegrated, and that Turkey's interest rate term structure is consistent with the Expectations Theory.

**Keywords:** Interest rate, government bonds, Expectations Theory.

**JEL Codes:** E40, E43, B22, C32

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## Kısa ve Uzun Dönem Faiz Oranlarının Vade Yapısının Analizi Türkiye Örneği

### Özet

Faiz oranlarının ekonomik faaliyetler üzerindeki etkisi, hem kısa hem de uzun vadeye yayılan önemli bir etkidir. Faiz oranlarının vade yapısının anlaşılması, politika yapıcıların ve ekonomik karar alma sürecinden sorumlu olanların piyasa katılımcılarının davranışlarını analiz etmelerine ve uygulanan politikaların etkinliğini artırmalarına olanak tanır. Bu araştırma projesi, özellikle kısa ve uzun vadeli devlet tahvillerinin vade yapılarına odaklanarak Türkiye'deki faiz oranlarının özelliklerini analiz etmeyi amaçlamaktadır. Araştırma, Şubat 2010'dan Haziran 2024'e kadar üç aylık, altı aylık, iki yıllık, beş yıllık ve on yıllık devlet tahvilleri için aylık verileri analiz etmiştir. Ampirik kanıtlar, kısa ve uzun vadeli faiz oranlarının eşbütünleşik olduğunu ve Türkiye'nin faiz oranı vade yapısının Beklentiler Teorisi ile uyumlu olduğunu göstermektedir.

**Anahtar Kelimeler:** Faiz oranı, devlet tahvilleri, Beklentiler Teorisi.

**JEL Kodları:** E40, E43, B22, C32



## Determinants of Expectation Errors of Real Sector Firms in Türkiye Regarding Sales, Exports and Inflation Rates

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### Abstract

Expectation of economic units is one of the most critical sources of information in the formulation and success of macroeconomic policies. As a matter of fact, surveys regarding the expectations of companies, households, individuals and certain focus groups are conducted regularly in all economies. In this study, using the Economic Tendency Survey data published regularly by the Central Bank of Republic of Türkiye, expectation errors of sales and exports for the next three months and inflation rates of producer prices and consumer prices for the next twelve months were calculated. The determinants (macro and company-specific variables) of expectation errors of sales, exports and inflation rates were tested by using monthly data for the period 2009-2024. Accordingly, it has been determined that there is a strong connection between the sales expectation error and variables such as the scale of the companies, the liability composition of the companies, and exchange rate volatility. It is estimated that sales and exports expectation errors have statistically significant negative associations with firm size while they have positive associations with the share of firms' short-term debts and exchange rate volatility. On the other hand, it has been estimated that the power of company-specific variables in explaining expectation errors for inflation rates is quite limited.

**Keywords:** Firm Expectations, Firm Characteristics, Panel Data

**JEL Classifications:** D84, D90, C23

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## Türkiye’de Reel Sektör Firmalarının Satış, İhracat ve Enflasyon Oranlarına İlişkin Beklenti Hatalarının Belirleyicileri

### Özet

Makroekonomik politikaların oluşturulmasında ve başarısında ekonomik birimlerin beklentileri kritik öneme sahip olan bilgi kaynaklarının başında gelmektedir. Nitekim bütün ekonomilerde firmalar, hane halkları ve bireyler ile belirli odak gruplarının beklentilerine ilişkin anketler düzenli olarak yapılmaktadır. Bu çalışmada TCMB tarafından düzenli olarak yayımlanan İktisadi Yönelim Anketi verileri kullanılarak gelecek üç aya ilişkin reel sektör firmalarının satış ve ihracatları ile gelecek on iki aya ait üretici ve tüketici fiyatları enflasyon oranları beklenti hataları hesaplanmıştır. Söz konusu değişkenlere ait beklenti hatalarının belirleyicileri (makro ve firmaya özgü değişkenler) 2009-2024 dönemi için aylık veriler kullanılarak test edilmiştir. Buna göre özellikle satışlara yönelik oluşan beklenti hatası ile firmaların ölçeği, firmaların borç kompozisyonu, döviz kuru oynaklığı gibi değişkenler arasında güçlü bir bağlantı olduğu tespit edilmiştir. Firma ölçeği ile satış beklentisi hatası arasında negatif, firmaların kısa vadeli borçlarının payı ve döviz kurundaki oynaklık arasında istatistiki olarak anlamlı bağlantı olduğu tahmin edilmiştir. Öte yandan firmalara özgü değişkenlerin enflasyon oranlarına ilişkin beklenti hatalarını açıklama gücünün oldukça sınırlı olduğu tespit edilmiştir.

**Anahtar Kelimler:** Firma Beklentileri, Firma Karakteristikleri, Panel Veri

**JEL Kodları:** D84, D90, C23



## Foreign Exchange Position Tracking of Corporate Companies

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### Abstract

Monitoring of the real sector's foreign currency assets and liabilities regularly is of great importance for financial stability. Systemic Risk Data Tracking System, established within the Central Bank, allows close monitoring of the foreign exchange positions of companies with foreign currency credit risk of 15 million USD or more. Systemic Risk Data Monitoring System database is the only database that includes both assets and liabilities of companies at a monthly frequency, with a separation of currency and remaining maturity. With this feature, Systemic Risk Data Monitoring System allows to monitor the FX position in a timely manner and to determine special policies when necessary, in order to prevent the exchange rate risk carried by the real sector and the systemic risk that may arise from this. It also contributes to the policy-making process in the analysis of dollarization tendencies of real sector companies. In this study, 500 companies whose data were obtained as of January 2021 within the scope of Systemic Risk Data Monitoring System were examined. Accordingly, it is shown how firms' FX assets and liabilities are determined by firm-level data (e.g. foreign trade data) and macroeconomic conditions (e.g. interest rates, exchange rate volatility, expectations regarding exchange rate and inflation). In addition, company behavior is examined on a sectoral basis and in exporter company detail. According to the analysis results, it is seen that when exchange rate volatility increases, the share of FX assets and FX liabilities in the total decreases. This shows that companies do not want to take exchange rate risk. While the findings reveal a significant positive relationship between FX assets of exporting companies, foreign sales and expected exchange rate, it has been determined that the effect of these variables is weaker for net exporting companies.

**Keywords:** Exchange rate risk, Currency mismatch, Real sector.

**JEL Codes:** F31, D22, G32

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## Kurumsal Firmaların Döviz Pozisyonu Takibi

### Özet

Reel sektörün yabancı para (YP) cinsinden varlık ve yükümlülüklerinin düzenli olarak takip edilmesi finansal istikrar açısından büyük önem taşımaktadır. Merkez Bankası bünyesinde kurulmuş olan Sistemik Risk Veri Takip Sistemi (SRVTS), 15 milyon ABD doları ve üzeri YP kredi riski bulunan firmaların döviz pozisyonlarının yakından izlenmesine olanak sağlamaktadır. SRVTS veri tabanı, firmaların hem varlık hem de yükümlülüklerini aylık frekansta, para birimi ve kalan vade ayrımında içeren tek veri tabanıdır. Bu özelliğiyle SRVTS, reel sektörün taşıdığı kur riski ve bundan kaynaklı oluşabilecek sistemik riski önlemek üzere YP pozisyonunu zamanlı bir şekilde takip etmeye ve gerektiğinde özel politikalar belirlenmesine imkân vermektedir. Ayrıca, reel sektör firmalarının dolarizasyon eğilimlerinin analizinde de politika yapım sürecine katkı sunmaktadır. Bu çalışmada, SRVTS kapsamında 2021 yılı Ocak ayından itibaren verisi temin edilen 500 firma incelenmiştir. Buna göre, firmaların YP varlık ve yükümlülüklerinin firma düzeyinde veriler (örneğin dış ticaret verileri) ve makroekonomik koşullar (örneğin faiz, kur ve enflasyona ilişkin beklentiler) tarafından ne şekilde belirlendiği gösterilmiştir. Bununla birlikte, sektörel bazda ve ihracatçı firmalar detayında firma davranışları incelenmiştir. Analiz sonuçlarına göre, kur oynaklığı arttığında YP varlık ve YP yükümlülüklerin toplam içerisindeki payının azaldığı görülmüştür. Bu durum firmaların kur riski almak istemediğini göstermektedir. Bulgular, ihracatçı firmaların YP varlıkları ile yurtdışı satışlar ve beklenen kur arasında anlamlı pozitif bir ilişki ortaya koyarken, nette ihracatçı firmalar için bu değişkenlerin etkisinin daha zayıf olduğu tespit edilmiştir.

**Anahtar Kelimeler:** Kur riski, Para birimi uyumsuzluğu, Reel sektör.

**JEL Kodları:** D22, F31, G32



# Harnessing the Sun: Welfare Gains and Economic Incentives for Prosumers

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## **Abstract**

To effectively design policies facilitating the adoption of renewable energy and flexible power systems at the household level, a comprehensive understanding of the economic benefits of these technologies is essential. In this paper, we analyze these benefits from an economics perspective by examining the optimal behavior of a UK household in terms of investment, electricity purchases, electricity feed-ins, and storage decisions. In contrast to previous studies, especially in the engineering literature, we emphasize the economic incentives driving these decisions. Our findings suggest that the ability of households to sell excess electricity generated by solar panels to the grid is the most decisive factor for their adoption. Our economic analysis adds a unique dimension to the discussion, contributing to the policy-making process by highlighting the economic factors influencing household decisions about renewable energy and flexible power systems. The insights provided can be applied to evaluate the benefits for prosumers in other locations, offering perspectives missing in the current literature.

**Keywords:** Household energy; Solar panels; Economic incentives; Household behavior; Policy design; Storage.

**JEL Codes:** D12; D24; D61; Q41; Q42

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## The Impact of Environmental Regulations on Waste Trade

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### Abstract

This study contributes to the growing body of research on the environmental consequences of international trade by examining the waste haven hypothesis (WHH). The WHH posits that countries with lax environmental regulations become net importers of waste from nations with stricter standards. We employ a gravity model to analyze waste trade flows between all waste-trading countries from 2009 to 2019. Our findings provide empirical support for the WHH, demonstrating that countries with weaker environmental regulations import significantly more waste. Furthermore, the analysis reveals a differential effect, with stricter regulations having a more substantial impact on hazardous waste imports compared to non-hazardous waste. These results highlight the role of environmental regulations in shaping global waste trade patterns. Given the significant environmental impact of waste disposal, this study underscores the potential of stricter regulations to mitigate international waste transfer.

**Keywords:** Waste trade, environmental regulations, waste haven hypothesis, gravity model

**JEL Codes:** F18, Q56, Q58

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# Nickel-Powered Sustainability: Revolutionizing the Energy Economy Through Lithium Batteries

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## **Abstract**

The world's energy landscape is changing fast as global temperatures continue to rise, technological innovations like electric vehicles (EVs) are increasingly seen as a key to sustainability. EVs help reduce pollution, offer recyclable components, and promote environmental and energy sustainability through the use of lithium batteries. The rising demand for EVs in 2025 is expected to drive a significant increase in nickel prices—potentially up to 1000%—unveiling both economic opportunities and challenges for nickel-producing countries. The complementary relationship between batteries and nickel demand is estimated to increase the contribution to the GDP of nickel supplying countries. However, there is a notable disparity in the economic benefits between nations with large nickel reserves, such as Indonesia and Australia, and EV-manufacturing powerhouses like China. This underscores the urgent need for strategic policy reforms in nickel-supplying countries. This paper analyses the impact of the transition to lithium batteries on fossil energy sources and tries to find an answer to an important question “will the countries with the largest nickel stock become the new energy leaders”.

**Keywords:** Sustainability, lithium batteries, electric vehicles, energy, GDP

**JEL Codes:** Q01, Q42, Q43, Q55

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## The Relationship Between Happiness and Pro-environmental Behavior: Evidence from Europe

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### Abstract

Research on happiness is gaining prominence in the field of economics, with a significant portion of well-being studies rooted in happiness research or data derived from happiness and life satisfaction surveys. The escalating negative impacts of environmental issues are currently affecting individuals' welfare and overall well-being. The rising prevalence of pro-environmental behavior is particularly notable in industrialized countries, where individuals are reacting to environmental problems primarily generated by human action and industrialization. Pro-environmental behavior contributes to the preservation and protection of ecosystems, biodiversity, natural resources, and it is essential for mitigating the impacts of climate change and transitioning to a low-carbon economy. It can enhance overall public health and it is aligned with sustainable development principles, supporting long-term economic prosperity and social well-being by promoting sustainable practices. This study aims to explore the relationship between happiness and pro-environmental behavior in European countries. Using data from the European Social Survey Wave 10, this study investigates the correlation between individuals' happiness levels and their engagement in pro-environmental behavior across Europe. Despite variations across regions, adopting pro-environmental behaviors emerges as one pathway to enhancing welfare. Therefore, designing and implementing policies that encourage pro-environmental behavior, with a focus on regional differences, can be crucial.

**Keywords:** happiness economics, environmental studies, pro-environmental behavior, behavioral economics

**JEL Codes:** D91, Q56, Q58, D64

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## The Long Shadow of PKK Conflict in Turkey

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### Abstract

This study examines the long-term effects of the PKK conflict in Turkey, using a difference-in-differences approach to exploit variations in conflict intensity across regions and cohorts. Our findings indicate that exposure to conflict during childhood significantly reduces educational attainment and adversely affects labor market outcomes in adulthood. Specifically, affected individuals are less likely to complete primary and secondary school and are more likely to be informally employed or engaged in low-skill jobs. In addition, exposure to conflict is associated with lower skill levels and a decreased likelihood of employment in the formal and manufacturing sector, especially for males. Furthermore, we find that parental exposure to conflict negatively impacts the health outcomes of their children, particularly their height and weight for age, although the educational impacts generally do not persist into the second generation. These results are robust to the use of alternative samples and specifications, including controlling for migration and excluding the less affected regions and the major urban centers. Our findings highlight the profound and lasting impact of conflict on human capital development, emphasizing the importance of targeted policies to support affected children.

**Keywords:** Armed conflict, human capital children, intergenerational transmission

**JEL Codes:** I21, I12, J24, N34

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## Taller and higher in status: The Impact of Height on Occupational Prestige Scores in Turkey

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### Abstract

Height is a cumulative health measure that reflects socioeconomic and genetic conditions. Determined by inherited genetics and childhood conditions, the association of adult height with labor market outcomes is an important topic of the subject given its implications for the intergenerational transmission of disadvantage and mobility. In this study, we use multiple cross-sectional data from the Turkey Health Survey (THS) to examine height-based occupational sorting in a developing country setting that has experienced a positive secular trend in adult height across generations. Our study is the first to examine the relationship between occupational status, a measure that reflects both income and social aspects of an occupation, and height for the case of Turkey, to the best of our knowledge. Using an ordinary least squares (OLS) approach, we observe a significant positive height premium on occupational prestige scores, even after controlling for several physical, mental and socioeconomic characteristics and selective labor force participation. The height premium on occupational prestige scores is higher for women and decreases for younger generations.

**Keywords:** Height, occupational prestige scores, height-based sorting, labor market outcomes.

**JEL Codes:** I14, J24

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## The Effect of Rental Prices on Student Mobility

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### Abstract

Between 2020 and 2023, Turkey experienced a significant rise in housing prices, with inflation-adjusted rents tripling in some regions, marking it as a standout case of house price inflation globally. This study exploits the regional and temporal variation in rental prices as a natural experiment to explore the impact on students' educational migration within a developing country context, where annually one million high school graduates face the critical decision to stay local or relocate for university education. The analysis combines comprehensive panel data from the Higher Education Council's Atlas on more than 10,000 higher education programs with rental price index data from 81 provinces based on asking rents from online real estate listings. Employing a fixed-effects regression model that accounts for time-invariant characteristics of each program, university, province, and year, this study isolates the effect of rental prices on the openness rates of higher education programs. The findings indicate that a 100 TL increase in rental prices—akin to recent trends in Istanbul and Antalya—results in a 4.4 percentage point decrease in the openness rate of public universities and an even steeper 14.1 percentage point decline in private universities. The adverse effects are especially pronounced among programs with lower entry scores, suggesting that escalating accommodation costs exert selective pressure on student mobility, discouraging those with lower academic achievements from relocating to provinces with higher living costs.

**Keywords:** Student mobility, educational migration, rental price, housing shock, accommodation cost.

**JEL Codes:** I23, R21, R23, R31



## Pathways to Progress: The Gender Roles and Intergenerational Educational Mobility in Turkey

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### **Abstract**

This paper examines intergenerational educational mobility among females in Turkey, leveraging data from four waves of the Turkish Demographic and Health Surveys (TDHS) from 2003 to 2018 to quantify absolute mobility metrics. Our analysis reveals a significant upward trend in educational mobility for individuals born after 1985 and corresponding decline in educational persistence, largely attributable to the educational reform aimed at increasing access to schooling via compulsory schooling policy. This trend is particularly pronounced in rural areas, suggesting that policy intervention has been effective in reducing regional disparities. In addition to highlighting the impact of educational expansion on mobility dynamics, this study explores the influence of regional, historical, and gender-specific factors. The findings contribute to the broader literature on educational mobility and underscore the importance of continued policy efforts to promote educational equity and socioeconomic advancement in developing countries.

**Keywords:** Intergenerational educational mobility, gender roles, educational expansion, Turkey.

**JEL Codes:** I24, J62

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## How did UK firms use the COVID loans during the pandemic?

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### Abstract

This paper examines how receiving a COVID loan affected UK firms during the pandemic. We match firms that received a COVID loan with non-treated firms and use difference-in-differences estimations to identify the effect of using a scheme loan on firms' balance sheets and employment. We find that receiving a loan had a positive and significant effect on firms' fixed assets, deposits and total assets. The effect on employment was modest. The positive effect of receiving a loan was largest for credit-constrained firms. While firms operating in investment-intensive sectors increased their investment and employment more, firms in sectors hardest hit by the pandemic chose to increase deposits more after receiving a COVID loan. While COVID loans contributed to increases in firms' total assets and total liabilities, COVID loans were associated with a decline in firms' equity, possibly due to higher dividend payments or lower profits.

**Keywords:** Covid loans, firm behaviour, investment, employment, big data.

**JEL Codes:** C5, D2, G38

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# Do the De-dollarization Regulations Affect Interest Rates? Evidence from Türkiye

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## **Abstract**

Emerging countries mainly prefer FX-related macroprudential measures due to their concerns on capital flows and exchange rate volatility. As a result of increased dollarization, Türkiye has started to implement a macroprudential framework aiming to decrease FX-protected deposits, which was introduced as an intermediary tool against increased FX demand of residents, and increase TL deposit share on August 2023. In this study, we investigate the impact of this regulation on deposit and loan rates by grouping banks based on their FX-protected deposit share and using difference-in-differences approach. We find that the real persons deposit rate of the affected banks are on average 376 basis points higher compared to the other group in the post-regulation period, the impact on commercial and consumer loan rates are 628 bp and 784 bp, respectively. Higher deposit interest payments by banks that are more affected by the regulation support the conversion of these banks' customers to TL deposits and increase in cost of funding results in higher loan pricing. The results of the analysis suggest that the regulation introduced on August 2023 has promoted the conversion of FX-protected deposits to Turkish lira deposits, thereby supported the monetary transmission mechanism and the monetary tightening process that started in June.

**Keywords:** Dollarization, Macroprudential Regulation, Difference-in-Differences

**JEL Codes:** E5; G21; G38





# Modeling and Forecasting Yield Curves: A Comparative Analysis of Parametric vs. Machine Learning Techniques

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## Abstract

Accurately modeling and forecasting yield curves in financial markets is not just a task but a comprehensive and crucial aspect of economic analysis and policymaking. Yield curves, which reflect the term structure of interest rates and market expectations, are not just numbers but critical in predicting economic activities and making financial decisions. Therefore, the forecasts of yield curves are not just data but a significant source of information for investors, central banks, and other economic agents. This study is a comprehensive exploration of the modeling and forecasting of yield curves in the bond markets of Turkey, the United States (US), and the European Central Bank (ECB). The study rigorously examines three different methods: Diebold-Li Model (DL), Functional Data Analysis (FDA), and Gaussian Processes (GP). By comparing the performance of these models using various economic and financial datasets and evaluating the forecasting accuracy of each model, we have uncovered some compelling insights. The DL model performs well in short-term forecasts but exhibits higher error rates in long-term forecasts. The FDA model has shown stable and low error rates, especially on ECB data, indicating its effectiveness in complex market structures. The GP model has achieved the most successful results across all markets, with notably low RMSE values on US data. Even in the volatile Turkish market, the GP model has outperformed the other models. These findings underscore the importance of selecting appropriate models for yield curve forecasting and provide a guide for identifying the most suitable model for different market conditions. They also emphasize the critical importance of accurately forecasting yield curves for economic policymakers and financial analysts, offering valuable insights into economic decision-making processes. Moreover, they underline the role of this study in contributing to future research on yield curve forecasting.

**Keywords:** Yield curve, machine learning, gaussian processes, functional data analysis, time series analysis, forecasting, predictive models.

**JEL Codes:** C53, E43, G17

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# An Analysis of Exchange Rate Jumps in Turkey: A Two-Phase Approach Before and After the Currency-Protected Deposit System

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## **Abstract**

This study investigates the significant jumps in the exchange rate and the factors influencing these jumps through a two-phase approach. The first phase covers the period up until the implementation of the Currency-Protected Deposit (CPD) system, from 2013 to the introduction of the CPD. The second phase focuses on the period after the removal of the CPD system. The primary aim of this research is to identify the sudden and extreme depreciation periods, which we define as "jumps," and to analyze the main economic factors driving these jumps in both phases. In the first phase, the period between 2013 and 2021 was analyzed using the Pruned Exact Linear Time (PELT) algorithm to detect abrupt changes in the exchange rate. This algorithm identifies change points in time series data, allowing us to pinpoint periods of sudden depreciation. Once the jumps were identified, a rare event logistic regression model was applied to assess the probability of these jumps based on various economic indicators. The results showed that an increase in dollarization, reflecting a higher tendency for residents to hold assets in foreign currency, increases the likelihood of an exchange rate jump. Conversely, higher deposit rates and increased central bank reserves were found to reduce the probability of such jumps. In the second phase, the study will reassess the likelihood of exchange rate jumps following the removal of the CPD system. The CPD was introduced to stabilize the exchange rate by protecting local currency deposits from depreciation. However, with its removal, there is a renewed potential for significant fluctuations in the exchange rate. The same methodology will be applied, using the PELT algorithm to detect jumps and a rare event logistic regression model to estimate the probability of these jumps in the post-CPD period. The results from both phases will be compared to evaluate how the likelihood of exchange rate jumps and the factors influencing them have changed with the existence and removal of the CPD system. This comparative analysis will shed light on the Turkish Lira's vulnerability to exchange rate risks in the post-CPD period and provide insights into the effectiveness of macroeconomic policies in managing these risks.

**Keywords:** Exchange Rate, Dollarization, PELT Algorithm, Logistic Regression

**JEL Codes:** C32, C53, E58



# The Immiserizing Effect of the Export-Oriented Growth Model: Evidence from the Ardl and Nardl Model for the Turkish Economy

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## **Abstract**

The immiserizing growth hypothesis has analyzed the relationship between the increase in foreign trade volume and welfare losses in the historical process. Edgeworth (1894) first proposed the hypothesis that economic growth would be damaged due to the deterioration of a country's terms of trade. The immiserizing growth hypothesis was based on theoretical foundations by Bhagwati in 1958. The export-based growth model has been implemented in the Turkish economy intermittently since the 1980s, but the increase in foreign trade volume has not made a sufficient contribution to economic growth. The low interest rate and high exchange rate policy implemented in the Turkish economy in September 2021 aims to gain competitive power and increase export revenues by depreciating the domestic currency against foreign currencies. In this study, the impoverishing effect of the export-based growth model recently implemented in the Turkish economy is examined using the linear and nonlinear (asymmetric) ARDL method for the period 2013:01-2024:07. The findings of the study support the impoverishing growth hypothesis in the Turkish economy during the period examined.

**Keywords:** Immiserizing growth, terms of trade, monetary policy, ARDL, NARDL.

**JEL Codes:** E52, F43



## **İhracata Dayalı Büyüme Modelinin Yoksullaştırma Etkisi: Türkiye Ekonomisi için NARDL Modelinden Kanıtlar**

### **Özet**

Yoksullaştıran büyüme hipotezi, tarihsel süreçte dış ticaret hacmindeki artış ile refah kayıpları arasındaki ilişkiyi analiz etmiştir. İlk kez Edgeworth (1894) tarafından bir ülkenin dış ticaret hadlerinin bozulması nedeniyle ekonomik büyümenin zarar göreceği hipotezi öne sürülmüştür. Yoksullaştıran büyüme hipotezi 1958’de Bhagwati tarafından kuramsal temellere dayandırılmıştır. Türkiye ekonomisinde ihracata dayalı büyüme modeli 1980’lerden itibaren aralıklarla uygulamaya konulmuş ancak dış ticaret hacmindeki artış ekonomik büyümeye yeterli katkı sunamamıştır. Türkiye ekonomisinde 2021 yılı eylül ayında uygulamaya konulan düşük faiz yüksek kur politikası yerli paranın yabancı paralar karşısında değer yitirmesi ile rekabet gücü kazanmak ve ihracat gelirlerini artırmak amacı taşımaktadır. Bu çalışmada Türkiye ekonomisinde son dönemde uygulamaya konulan ihracata dayalı büyüme modelinin yoksullaştırma etkisi 2013:01-2024:07 dönemi için doğrusal ve doğrusal olmayan (asimetrik) ARDL yöntemi kullanılarak incelenmektedir. Çalışmanın bulguları Türkiye ekonomisinde incelenen dönemde yoksullaştıran büyüme hipotezini destekler niteliktedir.

**Anahtar Kelimeler:** Yoksullaştıran büyüme, dış ticaret hadleri, para politikası, ARDL, NARDL.

**JEL Kodları:** E52, F43



# Effectiveness of Macroprudential Policies on Turkish Economy: SVAR and Dynamic Connectedness Approach

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## Abstract

Macroprudential policies refer to the policies implemented to prevent the systemic financial risks or to minimize real losses caused by financial instability. Following global financial crises that revealed macroeconomic stability is not independent of financial stability, many developed and developing countries began to implement macroprudential policies. In the Turkish economy, various macroprudential policies have been introduced by the Central Bank of the Republic of Turkey and the Financial Stability Committee to mitigate the effects of short-term capital movements on credit and bank balances and to prevent instabilities stemming from excessive credit growth. In this context, this study aims to investigate the effectiveness of macroprudential policies implemented in the Turkish economy on various financial and macroeconomic indicators using the Structural VAR (SVAR) analyzes for the period 2010M01-2021M12. The findings indicate that the cumulative macroprudential policy index has significant effects on net international capital inflows, exchange rates, real credits, industrial production index, inflation, and housing price increases. The significant effects persist in models using different exchange rate, interest rate, and macroprudential policy indexes as part of the robustness analysis. Additionally, to examine the total spillover effects among the variables in the system, the Diebold and Yilmaz (2012) dynamic connectedness approach was applied to different models. According to the dynamic connectedness results calculated for the 2-10 steps and 30-35 month rolling windows, the index value increased during periods such as 2012-2013 with intense capital inflows, 2017 and 2019 with instability from domestic and external conditions, and the Covid period, paralleling the periods when macroprudential policies were used in a tightening or loosening sign.

**Keywords:** Macroprudential policy, SVAR analyzes, dynamic connectedness.

**JEL Codes:** E58, E61, C01

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## **Türkiye Ekonomisinde Makro İhtiyati Politikaların Etkinliği: SVAR ve Dinamik Bağlantılılık Yaklaşımı**

### **Özet**

Makroihtiyati politikalar, sistemik finansal riskleri önlemek veya finansal istikrarsızlığın neden olduğu reel kayıpları en aza indirmek için uygulanan politikaları ifade etmektedir. Küresel alanda yaşanan finans kaynaklı krizlerin makroekonomik istikrarın finansal istikrardan bağımsız olmadığını ortaya koymasının ardından birçok gelişmiş ve gelişmekte olan ülke makro ihtiyati politika uygulamaya başlamıştır. Türkiye ekonomisinde de kısa vadeli sermaye hareketlerinin kredi ve banka bilançoları üzerindeki etkilerini hafifletmek ve aşırı kredi büyümesi kaynaklı istikrarsızlıkların önüne geçmek amacıyla Türkiye Cumhuriyeti Merkez Bankası ve Finansal İstikrar Komitesi aracılığıyla çeşitli makro ihtiyati politikalar uygulamaya konulmuştur. Bu bağlamda çalışmada Türkiye ekonomisinde uygulanmakta olan makro ihtiyati politikaların çeşitli finansal ve makroekonomik göstergeler üzerindeki etkinliğinin 2010M01-2021M12 dönemi için Yapısal VAR (SVAR) yöntemi kullanılarak araştırılması amaçlanmıştır. Elde edilen bulgular kapsamında kümülatif makro ihtiyati politika endeksinin uluslararası sermaye girişleri, döviz kurları, reel krediler, sanayi üretim endeksi, enflasyon ve konut fiyat artışları üzerinde anlamlı etkilere sahip olduğu görülmektedir. Dayanıklılık analizi kapsamında farklı kur, faiz ve makro ihtiyati politika endekslerinin kullanıldığı modellerde de anlamlı etkiler devam etmektedir. Ayrıca, sistemde yer alan değişkenler arası toplam yayılım etkilerinin incelenmesi amacıyla Diebold ve Yılmaz (2012) dinamik bağlantılılık yaklaşımı farklı modellere uygulanmıştır. 2-10 adım ve 30-35 aylık kayan pencere için hesaplanan dinamik bağlantılılık sonuçlarına göre endeks değerleri yoğun sermaye girişlerinin yaşandığı 2012-2013 yılları, iç ve dış koşullardan kaynaklı istikrarsızlıkların görüldüğü 2017 ve 2019 kapsayan dönem ve Covid döneminde artmakla birlikte, makro ihtiyati politikaların daraltıcı veya genişletici yönlü kullanıldığı dönemlerle paralellik göstermektedir.

**Anahtar Kelimeler:** Makro ihtiyati politikalar, SVAR analizi, dinamik bağlantılılık.

**JEL Kodları:** E58, E61, C01



# Friends in Trade: Friendshoring Approach in Turkey's Foreign Trade Composition

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## Abstract

With the recent rise in protectionist measures, arguments that globalization has reversed and/or slowed down have found an important ground for debate. On the other hand, the development of global supply chains in the last 50 years has increased the collaboration between countries on the one hand and dependency on the other. In fact, the problem in supply from one country can break the supply chain. This risk, which was realized in the Covid-19 pandemic, has brought the importance of the resilience of supply chains to the agenda. Therefore, rising protectionism, high interdependence between countries through global supply chains, and the resilience and reliability of these supply chains have come to the fore in trade policy debates. As a result of these debates, the concept of "friendshoring" has gained importance in foreign trade policy. This study examines whether the friendshoring approach, which is expected to have an impact on the shaping of trade composition in the upcoming period, has had an impact on Turkey's current trade composition and its evolution over the last 20 years. This issue, which is important to evaluate in terms of risks on the supply chain, is investigated using the Gravity Model. The study tries to answer questions such as whether there will be a deviation in the market composition of Turkey's foreign trade in the coming period within the scope of the friendshoring strategy, which countries it may result in favor of, and whether this will affect the external demand conditions faced by Turkish exports.

**Keywords:** Friendshoring, export, import, globalization, gravity model

**JEL Codes:** E6, E0, F4, O2

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## **Dostlar Alışverişte Görsün: Türkiye’nin Dış Ticaret Kompozisyonunda Dost Ülkelerden Tedarik Yaklaşımı**

### **Özet**

Son dönemde artan korumacı eğilimlerle birlikte küreselleşmenin tersine döndüğü ve/veya yavaşladığı savları önemli bir tartışma zemini bulmuştur. Buna karşın son 50 yılda küresel tedarik zincirlerinin gelişmesi, ülkeler arasında bir yandan iş bölümünü diğer yandan bağımlılığı artırmıştır. Öyle ki, bir ülkeden tedarikte yaşanacak bir aksaklık, tedarik zincirinin kırılabilmesine neden olmaktadır. Covid-19 pandemisinde realize olan bu risk, tedarik zincirlerinin dayanıklılığının önemini gündeme taşımıştır. Dolayısıyla bir yandan yükselen korumacılık, diğer yandan küresel tedarik zincirleri üzerinden ülkeler arası yüksek bağımlılık, üçüncü bir taraftan ise bu tedarik zincirlerinin dayanıklılığı ve güvenilirliği, ticaret politikası tartışmalarında ön plana çıkmıştır. Bu tartışmaların neticesinde ortaya çıkan “Dost ülkelerden tedarik” (friendshoring) kavramının dış ticaret politikasında önemi artmıştır.

Bu çalışmada, önümüzdeki dönemde ticaret kompozisyonunun şekillenmesinde etkileri olması beklenen dost ülkelerden tedarik yaklaşımının, Türkiye’nin mevcut ticaret kompozisyonunda ve bu kompozisyonun son 20 yıldaki gelişiminde etkileri olup olmadığı incelenmiştir. Tedarik zinciri üzerindeki riskler bakımından değerlendirilmesi önemli olan bu konu, Çekim (Gravity) Modeli kullanılarak araştırılmıştır. Çalışmada Türkiye dış ticaretinin pazar kompozisyonunda dost ülkelerden tedarik stratejisi kapsamında önümüzdeki dönem bir sapma olup olmayacağı, hangi ülkeler lehine sonuç doğurabileceği, bunun Türkiye ihracatının karşılaştığı dış talep koşullarını etkileyip etkilemeyeceği gibi sorulara yanıt verilmeye çalışılmıştır.

**Anahtar Kelimeler:** Dost ülkelerden tedarik, ihracat, ithalat, küreselleşme, Çekim Modeli.

**JEL Kodları:** E6, E0, F4, O2





## The Relationship between Unemployment and Openness to Trade in Turkey (2013-2021)

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### **Abstract**

The relationship between foreign trade and unemployment has an important place in the economic development of countries. In this context, the aim of this study is to evaluate the spatial interaction between unemployment and openness to trade for 26 sub-regions of Turkey. According to model 1 and model 2 evaluated by spatial panel data analysis, there is a significant relationship between unemployment and per capita income. While model 1 and model 2 with spatial interaction are statistically insignificant, model 3 without spatial interaction shows a positive relationship between unemployment and openness to internationalization. Krugman (1991), within the framework of the economic geography approach, states that the unemployment rates will be high due to the less developed regions that he describes as Center-fugitive and that the production structure will be realized with low value-added products compared to other regions. In line with the maps examined in the Eastern Anatolia and Eastern Black Sea regions of Turkey, which can be characterized as center-fugitive, a negative relationship has been determined in which unemployment is high and openness to trade is low.

**Keywords:** Unemployment, openness to trade, spatial panel data analysis

**JEL Codes:** E24, F41

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## Türkiye’de İşsizlik ve Dışa Açıklık Oranı İlişkisi (2013-2021)

### Özet

Dış ticaret ile işsizlik ilişkisi, ülkelerin ekonomik kalkınmalarında önemli bir yere sahiptir. Bu bağlamda çalışmanın amacı Türkiye’nin 26 alt bölgesi için, işsizlik ile dışa açıklık oranını, mekânsal etkileşim ile değerlendirmektir. Mekânsal panel veri analizi ile değerlendirilen model 1 ve model 2 ye göre işsizlik ile kişi başına düşen gelir arasında anlamlı bir ilişki söz konusudur. Mekânsal etkileşimin dahil edildiği model 1 ve model 2 işsizlik ile dışa açıklık oranı ilişkisini istatistiksel olarak anlamsızken, mekânsal etkileşimin dahil edilmediği model 3’ e göre işsizlik ile dışa açıklık oranı arasında pozitif yönlü bir ilişki söz konusudur. Krugman(1991) ekonomik coğrafya yaklaşımı çerçevesinde Merkez-kaç olarak nitelendirdiği bölgelerin az gelişmiş olmasından kaynaklı olarak işsizlik oranlarının da yüksek olacağı ve üretim yapısının da diğer bölgelere göre düşük katma değere sahip ürünlerle gerçekleşeceğini ifade etmektedir. Türkiye’nin Merkez-kaç olarak nitelendirilebilecek olan Doğu Anadolu ve Doğu Karadeniz bölgelerinde incelenen haritalar doğrultusunda işsizliğin yüksek dışa açıklık oranının ise düşük olduğu negatif yönlü ilişki tespit edilmiştir.

**Anahtar Kelimeler:** İşsizlik, dışa açıklık oranı, mekânsal panel veri analizi.

**JEL Kodları:** E24, F41



# Job Transitions after the Kahramanmaraş Earthquakes: An Individual Level Analysis

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## **Abstract**

In this study, job mobility after the devastating earthquakes in Kahramanmaraş and its surroundings on February 6, 2023 are examined. For this purpose, individuals were tracked between periods and their transitions were monitored with the masked TR ID number information in the Social Security Institution micro data. Accordingly, it is observed that people residing in the earthquake zone lost their insurance status and changed their city of residence at a higher rate than those not residing in this zone. İstanbul, Ankara, Antalya, Antalya and Mersin were the cities of migration. The shares of retail trade, wholesale trade, building construction, clothing, food and beverage, and education sectors in the insured residents who stayed in the region after the earthquakes became lower than the share of those sectors in the insured residents in December 2022. Similarly, the shares of garbage collectors, sales service personnel, mining personal services, and construction occupations among the insured residents declined after the earthquakes. While most of those who were employed in the same city after the earthquake received wages above the median value according to the December 2022 wage distribution, most of those who lost their insurance status after the earthquake received wages below the median value.

**Keywords:** Earthquake, Job Mobility, Employment

**JEL Codes:** J08, J10, J21

## Kahramanmaraş Depremleri Sonrası İş Geçişleri: Birey Düzeyinde Bir Analiz

### Özet

Bu çalışmada, 6 Şubat 2023 tarihinde Kahramanmaraş ve çevresinde meydana gelen yıkıcı depremler sonrası iş hareketliliği incelenmiştir. Bu amaçla Sosyal Güvenlik Kurumu mikro verilerinde yer alan maskelenmiş TC kimlik numarası bilgisi ile bireyler dönemler arasında takip edilmiş ve geçişleri izlenmiştir. Buna göre, deprem bölgesinde ikamet eden kişilerin, bu bölgede ikamet etmeyenlere göre daha yüksek oranda sigortalılık statülerini kaybettikleri ve ikamet ettikleri şehri değiştirdikleri görülmektedir. Göç edilen iller İstanbul, Ankara, Antalya ve Mersin olmuştur. Deprem sonrasında bölgede kalan sigortalılarda perakende ticaret, toptan ticaret, bina inşaatı, giyim, gıda ve içecek ile eğitim sektörlerinin payı, Aralık 2022'de bölgede kalan sigortalılarda bu sektörlerin payından daha düşük olmuştur. Benzer şekilde, çöp toplayıcı, satış servis elemanı, madencilik kişisel hizmetler ve inşaat mesleklerinin sigortalılar arasındaki payları depremlerden sonra azalmıştır. Depremden sonra aynı şehirde istihdam edilenlerin çoğu Aralık 2022 ücret dağılımına göre medyan değer üzerinde ücret alırken, depremden sonra sigortalılık statüsünü kaybedenlerin çoğu medyan değer altında ücret almıştır.

**Anahtar Kelimeler:** Deprem, İş Hareketliliği, İstihdam

**JEL Kodları:** J08, J10, J21



## Labor Market Mismatch in Türkiye

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### Abstract

This study examines the misalignment between educational outputs and labor market demands in Türkiye, focusing on education, skill, and field-of-study mismatches for full-time wage-employed workers. Using data from the Programme for the International Assessment of Adult Competencies (PIAAC), the findings reveal a high prevalence of education and skill mismatches in Türkiye. Individuals who are mismatched in terms of their education and skills often face wage penalties, as they are employed in positions that do not fully utilize their qualifications and abilities. This underutilization leads to lower returns on educational investment, with overeducated and overskilled workers earning less than their adequately matched counterparts. Additionally, a significant proportion of tertiary-educated individuals are employed in sectors unrelated to their field of study, leading to wage penalties. Despite these financial drawbacks, the study finds that job satisfaction remains largely unaffected by these mismatches. These findings show the need for more effective alignment between educational outputs and labor market needs in Türkiye, ensuring that workers can more effectively apply their qualifications and skills in their jobs, thereby improving both individual outcomes and broader economic efficiency.

**Keywords:**

**JEL Codes:**



## Türkiye'de İşgücü Piyasası Uyumsuzluğu

### Özet

Bu çalışma, Türkiye'de eğitim çıktıları ile işgücü piyasası talepleri arasındaki uyumsuzluğu, tam zamanlı ücretli çalışanlar için eğitim, beceri ve alan uyumsuzluklarına odaklanarak incelemektedir. Uluslararası Yetişkin Yeterlilikleri Değerlendirme Programı (PIAAC) verileri kullanılarak elde edilen bulgular, Türkiye'de eğitim ve beceri uyumsuzluğunun yaygın olduğunu ortaya koymaktadır. Bu uyumsuzlukların sonuçları incelendiğinde, eğitim ve beceri açısından uyumsuz olan çalışanların, nitelik ve becerilerini tam olarak kullanmayan pozisyonlarda istihdam edildikleri için ücret cezalarıyla karşı karşıya kaldıkları bulunmakta ve fazla eğitilmiş ve fazla becerili çalışanların uygun şekilde eşleşmiş meslektaşlarından daha az gelir kazandığı görülmektedir. Ayrıca, yükseköğrenim görmüş tam zamanlı ücretli çalışanların önemli bir kısmının eğitim alanlarıyla ilgisi olmayan işlerde istihdam edildiği ve bunun da ücret kayıplarına yol açtığı bulunmaktadır. Bununla birlikte, iş memnuniyetinin bu uyumsuzluklardan olumsuz etkilenmediği görülmektedir. Bu bulgular, Türkiye'de eğitim çıktıları ile işgücü piyasası ihtiyaçları arasında daha etkin bir uyum sağlanması, çalışanların niteliklerini ve becerilerini işlerinde daha etkin bir şekilde kullanabilmelerinin sağlanması ve böylece hem bireysel kazanımların hem de daha genel anlamda ekonomik verimliliğin iyileştirilmesi gerektiğini göstermektedir.



## Analysis of the Persistence Changes in Export Price Indexes for Developed and Developing Countries

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### Abstract

This study examines changes in the persistence shocks in export price indices for developed and developing countries over approximately half a century. The nature of these shocks influences the design and effectiveness of foreign trade policies. Structural policies are necessary for permanent shocks, while stability policies are more suitable for temporary shocks. Understanding whether shocks are permanent or temporary is crucial for policymakers, as non-stationary shocks have lasting effects on export price indices. Additionally, the relative significance of persistence in supply and demand shocks is important. Supply shocks tend to have longer-lasting effects compared to demand shocks. In this context, larger demand shocks typically result in a lower persistence of the export price index. The study aims to analyze changes in the persistence of export price indices for selected developed and developing countries by distinguishing between breaks in averages and persistence. The findings indicate that the persistence characteristics of export price indices vary across country groups (for the period 1980M1-2023M12).

**Keywords:** Export prices, persistency, supply and demand shocks

**JEL Codes:** F14, C22

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## Gelişmiş ve Gelişmekte olan Ülkelerin İhracat Fiyat Endekslerinde Kalıcılık Değişimlerinin Analizi

### Özet

Bu çalışma, yaklaşık yarım asırlık zaman sürecinde gelişmiş ve gelişmekte olan ülkeler için ihracat fiyat endekslerindeki kalıcılık şoklarındaki değişimleri incelemektedir. İhracat fiyatlarına yönelik şokların niteliği dış ticaret politikalarının tasarımı ve uygulanabilirliğini belirlemektedir. Kalıcı şoklar yapısal politikalar gerektirir. İstikrar politikaları ise sadece geçici şoklarla başa çıkmak için yararlıdır. İhracat fiyat endeksi durağan değil ise şokların kalıcı etkiler vardır. Dolayısıyla, şokların geçici mi yoksa kalıcı mı olduğu politika yapıcıları açısından önem arz etmektedir. Ayrıca, ihracat fiyat endeksindeki kalıcılık arz ve talep şoklarının nispi önemi ile yakından ilişkilidir. Arz şoklarının etkileri talep şoklarının etkisinden daha uzun süreli olması muhtemeldir. Bu bağlamda, talep şoklarının nispeten daha büyük olması ihracat fiyat endeksinin çok az kalıcılık göstermesine neden olur. Dolayısıyla bu çalışmada ortalama ve kalıcılıktaki kırılmaların birbirinden ayırarak seçilmiş gelişmiş ve gelişmekte olan ülkelerin ihracat fiyat endekslerindeki kalıcılıktaki değişikliklerin incelenmesi amaçlanmaktadır. Sonuç olarak ülke gruplarında ihracat fiyat endekslerinde (1980M1-2023M12 dönemi için) kalıcılık özellikleri birbirinden farklılaştığına yönelik bulgulara ulaşılmaktadır.

**Anahtar Kelimeler:** İhracat Fiyat Endeksi, kalıcılık, arz ve talep şoku

**JEL Kodları:** F14, C22



## Küresel Sanayi Ürünleri Dış Ticaretindeki Gelişmeler Çerçevesinde Türkiye’de Sanayi Sektörünün Üretim ve İhracat Yapısının Sürdürülebilirliği

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### Özet

Dünya ekonomisinde son yıllarda yaşanan gelişmeler çerçevesinde, özellikle Çin’de üretim kapasitesinin aşırı artması, yaşanan küresel ticaret savaşları, başta tarife dışı engeller olmak üzere korumacı politikaların genişlik kazanması dünya ticaretinde yavaşlamaya yol açtı. Pandemi döneminde başlayan ve jeopolitik gerginliklerle devam eden tedarik zincirindeki kopmaların; bir yandan navlun maliyetlerini artırırken diğer yandan uluslararası ticaret akışını sekteye uğratması, tedarik güvenliği için yerel üretimi ve yakından tedariki önplana çıkardı. Bu gelişmeler, son yıllarda gündeme gelen “Deglobalizasyon” sürecine ivme kazandı. Alışlagelenden farklı bu gelişmeler yanında hızlanan teknolojik gelişmeler bir taraftan ürünlerin teknoloji yoğunluğunu artırırken diğer taraftan da yeni ve farklı teknolojik ürünlerin piyasalara girmesine imkan verdi. Genelde hacimsel büyüklüğü küçük, değersel büyüklüğü yüksek olan bu ürünler küresel ticaretin desenini hem nitelik hem de nicelik olarak farklılaştırdı. Bu gelişmenin doğal sonucu olarak da bu ürünlerin daha fazla üretildiği ülkeler küresel ticaretten daha fazla pay almış, ticaretteki coğrafi ağırlıklarda da değişim yaşanmıştır. Dünya genelinde üretim ve ticaret boyutunda oldukça önemli gelişmeler gerçekleşirken Türkiye’nin ise sanayi ürünleri ihracatında giderek zorlanmaya başladığı görüldü. Zira Türkiye’nin ihraç ettiği sanayi ürünlerinin, benzer rakip ülkelerde de gelişmesi, rekabeti yoğunlaştırdı. Bu yoğun rekabet sürecinde Türkiye sanayinin büyük ölçüde ithalata bağımlı olması da önemli zafiyetler yarattı. Tedarik zincirindeki kırılmalar ve jeopolitik gerginliklerle artan ithalat maliyetleri, özellikle girdi maliyet avantajına sahip ülkeler karşısında Türkiye’yi dezavantajlı konuma getirdi. Teknoloji ve teknolojik ürün geliştirmedeki gerilik ise sorunları daha da derinleştirdi. Bu küresel ve ulusal gelişmeler çerçevesinde Türkiye’nin sanayi ürünleri ihracatının sürdürülebilirliğinin sorgulandığı bu çalışmamızın ilk bölümünde küresel sanayi ürünleri ticaretindeki gelişmeler farklı boyutlarıyla değerlendirilecektir. İkinci bölümde Türkiye ve rakip ülkelerin sanayi ürünleri dış ticaretinin yapısı ve gelişimi incelenecektir. Üçüncü bölümde ise ilk iki bölümdeki analizler ışığında; Türkiye’nin sanayi ürünleri üretim ve ihracatının sürdürülebilirliği ve alınması gereken önlemlere bütünsel perspektifte yer verilecektir.

**Anahtar Kelimeler:** Küresel ticaret, Sanayi ürünleri ihracatı, üretimi, yapısı  
**JEL Kodları:** F13, O14, O24



# Challenging the Dragon: Turkish Exports in the Face of China's EU Market Expansion

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## Abstract

As China has been reintegration to the global economy, Chinese firms have continued to expand their market share in manufacturing in many markets all over the world. This article mainly explores the impact of Chinese exports on Türkiye's market share within the European Union (EU) over the period 1996-2022. The European Union, Türkiye's largest export market, has seen increasing competition from China, which has significantly expanded its export presence in the region. To analyze the dynamic of reducing effect of the rise of Chinese exports on countries' market shares in a given market, approach of Abraham and Van Hove (2011) is employed in this article with both fixed effect model and Generalized Method of Moments (GMM) estimation. Additionally, the study examines the impact of Türkiye's proactive strategy of upgrading export quality, which is proxied by Hausmann and Hidalgo's (2009) product complexity index, on enhancing its market share in the EU, even in the face of Chinese competition. The study indicated in the study that conclusion with actionable policy recommendations to support Türkiye's export sector in navigating the challenges and opportunities posed by Chinese competition in the EU market.

**Keywords:** Export, China-Effect, Export Competitiveness, International Trade.

**JEL Codes:** F1, F14, F47

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## **Ejderhaya Meydan Okumak: Türkiye’nin Çin’in AB Pazarındaki Genişlemesine Karşı İhracat Görünümü**

### **Özet**

Çin’in küresel ekonomiye yeniden entegrasyonu sürecinde, Çinli firmalar birçok farklı pazarda imalat sektöründe yer alan ürünlerdeki ihracat pazar paylarını genişletmeye devam etmektedir. Bu makale, 1996-2022 döneminde Çin ihracatının Türkiye’nin Avrupa Birliği (AB) içindeki pazar payı üzerindeki etkisini incelemektedir. Türkiye’nin en büyük ihracat pazarı olan Avrupa Birliği, Çin’in bölgedeki ihracat varlığını önemli ölçüde genişletmesiyle artan bir rekabetle karşı karşıyadır. Literatürde Çin etkisi olarak tabir edilen ve belirli bir pazarda Çin’in ihracatındaki artışın diğer ülkelerin ihracat pazar payları üzerindeki azaltıcı etkisini analiz etmek için, bu makalede Abraham ve Van Hove (2011) yaklaşımı hem sabit etkiler modeli hem de Genelleştirilmiş Momentler Yöntemi (GMM) ile kullanılmaktadır. Ayrıca, Türkiye’nin ihracat kalitesini artırma yönündeki proaktif stratejisinin, Hausmann ve Hidalgo’nun (2009) ürün karmaşıklığı endeksi ile temsil edilen, Çin rekabeti karşısında AB içindeki pazar payını artırma üzerindeki etkisi de incelenmektedir. Çalışma ile birlikte Türkiye’nin ihracat sektörünün Çin rekabetinin AB pazarında yarattığı zorluklar ve fırsatlar ışığında güçlendirilmesi için uygulanabilir politika önerileri geliştirilmektedir.

**Anahtar Kelimeler:** İhracat, Çin Etkisi, İhracat Rekabetçiliği, Uluslararası Ticaret  
**JEL Kodları:** F1, F14, F47



## Identification in Social Sciences Using Observational Data

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### **Abstract**

This paper explores good practices for identification in social sciences through illustrative, tailored examples from the economics of crime and criminology using observational data with an exclusive focus on Judea Pearl's causal framework. It highlights the perils of relying solely on the statistical problem, without causal diagrams or structural causal models, to navigate complexities such as mediation fallacy, collider bias and the use of inadmissible instruments. Through case studies, the paper emphasizes the necessity to obtain the full causal model to draw correct inferences. The ultimate goal is to equip researchers with the tools necessary for rigorous causal inference in their empirical work and introduce empirical scholars into the fundamental principles and methodologies that underpin robust causal analysis, emphasizing the distinction between identification and estimation.

**Keywords:** structural causal models, directed acyclic graphs, crime research

**JEL Codes:** A12; C18; C51; K14

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# Identifying the Socioeconomic Factors for Low Seafood Consumption in a Coastal Nation: The Case of Turkey

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## **Abstract**

Although Turkey has a long coastline and abundant water resources, seafood consumption in the country is significantly lower compared to other protein sources and the global average. This study aims to highlight the relationship between certain socioeconomic factors and this situation. To this end, accounting for censored dependent variables, endogeneity, and demographic scaling, a multi-stage budgeting approach is employed using the 2003 TurkStat Household Budget Survey dataset. The findings indicate that seafood products can be categorized as luxury goods and exhibit significantly higher price elasticities compared to other food groups. This is supported by the evidence that households with fewer members, higher rental costs, higher income-to-need ratios, and greater spending on alcohol, tobacco, and dining out also exhibit higher income and price elasticities. The policies should be formulated with the aim of increasing the availability of seafood to all demographic groups and prioritize making seafood consumption a fundamental need rather than a luxury. There should be limitations on the use of anchovy as a raw material for fish meal and oil factories, which supply intermediate products to the feed industry. Moreover, there should be a greater emphasis on promoting the sale of cultured fish in the domestic market.

**Keywords:** Seafood demand, multi-stage budgeting, quadratic almost ideal demand system, censored dependent variables, demographic scaling

**JEL Codes:** C24, D12, Q22, R22



# Tradeoffs in Choosing Nicotine Products in Türkiye: Evidence from a Discrete Choice Experiment

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## **Abstract**

This study investigates the trade-offs Turkish consumers face when choosing between nicotine products—packaged cigarettes, roll-your-own cigarettes, and e-cigarettes—under evolving market conditions and stringent regulations. By employing a discrete choice experiment within an online survey, the research assesses how attributes like prices, legal status, and flavor availability influence consumer choices. Türkiye's high smoking prevalence and regulatory landscape, including the 2020 bans on flavored cigarettes and e-cigarettes, set the context for this analysis. The study seeks to provide insights into consumer behavior and the potential impacts of regulatory changes, aiming to support evidence-based tobacco policy decisions in Türkiye.

**Keywords:** Tobacco Control, E-cigarettes, Sales Bans, Consumer Perceptions, Consumer Choice

**JEL Codes:** I12, I18, D91

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## Unravelling the cooperative performance: Factors influencing social capital in Sweden

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### Abstract

Cooperative performance has become a prominent topic in recent literature. Although researchers frequently discuss performance, there is no consensus on measuring it. This study aims to fill the gap in the literature by using social capital theory to measure performance. The study's dataset was obtained through an online survey of 1345 cooperative members in Sweden. To determine the components of social capital, we employed Exploratory Factor Analysis (EFA), revealing three components: 'trust,' 'collaboration,' and 'loyalty.' After that, we used three multiple regression models to determine factors influencing each of the components. As independent variables, we chose some variables including demographic, economic, membership characteristics. The results showed that age, perceived fair price paid to members, perception of steady income and financial security, and the high product price paid to members are all positively and significantly linked with trust. The size of the cooperative, however, has a negative and significant association with trust. The same independent variables were found to be significant for collaboration. The positive link between involvement in cooperative governance and loyalty suggests that involving members in decision-making processes increases their commitment. In conclusion, this study advances to optimize social capital and, by extension, cooperative performance.

**Keywords:** Social capital, cooperatives, performance.

**JEL Codes:** D23, Q13, J24

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## Temperature, precipitation and food price inflation: Evidence from a panel of countries

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### **Abstract**

This study addresses a significant gap in the existing literature by examining the association between weather variables, i.e. temperature and precipitation, and food price inflation at monthly frequency. Using a comprehensive panel dataset that spans 23 years of data for 186 countries, we explore this relationship in depth. Furthermore, we employ panel quantile regression techniques to investigate how weather-related variables influence food price inflation across different quantiles of inflation. Our findings reveal three key results. First, we establish that weather variables play a crucial role in explaining inflation, with temperature generally having a negative coefficient with inflation in the immediate term. In contrast, precipitation appears to have a positive coefficient. Next, the strength of these associations varies across different inflation quantiles, with the cumulative year-on-year positive impact of temperature on inflation reaching up to 0.6 percentage points per 1°C temperature change. Subsequently, our results demonstrate sensitivity to the method of clustering the panel of countries, indicating the importance of methodological considerations in such analyses.

**Keywords:** Climate Change; Food price inflation; Panel data; Quantile regression

**JEL Codes:** C21; C33; E31; Q54





## TV News and Inflation Expectations

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### Abstract

This paper introduces a new TV news index specifically designed to monitor news about rising inflation across four major TV channels—ABC, CBS, CNN, and FOX News—as well as an aggregate index. The index is generated daily and then compiled into a monthly index. For validation, we compare the aggregate monthly index with monthly data on inflation and inflation expectations, finding significant correlations.

We use our index to analyze the impact of TV news on inflation expectations. Specifically, we regress the inflation expectations of various demographic sub-groups from the Michigan Surveys of Consumers on both our aggregate index and the individual indices for each TV channel. This approach allows us to assess whether and how TV news influences inflation expectations and how different demographic groups are affected by specific TV channels. Additionally, we identify state-dependent effects of TV news, with inflation expectations reacting more strongly to TV news when inflation is rising. We demonstrate that this reaction is due to anticipation rather than mere exposure to a high inflation environment.

**Keywords:** TV news, Inflation Expectations, Expectation Formation.

**JEL Codes:** E31, D84, E58, C55

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## Non-response Bias in Household Inflation Expectations Surveys

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### Abstract

This paper uses micro-data from the Reserve Bank of New Zealand's Household Inflation Expectations survey to obtain an accurate read of households' true inflation expectations by studying how different demographic groups respond (or do not respond) to the inflation expectations question in the survey. We find non-responses lead to substantial under-representation of some demographic groups in the survey: young, female, low-income, and minority ethnic groups have lower response rates. How the survey is conducted also affects item response rates. The survey response rates increase when the survey is conducted online and when inflation rates deviate from the central bank's target range. Using a sample selection model, we assess whether the survey has item non-response bias by comparing the demographic characteristics of responders and non-responders. After accounting for selection, we find that observed differences in inflation expectations by gender, ethnicity, and income decrease substantially, while differences by age increase. We quantify and demonstrate how to adjust average inflation expectations for bias caused by item non-response. We show that there is a positive bias, and the aggregate inflation expectation series shifts down after the adjustment.

**Keywords:** inflation expectations, household surveys, item non-response, demographic heterogeneity.

**JEL Codes:** C83, D84, E31, E71

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# An Analysis of Volatility of Oil Prices and Exchange Rates for the Turkey

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## **Abstract**

An important component of production in an economy is energy. Changes in the prices of energy resources have a direct and an indirect effect on many economic indicators (employment, balance of payments, etc.), especially inflation and growth. The volatility of the price of oil, a major energy source, impact inflation by either elevating or reducing it. For this reason, while central banks use monetary policy tools to reach the inflation target and keep it under control, they also have to closely monitor the volatility of oil prices. Another variable that affects inflation is the exchange rate. Exchange rate volatility has significant effects on inflation, international trade, balance of payments, and economic performance. Therefore, it is important to investigate the relationship between exchange rates and oil prices. For this purpose, the relationship between oil price and exchange rate is analyzed with the Generalized Auto-Regressive Conditional Heteroskedasticity (GARCH) method using daily time series data for the period January 2004 - March 2024. Through the research period, it will be possible to compare the 2004-2008 Conventional Monetary Policy, the 2009 –2020 Unconventional Monetary Policy and the post-Covid-19 period.

**Keywords:** Exchange rates, oil prices, inflation rate.

**JEL Codes:** E31, E52, E60

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## Synchronization between the Business, Credit and Financial Cycles in Turkey

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### Abstract

The 2008 global financial crisis drew attention to fluctuations in business and financial markets and policy responses. Business cycles refer to the real sector of the economy, while credit and financial cycles refer to the financial sector. There are two different views on these two markets in the literature. On the one hand, the perception that there is a very weak relationship between these two markets and that they develop in separate paths, and on the other hand, that these two markets are interconnected through feedback. However, in the aftermath of the 2008 global financial crisis, the latter view has become more widespread and the close and complex relationship between these two markets has attracted the attention of both researchers and authorities, especially central banks. The role of cycles in macroeconomics is no coincidence. Without understanding cycles, it seems unlikely to understand the economy and make inferences about the future. If credit and financial markets are at the root of macroeconomic fluctuations, then it is crucial to better understand what drives the cycles and identify leading indicators to design and test policies to smooth them. The main objective of this paper is to investigate the interaction between business, credit and financial cycles in Turkey. Firstly, the cycles will be obtained by Hodrick-Prescott (HP) and Corbae-Ouliaris (CO) filtering method. Then, cross-correlation analysis and Dynamic Conditional Correlation (DCC) analysis will be used to determine the relationship between the cycles. The empirical results show that there is a strong synchronisation between the cycles and that credit and financial cycles are the precursors of the business cycle. The most important finding of the study in this sense is that a possible major crisis that may arise from financial instability can be foreseen and necessary measures can be taken.

**Keywords:** Business cycles, credit cycles, financial cycles, synchronization.

**JEL Codes:** E32, E37, E44, G17

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## Türkiye’de İş, Kredi ve Finansal Döngüler Arasındaki Senkronizasyon

### Özet

2008 küresel finansal krizi dikkatleri iş ve finansal piyasalardaki dalgalanmalara ve politika tepkilerine çekmiştir. İş döngüleri ekonominin reel kesimini, kredi ve finansal döngüler ise finansal kesimi ifade etmektedir. Bu iki piyasaya ilişkin literatürde iki ayrı görüş mevcuttur. Bir yandan bu iki piyasa arasında son derece zayıf bir ilişki olup ayrı yollarda geliştiği algısı, öte yandan geri besleme yoluyla bu iki piyasanın birbirleriyle bağlantılı olduğu şeklindedir. Ancak 2008 küresel finansal krizinin ardından ikinci görüş daha yaygın hale geldi ve bu iki piyasanın yakın ve karmaşık ilişkisi hem araştırmacıların hem de yetkililerin, özellikle merkez bankalarının, ilgi alanına girmiştir. Döngülerin makroekonomide rolü tesadüf değildir. Döngüleri anlamadan ekonomiyi anlamak ve gelecek hakkında çıkarımlarda bulunmak pek olası görünmemektedir. Eğer makroekonomik dalgalanmaların kökeninde kredi ve finansal piyasalar varsa, o zaman döngüleri neyin yönlendirdiğini daha iyi anlamak ve bunları yumuşatacak politikaları tasarlamak ve denemek için öncü göstergeleri belirlemek oldukça önemlidir. Bu çalışmanın temel amacı Türkiye’deki iş, kredi ve finansal döngüler arasındaki etkileşimi araştırmaktır. Öncelikle döngüler Hodrick-Prescott (HP) ve Corbae-Ouliaris (CO) filtreleme yöntemi ile elde edilecektir. Ardından çapraz korelasyon analizi ve Dinamik Koşullu Korelasyon (DCC) analizi ile döngüler arasındaki ilişkiyi belirlenecektir. Ampirik sonuçlar döngüler arasında güçlü senkronizasyonun varlığını, kredi ve finansal döngülerin iş döngüsünün öncüsü olduğunu göstermektedir. Çalışmanın bu anlamda en önemli bulgusu, finansal istikrarsızlıklardan kaynaklanabilecek olası bir büyük krizin öngörülebilirliği ve gerekli tedbirlerin alınabileceği şeklindedir.

**Anahtar Kelimeler:** İş döngüleri, kredi döngüleri, finansal döngüler, senkronizasyon.

**JEL Kodları:** E32, E37, E44, G17



## Does Okun's Law Differ According to Gender? An Empirical Analysis on the Turkish Economy

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### Abstract

The relationship between economic growth and unemployment rates is known as Okun's Law in economic literature. In this study, the validity of Okun's Law in the Turkish economy in the period 1989–2022, and whether it differs by gender, were analyzed using linear regression analysis with the Ordinary Least Squares method. The stationarity of the series was tested with the help of ADF and PP unit root tests, and it was concluded that all series were stationary at the level. Then, regression analysis was performed, and it was concluded that for every 1% growth above the long-term average growth rate of 4.58%, the total unemployment rate decreased by 0.15%, the male unemployment rate by 0.19%, and the female unemployment rate by 0.05% in the same period. In addition, in the models established using youth unemployment rates, it was concluded that for every 1% growth above the average, the total youth unemployment decreased by 0.20%, the young male unemployment decreased by 0.28%, and the young female unemployment decreased by 0.06% in the same period. In the models with female unemployment rates, very small coefficients were obtained, but it was concluded that these models were not statistically significant. In summary, a growth above the trend significantly reduces male unemployment rates compared to female unemployment rates, and when youth unemployment is examined, it is seen that this difference between the genders widens even more. In other words, Okun's Law is valid in the Turkish economy, but it differs according to gender.

**Keywords:** Economic Growth, Unemployment, Okun's Law, OLS.

**JEL Codes:** C22, E24, N25, O47

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## Okun Yasası Cinsiyetlere Göre Farklılaşır Mı? Türkiye Ekonomisi Üzerine Ampirik Bir Analiz

### Özet

Ekonomik büyüme ve işsizlik oranları arasındaki ilişki iktisat literatüründe Okun Yasası olarak bilinmektedir. Bu çalışmada, En Küçük Kareler yöntemi ile doğrusal regresyon analizi kullanılarak Türkiye ekonomisinde 1989-2022 döneminde Okun Yasası'nın geçerliliği ve cinsiyetlere göre farklılaşıp farklılaşmadığı analiz edilmiştir. Serilerin durağanlığı ADF ve PP birim kök testleri yardımıyla sınanmış ve serilerin tümünün düzeyde durağan olduğu sonucuna ulaşılmıştır. Daha sonra ise regresyon analizi yapılmış ve uzun dönemli ortalama büyüme oranı olan %4.58'in üzerinde gerçekleşen her %1'lik büyüme için, aynı dönemde toplam işsizlik oranının %0.15, erkek işsizlik oranının %0.19, kadın işsizlik oranının ise %0.05 azaldığı sonucuna ulaşılmıştır. Ayrıca genç işsizlik oranları kullanılarak kurulan modellerde ise ortalamanın üzerindeki her %1'lik büyüme için aynı dönemde toplam genç işsizliğinin %0,20, genç erkek işsizliğinin %0.28, genç kadın işsizliğinin ise %0.06 azaldığı sonucuna ulaşılmıştır. Kadın işsizlik oranlarının olduğu modellerde çok küçük katsayılar elde edilmiş, fakat bu modellerin istatistiki olarak anlamlı olmadığı sonucuna ulaşılmıştır. Özetle, trendin üzerinde gerçekleşen bir büyüme erkek işsizlik oranlarını kadın işsizlik oranlarına göre önemli ölçüde azaltmaktadır, genç işsizlik incelendiğinde ise cinsiyetler arasındaki bu farkın daha da açıldığı görülmektedir. Yani, Türkiye ekonomisinde Okun Yasası geçerli olmakla birlikte cinsiyetlere göre farklılaşmaktadır.

**Anahtar Kelimeler:** Ekonomik Büyüme, İşsizlik, Okun Yasası, EKK.

**JEL Kodları:** C22, E24, N25, O47

# Temporal Disaggregation of Türkiye's GDP from Quarterly to Monthly: State-Space Modeling Approach

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## Abstract

In recent years, the demand for high-frequency data has been steadily increasing. However, publishing high-frequency direct measurements can be both challenging and costly for official statistical offices. To address this, many national statistical offices use temporal disaggregation techniques to estimate high-frequency indicators. Temporal disaggregation can be defined as the process of deriving high-frequency time series from the low frequency series. These methods are divided into two main categories based on the availability of high-frequency information related to the target variable. The first category includes mathematical methods and time series methods that do not use external indicators. The second category comprises methods employing high-frequency information from related variables, such as the Denton procedure, regression-based methods, and dynamic regression models. This study aims to estimate the monthly frequency real GDP which is published quarterly by Turkstat, using temporal disaggregation methods. In this study, an indirect approach is adopted for the temporal disaggregation of real GDP. That is, instead of directly deriving monthly frequency GDP series from quarterly GDP, the subcomponents of the GDP series are first decomposed on a monthly basis and then aggregated. According to the NACE Rev2 economic activity classification, subcomponents BCDE (Industry), F (Construction), and services from G to N excluding K were disaggregated to a monthly frequency using regression-based methods with related indicators. The other subcomponents of GDP are estimated on a monthly basis using structural time series models. The existing literature on regression-based temporal disaggregation methods typically assumes that the regression coefficients are constant. If the relation between economic time series changes over time or if there is a structural break in the data, using a model with constant coefficients will lead to model specification errors. The primary contribution of this study is the use of time-varying coefficient regression models in the temporal disaggregation of GDP subcomponents. Temporal disaggregation with time-varying parameter models and structural time series methods were estimated using the state-space model approach. Comparing the statistical quality and revision performances of the models used in the study, it was found that the time-varying parameter models outperformed the standard constant coefficient models.

**Keywords:** Temporal disaggregation, State-space model, time-varying parameter, GDP.

**JEL Codes:** C22, C53, E01

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## Türkiye'nin GSYH'sinin Çeyreklikten Aylığa Dönemsel Ayrıştırılması: Durum-Uzay Modeli Yaklaşımı

### Özet

Son yıllarda yüksek frekanslı verilere olan talep giderek artmaktadır. Ancak, resmi istatistik ofisleri için yüksek frekanslı doğrudan ölçümler yayımlamak hem zor hem de oldukça maliyetli olabilir. Bu nedenle birçok ülkenin istatistik ofisi, yüksek frekanslı göstergelerin tahmini için dönemsel ayrıştırma tekniklerini kullanmaktadır. Dönemsel ayrıştırma, düşük frekanslı serilerden yüksek frekanslı zaman serileri türetme süreci olarak tanımlanabilir. Dönemsel ayrıştırma yöntemleri, hedef göstergeyle ilgili yüksek frekanslı dışsal bilginin kullanılıp kullanılmamasına göre iki ana kategoriye ayrılır. İlk grup, dışsal bir gösterge kullanmayan matematiksel yöntemler ve zaman serisi yöntemlerini içerir. İkinci kategori ise Denton prosedürü, regresyon tabanlı yöntemler ve dinamik regresyon modelleri gibi dışsal değişkenlerden yüksek frekanslı bilgi kullanan yöntemleri kapsamaktadır. Bu çalışmada, Türkiye İstatistik Kurumu (TÜİK) tarafından çeyreklik frekansta yayımlanan reel Gayrisafi Yurtiçi Hasılanın (GSYH) dönemsel ayrıştırma yöntemleri kullanılarak aylık frekansta tahmin edilmesi amaçlanmıştır. Dönemsel ayrıştırmada dolaylı yaklaşım benimsenmiştir. Yani, aylık GSYH tahminleri, çeyreklik GSYH'nin doğrudan aylığa dönüştürülmesi yerine, önce GSYH'nin alt kalemlerinin aylık olarak tahmin edilmesi daha sonra bu alt kalemlerin toplulaştırılması yoluyla elde edilmiştir. GSYH'nin NACE Rev2 ekonomik faaliyet sınıflamasına göre BCDE (Sanayi), F (İnşaat) ve K hariç G-N arası hizmetler alt kalemleri, dışsal göstergeler kullanarak regresyon tabanlı dönemsel ayrıştırma yöntemleriyle aylık frekansa dönüştürülmüştür. GSYH'nin diğer alt kalemleri ise yapısal zaman serisi modelleriyle aylık bazda tahmin edilmiştir. Literatürde, regresyon tabanlı ayrıştırma yöntemlerinde modeldeki regresyon katsayılarının sabit olduğu varsayılmaktadır. İktisadi zaman serileri arasındaki ilişki zamanla değişiyorsa ya da verilerde yapısal bir kırılma varsa sabit katsayılı bir model kurmak spesifikasyon hatasına yol açabilir. Bu çalışmanın en önemli katkısı GSYH alt bileşenlerinin dönemsel ayrıştırmada zamanla değişen katsayılı regresyon modellerinin kullanılmasıdır. Zamanla değişen parametrelili dönemsel ayrıştırma ve yapısal zaman serisi yöntemleri durum-uzay modeli yaklaşımıyla tahmin edilmiştir. Çalışmada kullanılan modellerin istatistiksel kalitesi ve revizyon performansları karşılaştırıldığında, zamanla değişen parametrelili modellerin standart sabit katsayılı modellere göre daha iyi sonuç ürettiği tespit edilmiştir.

**Anahtar Kelimeler:** Dönemsel ayrıştırma, durum-uzay modeli, zamanla değişen parametre, GSYH.

**JEL Kodları:** C22, C53, E01



# The Analysis of Educational Results of Selected Eastern European and Central Asian Countries According to the 2018 Pisa Findings

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## **Abstract**

The aim of the article is to analyze the educational results of Turkey and some selected Eastern European and Central Asian countries participated PISA in 2018. While economic growth is improving in the region, regional countries still face some important socio-economic issues. The level of development in the regional countries is well below that of the most of OECD countries, and the income is not evenly distributed within the region, as measured by Gini coefficient. In addition to these problems, global crises caused by globalisation, technological changes, artificial intelligence and many other distortive elements have brought about many new important problems in the educational system, especially in EECA countries by means of deepening the inequality. Public policies the importance of which is understood in the global area that increased of inequalities in the socio-economic field play an important role in determining how to respond to such social problems. Creating a fair educational system needs prioritises in the evaluation of a student according to her/his ability regardless of her/his socio-economic profile. One of the most important developmental problems for EECA countries is the inequality of opportunity manifesting itself in the form of lack of education and training opportunities, which threatens the future of the children of these countries. It is highly important to create modern economies and societies by giving priority to the highly qualified population in selected EECA countries, in the way of targeting competitiveness in the global atmosphere.

**Keywords:**PISA, education results, EECA countries.

**JEL Codes:** I20,I21, I24, I25

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## 2018 Yılı Pisa Sonuçları Bağlamında Seçili Doğu Avrupa ve Orta Asya Ülkeleri'nin Eğitim Sonuçlarının Analizi

### Özet

Makale 2018 yılında PISA'ya katılan Doğu Avrupa ve Orta Asya Ülkeleri (EECA) içinde yer alan seçili ülkelerin ve Türkiye'nin eğitim sonuçlarını analiz etmeyi amaçlamaktadır. Bölgede ekonomik büyüme gelişme gösterirken, bölge ülkeleri hala önemli bazı sorunlarla yüzleşmektedir. Ele alınan ülkelerde kalkınma düzeyinin çoğu OECD ülkesinin oldukça altında kaldığı ve bölgede refah artışının eşit şekilde dağılmadığı gözlenmektedir. Ayrıca Gini katsayısıyla ölçülen ekonomik eşitsizliğin bu ülkelerde oldukça yüksek olduğu ortaya çıkmaktadır. Bu sorunlara ek olarak küreselleşmenin beraberinde getirdiği küresel krizler, teknolojik değişimler, yapay zeka ve gittikçe şiddetini arttıran daha birçok eşitsizlik özellikle EECA ülkelerinde eğitim sisteminde önemli yeni birçok sorunu da beraberinde getirerek eşitsizliğin derinleşmesine neden olmuştur. Sosyo-ekonomik alanda eşitsizliklerin böylesine arttığı küresel ekseninde önemini hissettiren kamu politikaları özellikle eğitim sisteminde bu sorunların çözümüne nasıl tepki vereceğini belirlemede hayati bir rol oynar. Adil bir eğitim sisteminin oluşturulması bir öğrencinin sosyo-ekonomik profili ne olursa olsun onun yeteneğine göre değerlendirilebilmesini ön plana koyar. EECA Ülkeleri için en önemli kalkınma sorunlardan biri eğitim ve öğretim olanaklarının eksikliği şeklinde kendini gösteren fırsat eşitsizliği bu ülke çocuklarının geleceğini tehdit etmeye devam etmesidir. Küresel ortamda ekonomik rekabet gücünü geliştirmeyi hedefleyen araştırmaya konu ilgili EECA ülkelerinin gelişme noktasında önceliği yüksek nitelikli nüfusa vererek, modern ekonomiler ve toplumlar yaratabilmesi oldukça önemlidir.

**Anahtar Kelimeler:** PISA ,Eğitim Sonuçları, EECA Ülkeleri.

**JEL Kodları:** I20, I21, I24, I25



## The (In) Equality of Opportunity in Education: The Assessment with the Framework of OECD Countries

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### Abstract

Education is a fundamental human right, and also, it is a necessity for economic, social, and cultural development. Equality of opportunity, which expresses the necessity for everyone to have the same improvement opportunities, is most associated with education. The fact that education is a semi-public (mixed) good makes it difficult to achieve the aim of providing equality of opportunity in education. It also leads to the perpetuation of existing inequalities. Although the reasons for inequality of opportunity in education are mostly due to socio-economic differences, there may also be socio-cultural reasons that cause inequality in countries where factors such as discrimination are evident. In this context, the Economic, Social, and Cultural Situation (ESKD) index is one of the most used variables after PISA scores. The index contributes to identifying problems related to inequalities in educational opportunities and learning outcomes. This study will discuss the dimensions of inequality of opportunity in education within the framework of OECD member countries. The concept of equality of opportunity will be discussed from a conceptual and theoretical perspective in the first part. The second part will evaluate the causes and consequences of inequality of opportunity in education. In the last part, a comparative evaluation will be made with OECD countries regarding advantaged and disadvantaged students and schools with the Economic, Social, and Cultural Situation (ESCS) index, based on PISA data specifically for Türkiye.

**Keywords:** Education, Equality of opportunity, PISA, OECD

**JEL Codes:** I21, I24, I25

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## Eğitimde Fırsat Eşit(siz)liği: OECD Ülkeleri Çerçevesinde Değerlendirme

### Özet

Temel bir insan hakkı olan eğitim; ekonomik, sosyal ve kültürel kalkınma için bir gerekliliktir. Bununla birlikte herkesin aynı gelişme olanaklarına sahip olması gerekliliğini ifade eden fırsat eşitliği kavramı, en çok eğitim kavramı ile ilişkilendirilmektedir. Eğitimin yarı-kamusal (karma) bir mal olması, eğitimde fırsat eşitliğini sağlama amacına ulaşmayı zorlaştırmakta ve var olan eşitsizliklerin süreklilik kazanmasına da yol açmaktadır. Eğitimde fırsat eşitsizliğinin nedenleri daha çok sosyo-ekonomik farklılıklardan kaynaklanmakla birlikte ayrımcılık gibi unsurların belirgin olduğu ülkelerde eşitsizliğe neden olan sosyo-kültürel nedenler de var olabilir. Bu bağlamda, Ekonomik, Sosyal ve Kültürel Durum (ESKD) endeksi, PISA başarı puanlarından sonra en çok kullanılan değişkenlerden biridir. Endeks, eğitim olanaklarına ve öğrenme çıktılarına ilişkin eşitsizliklere ilişkin sorunların belirlenmesine katkı sağlamaktadır. Bu çalışmada eğitimde fırsat eşitsizliğinin boyutları OECD üyesi ülkeler çerçevesinde ele alınacaktır. Bu temelde çalışmanın ilk bölümünde fırsat eşitliği, kavramsal ve teorik açıdan ele alınacaktır. İkinci bölümde eğitimde fırsat eşitsizliğinin nedenleri ve sonuçları değerlendirilecek ve son bölümde ise Türkiye özelinde PISA verileri temelinde Ekonomik, Sosyal ve Kültürel Durum (ESKD) endeksi çerçevesinde avantajlı-dezavantajlı öğrenciler ve okullar açısından OECD ülkeleri ile karşılaştırmalı bir değerlendirme yapılacaktır.

**Anahtar Kelimeler:** Eğitim, Fırsat eşitliği, PISA, OECD.

**JEL Kodları:** I21, I24, I25



## Determinants of Mental Health in Turkey after Covid-19

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### Abstract

According to the World Health Organization (WHO), mental health is the ability of individuals to realize themselves, to cope with the ordinary stress of life, to work productively and efficiently, and to contribute to society. According to WHO data, 970 million people experience some type of mental health disorder (WHO, 2022). Depression is the most common of these disorders, affecting approximately 280 million people. Anxiety disorders take the second place and affect 264 million people (WHO, 2022). The prevalence of mental health disorders in Turkey shows a similar trend in the world with 8.1% depression, 6.2% anxiety disorders, 4.5% attention deficit and hyperactivity disorders (TURKSTAT). Various studies have been conducted in the literature to identify the determinants of mental health. Although various studies have been conducted on the determinants of mental health in Turkey, there are deficiencies in terms of the impact of chronic diseases on mental health and the evaluation of mental health disorders. This study tries to explain the determinants of mental health after Covid-19 using the 2022 Turkey Health Survey data. As the method, Ordinary Least Squares method was used. Mental health was obtained through Principal Component Analysis through subjective evaluations and was used as the dependent variable. In addition, it brings a new perspective to the literature by analyzing the variables related to Turkey to analyze the impact of living in Turkey.

**Keywords:** Language of instruction, job satisfaction, graduate education.

**JEL Codes:** A23, I21, J24, J28

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## Covid-19 sonrası Türkiye’de Ruh Sağlığının Belirleyicileri

### Özet

Ruh sağlığı Dünya Sağlık Örgütü (DSÖ)’ye göre bireylerin kendini gerçekleştirme, yaşamın olağan stresi ile başa çıkabilme, üretken ve verimli çalışabilmesi ve topluma katkıda bulunabilmesidir. DSÖ’nün verilerine göre 970 milyon insan bir tür ruh sağlığı bozukluğu yaşamaktadır (DSÖ,2022). Depresyon bu bozuklardan en yaygın olanı ve yaklaşık 280 milyon kişiyi etkilemektedir. İkinci sırada anksiyete bozuklukları yer almaktadır ve 264 milyon kişiyi etkilemektedir (DSÖ,2022).Türkiye’de ruh sağlığı bozukluklarının prevalansı ise %8,1 depresyon, %6,2 anksiyete bozuklukları, %4,5 dikkat eksikliği ve hiperaktivite bozuklukları ile dünyadaki istatistiklere benzer bir seyir göstermektedir(TÜİK). Literatürde ruh sağlığının belirleyicilerini tespit etmek için çeşitli çalışmalar yapılmıştır. Türkiye için de ruh sağlığının belirleyicileri üzerine çeşitli çalışmalar yapılmış olsa da kronik hastalıkların ruh sağlığına etkisi, ruh sağlığı bozukluklarının değerlendirilmesi açısından eksiklikler bulunmaktadır. Bu çalışmada 2022 Türkiye Sağlık Araştırması verilerini kullanarak Covid-19 sonrası ruh sağlığının belirleyicilerini açıklamaya çalışmaktadır. Yöntem olarak, Sıradan En Küçük Kareler yöntemi kullanılmıştır. Ruh sağlığı öznel değerlendirmeler üzerinden Temel Bileşenler Analizi ile elde edilmekte olup bağımlı değişken olarak kullanılmıştır. Bununla birlikte Türkiye’de yaşamış olmanın vermiş olduğu etkiyi analiz etmek için Türkiye’ye ait değişkenleri de analiz ederek literatüre yeni bir bakış açısı getirmektedir.

**Anahtar Kelimeler:** Ruh Sağlığı, Covid-19, Depresyon.

**JEL Kodları:** I12, I14, J14



## The Five Big Questions on Consumption Inequality and Answers From Turkish Economy

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### **Abstract**

Consumption is a better measure of economic welfare according to many studies. Also, because of Consumption smoothing efforts of individuals and other leakages on transformation income to consumption such as inflation, indirect taxes and debt dynamics, it captures the a better and accurate picture of economic inequalities. After global financial crises and Covid-19 pandemics consumption inequality take in place of income inequalities by higher rises and become a hot topic on development economics. This study aims to explore consumption inequality at Turkish economy with a comprehensive approach. There are five big questions on related literature. First question is that whether consumption inequality mimic the income inequality. This study tries to answer this questions from 2003 to 2022. Second one asks what factors create the difference between income and consumption inequalities and responses to income shocks. A third question is about the measurement of the consumption inequality. To get answer, it offers a net welfare based measure to consumption inequality. Fourth question asks how consumption inequalities change with ages. Measure the consumption inequality over the life cycle also get insights about the how strong does consumption smoothing. Fifth question is that how durables and housing effects the consumption inequality. And finally a bonus question comes from the pandemics. What are the effects of pandemics and expansionary policies at pandemics at consumption and other economic inequalities. This study tries to get answers to all these questions from Turkish household surveys from 2003 to 2022. Also it presents a comparison with the findings of relevant literature. It proposes that both of scholars and policymakers get enough attention to consumption inequalities because higher inequality and steadily rises.

**Keywords:** Consumption Inequality, Income Inequality, Development Economics, Household Budget Surveys

**JEL Codes:** E21, I31, C83



## Tüketim Eşitsizliğine İlişkin Beş Büyük Soru ve Türkiye Ekonomisinden Yanıtlar

### Özet

Tüketim, birçok çalışmaya göre ekonomik refahın daha iyi bir ölçütüdür. Ayrıca, bireylerin tüketim düzleştirme çabaları ve gelirin tüketime dönüşümü üzerindeki enflasyon, dolaylı etkiler ve borç dinamikleri gibi diğer sızıntılar nedeniyle, ekonomik eşitsizliklerin daha iyi ve doğru bir resmini yakalamaktadır. Küresel finansal kriz ve Covid-19 salgını sonrasında tüketim eşitsizliği daha da artarak gelir eşitsizliğinin yerini almış ve kalkınma ekonomisinin yeniden güncel çalışma alanı haline gelmiştir. Bu çalışma, Türkiye ekonomisinde tüketim eşitsizliğini kapsamlı bir yaklaşımla incelemeyi amaçlamaktadır. İlgili literatürde beş büyük soru bulunmaktadır. İlk soru, tüketim eşitsizliğinin gelir eşitsizliğini taklit edip etmediğidir. Bu çalışma 2003'ten 2022'ye kadar bu soruyu cevaplamaya çalışmaktadır. İkinci soru, gelir ve tüketim eşitsizlikleri arasındaki farkı yaratan faktörlerin ve gelir şoklarına verilen tepkilerin neler olduğudur. Üçüncü soru ise tüketim eşitsizliğinin ölçümü ile ilgilidir. Bu soruyu cevaplayabilmek için, tüketim eşitsizliğine refah temelli bir ölçü önermektedir. Dördüncü soru, tüketim eşitsizliklerinin yaşla birlikte nasıl değiştiğini sormaktadır. Tüketim eşitsizliğinin yaşam döngüsü boyunca ölçülmesi, tüketim düzeltmesinin ne kadar güçlü olduğu hakkında da fikir vermektedir. Beşinci soru, dayanıklı tüketim malları ve konutların tüketim eşitsizliğini nasıl etkilediğidir. Ve son olarak bir bonus soru da pandemiden gelmektedir. Pandeminin ve pandemi dönemindeki genişlemeci politikaların tüketim ve diğer ekonomik eşitsizlikler üzerindeki etkileri nelerdir? Bu çalışma, tüm bu sorulara 2003-2022 yılları arasında Türkiye'de yapılan hanehalkı anketlerinden cevap bulmaya çalışmaktadır. Ayrıca, ilgili literatürün bulguları ile bir karşılaştırma sunmaktadır. Hem akademisyenlerin hem de politika yapımcıların tüketim eşitsizliklerine yeterince dikkat etmelerini önermektedir, çünkü daha yüksek eşitsizlik ve istikrarlı bir şekilde artmaktadır.

**Anahtar Kelimeler:** Tüketim Eşitsizliği, Gelir Eşitsizliği, Kalkınma Ekonomisi, Hanehalkı Bütçe Anketleri

**JEL Kodları:** E21, I31, C83



# Economic Analysis of CCUS: Market Dynamics and Policy Implications

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## **Abstract**

This research aims to develop an economic model to assess the viability and policy implications of Carbon Capture, Utilization, and Storage (CCUS) within market economies, comparing this with outcomes under a social planner's perspective. By integrating CO<sub>2</sub> utilization into composite goods production, including cement, plastics, and chemicals, alongside Enhanced Oil Recovery (EOR), the study seeks to provide a comprehensive understanding of the economic drivers and barriers shaping the CCUS market. Through analytically solvable models and simulations, the research explores the conditions under which CCUS can be competitive or monopolistic, informing strategic policy frameworks for effective carbon mitigation. The findings are expected to offer valuable insights for policymakers and industry stakeholders on optimizing CCUS adoption to achieve significant environmental and economic benefits.

**Keywords:** Market Competitiveness; Market Failure; Environmental Policy; Welfare Analysis; Simulation Modeling

**JEL Codes:** Q58; L11; L13; H23; C63

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## Rethinking Income Inequality and Subjective Well-being Paradox for Türkiye

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### Abstract

Beginning with the 1923 İzmir Economic Congress, the founders of the republic prioritized social development and welfare in their goal for Türkiye to catch up with western civilization. On the other hand, the neoliberal economic policies that started in the 1980s and changed phase in the 2000s, combined with the conservative policies of this period, created a new system that is completely contrary to the founding economic principles of the republic. This study aims to interpret the tension between social development and individual well-being within the framework of subjective well-being indicators for Türkiye starting from 2008 and extending to 2022. As a matter of fact, according to the 2023 World Happiness Report published annually by the United Nations, Türkiye ranks 106<sup>th</sup> among 137 countries in the happiness ranking when looking at the three-year average including the years 2020-2022. Although Türkiye ranks 42<sup>nd</sup> among the countries compared in terms of GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity and freedom from corruption, it has fallen to 98<sup>th</sup> place when the happiness gaps between the top and bottom half of each country's population are taken into account. Our study aims to explain the subjective well-being and income paradox by utilizing the income inequality and the individual well-being as an indicator of social inequality obtained from World Values Surveys for the last three waves (2005-2022). Our findings indicate that there is a positive relationship between income inequality and happiness in Türkiye, but this relationship weakens when we use freedom to make life choices, trust, generosity and freedom from corruption as indicators of social well-being.

**Keywords:** General welfare, well-being, income inequality

**JEL Codes:** D63, I31, O12

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## The Achievement of SDG 15 in view of Biodiversity Loss and New Industrial Policy in Turkey

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### **Abstract**

The Sustainable Development Goals (SDGs) were adopted by the United Nations (UN) in 2015 as a “universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity”. 191 countries signed the UN Agenda 2030, including Turkey. There are 17 goals with targets and indicators. The fifteenth goal, namely SDG 15, is about life on land. SDG 15 has twelve targets such as “Conserve and restore terrestrial and freshwater ecosystems” and “Protect biodiversity and natural habitats”, and it has twelve indicators such as “Forest area as a proportion of total land area” and “Mountain green cover index, land cover-land use area”. This paper aims to investigate the performance of the Turkish economy between years 2000-2020 in terms of the achievement of SDG 15. There are several institutions, principally the TURKSTAT, that were given various tasks in providing data and monitoring the progresses achieved. Based on the data about the twelve indicators and the methodology provided by the OECD, we try to measure the distance taken by the economy and to identify the areas where there should be further efforts to be made toward 2030. On the other hand, there is now a rich literature on the interaction between the biodiversity loss and economic activity, and a burgeoning literature on the new industrial policy. Drawing on the work from recent research in these fields, we will try to make suggestions for policymakers regarding the design of industrial policy to offset the harmful effects of biodiversity loss.

**Keywords:** SDG 15, Biodiversity loss, New industrial policy, Turkish economy

**JEL Codes:** L52; L73; Q56; Q57



## Regime Switching Dynamics of Electricity from Hydropower Production in High-Income Economies

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### Abstract

In the modern era, many nations are actively working to lower their carbon dioxide (CO<sub>2</sub>) emissions, demonstrating a global commitment to environmental responsibility and collaborative efforts to tackle climate change. This study examines the nonlinear asymmetries of per capita hydroelectricity in high-income economies from 1950 to 2022, using hidden Markov models to capture state-dependent dynamics. The model parameters are estimated using a combination of EM algorithms and nonlinear filters, enabling likelihood estimation without constraining the coefficients. To thoroughly explain the asymmetric features within specific regimes of per capita hydroelectricity and provide consistent insights into its dynamics, this research identifies nonlinearity, determines the number of regimes, reveals regime classifications, and examines regime-dependent heteroscedasticity. Additionally, forecasted transition probabilities are used to specify continuity and consistency within a given per capita hydroelectricity regime. The study emphasizes the role of time in the observed cause-effect relationship, noting that changes in economic conditions significantly influence the link between hydropower-generated renewable energy and economic performance. This detailed analysis offers valuable insights into the complex and evolving interactions between renewable energy markets and economic performance, thereby enhancing our understanding of these dynamics in various contexts.

**Keywords:** Hydroelectricity, Markov Switching, Energy, High-Income Economies

**JEL Codes:** C50, E23, Q40.

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## İktisat Biliminde Kadın İnisiyatifi (İBKİ): Eşitlik İçin Bir Araya Gelme ve Değişim Talepleri

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Ünay Tamgaç Tezcan<sup>71</sup>

### Özet

İktisat disiplini, kamu politikalarının oluşturulmasında, toplumsal değişim süreçlerinin anlaşılmasında ve kamusal söylemlerin şekillendirilmesinde kritik bir rol oynamaktadır. Ancak, ne yazık ki, bu alanda cinsiyet eşitliği ve temsilde adalet sağlayacak kurumsal yapılar eksiktir. Gözlemlenen eğilimler, yükselme ve yönetim süreçlerindeki cinsiyetçi önyargıların ve eşitsizliklere kayıtsız kalan süreçlerin, sorunun altında yatan etmenler olduğunu işaret etmektedir. Kadınların akademiye yetersiz temsili yeni bir sorun olmamakla birlikte, çözüm için gerekli koşullar henüz oluşturulmuş değildir. Bu bağlamda, iktisat disiplininin kendi içinde eşitsizlikleri önleyebilme potansiyeline sahip olup olmadığı sorusu önemlidir. Bu sorudan yola çıkarak, kadınların iktisatta eşit bir şekilde var olabileceği kapsayıcı bir çalışma ortamı talebini dile getirebileceğimiz bir platform olan İktisat Biliminde Kadınlar İnisiyatifi (İBKİ) oluşturulmuştur. İBKİ çatısı altında bir araya gelen kadın iktisatçılar, deneyimlerinden yola çıkarak iktisat alanındaki mevcut eşitsizlikleri tespit etmeyi ve alanda eşit temsilin sağlanmasına katkıda bulunmayı amaçlamaktadır. Kurumsal yapıların ve bilimsel üretimdeki cinsiyetçi kodların açığa çıkarılması, araştırmalar yoluyla akademinin eşitlikçi niteliklere kavuşturulması ve genç iktisatçılara destek sağlanması gibi etkinliklerle İBKİ, iktisat disiplini bu dönüşüm için araç olmayı hedeflemektedir. Bu makale (sunuş) İBKİ'nin Türkiye'deki kadın iktisatçılarla buluşmayı kendini ve hedeflerini açıklayacağı bir tanıtıcı makale olmayı hedeflemektedir.

**Anahtar Kelimeler:** İktisat Biliminde Kadın, Cinsiyet Eşitliği, Kadın İktisatçılar

**JEL Kodları:** A11, J16, J7

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## Türkiye'de İktisat Biliminde Cinsiyet Eşitsizliği: Kadınların Üniversite İçindeki Konumu

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**Ünay Tamgaç Tezcan<sup>74</sup>**

### Özet

Bu makale, iktisat bilimi alanında üniversitelerdeki cinsiyet dağılımı üzerinden kadınların konumunu araştırmayı hedeflemektedir. Bu çerçevede cinsiyet eşitsizliğinin Türkiye akademisindeki güncel durumunun analizini kadınların iktisat alanında ne kadar temsil edildiği üzerinden ele alınarak değerlendirilecektir. Makalenin amacı, Türkiye’de öğretim elemanlarının akademik unvanlarına göre kırılımlı cinsiyet dağılımının yanı sıra, akademik pozisyonlar, yayınlar ve proje konferans vb. faaliyetlere katılım gibi kategoriler çerçevesinde iktisat bilim alanına odaklanarak güncel durumun niceliksel değerlendirmesini yapmaktır. Araştırmanın bulguları, Türkiye’de akademinin genelindeki durumla ve dünyadaki akademik cinsiyet eşitsizliği bulguları yanında Türkiye ve dünya genelinde iş gücü piyasalarındaki bulgular ışığında değerlendirilerek göreceli durum analizleri yapılacaktır. Bu değerlendirmeler ışığında kadınların iktisat alanında daha fazla temsil edilmelerini sağlayarak cinsiyet eşitliğini teşvik edecek çözüm ve politika önerileri üretmek çalışmanın temel kazanımları arasındadır. Bu kapsamda anketler ve var YÖK verileri üzerinden yürütülen bu çalışma Türkiye özelinde iktisat alanında akademik cinsiyet dağılımını tartışan ilk nitel araştırma olma özelliğini taşımaktadır.

**Anahtar Kelimeler:** İktisat Biliminde Kadın, Cinsiyet Eşitliği, Kadın İktisatçılar

**JEL Kodları:** A11, J16, J71

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# Kadın İktisatçıların Küresel Durumu: Eşitsizlikler, Fırsatlar ve Mücadeleler

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**Meltem Dayıoğlu Tayfur<sup>77</sup>**

## Özet

Bu makale, iktisat bilimi alanında kadınların durumunu, karşılaşılan eşitsizlikler ve şimdiye değin verilen mücadeleler bağlamında küresel bir ölçekte ele almaktadır. İktisat disipliniinde kadınların karşılaştığı zorlukların belgelenmesi, sahadaki cinsiyet dengesi eksikliğinin maliyetinin ortaya konması, kadınların disipline eşit ve tam olarak katılmasının önündeki kurumsal engellerin tespit edilmesi ve iktisat disipliniinde toplumsal cinsiyet sorununun tarihsel köklerinin derinliğinin bütüncül bir yaklaşımla ortaya konması önemlidir. Buradan hareketle makalede, ilkin kadının iktisat bilimindeki yerine ilişkin bir tarihsel anlatı sunulmakta, peşinden son 50 yılda verilen mücadeleler ve bunların sonuçlarına ilişkin yapılan araştırmaları konu alan bir literatür taraması yapılmaktadır. Mevcut durumun maliyeti ve kadınların disipline tam katılımını engelleyen faktörlerin belirlenmesi, çözüm odaklı adımların atılması için önemlidir. Makale, iktisat disipliniinde cinsiyet eşitsizliği konusunda tartışmaları ve araştırmaları teşvik ederek daha kapsayıcı ve adil bir akademik ortamın oluşturulmasına katkıda bulunmayı amaçlamaktadır.

**Anahtar Kelimeler:** İktisat Biliminde Kadın, Cinsiyet Eşitliği, Kadın İktisatçıları

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## Türkiye’de İktisat Biliminde Kadınların Karşılaştığı Eşitsizlikler: Mülakatlarla Vurgulanmış Farklılıklar

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**Ünay Tamgaç Tezcan<sup>81</sup>**

### **Özet**

Bu makalede, Türkiye'deki kadın iktisatçı akademisyenlerin yaşadığı eşitsizlikleri vurgulamak amacıyla farklı gruplardan ve yaşlardan kadın iktisatçılarla yapılan mülakatlar incelenmiştir. Yapılan mülakatlar yoluyla elde edilen veriler, kadın iktisatçıların karşılaştığı cinsiyete dayalı ayrımcılık, kariyer gelişiminde yaşanan engeller, maaş ve kaynak eşitsizlikleri gibi konuları açığa çıkarmaktadır. Mülakatlar sırasında bağlı bulunan üniversitenin durumu (devlet/özel/vakıf), bulunan şehir, yaş grubu ve akademik unvan (Profesör, Doçent, Dr. Öğretim üyesi, asistan) dikkate alınmış, farklı gruplardan akademide kadın iktisatçıların örnekleme dahil edilmesine önem verilmiştir. Ayrıca, kadın iktisatçıların ne tür desteklere ihtiyaç duydukları ve nasıl daha eşit bir çalışma ortamı sağlanabileceği konuları da ele alınmıştır. Bu çalışma, Türkiye'deki kadın iktisatçıların deneyimlerine odaklanarak eşitsizliklerin anlaşılmasına ve bu alanda yapılabilecek iyileştirmelere katkı sağlamayı amaçlayan ilk çalışmadır. Bu çalışmayla ortaya konulan bulgular İktisat Biliminde Kadın İnisiyatifi (İBKİ)'nin her yıl yapmayı planladığı Türkiye ölçeğinde yapmayı planladığı anketlere de önemli eşitsizlik alanlarının ve politika yöntemlerinin belirlenmesi ve sorulması anlamında girdi sağlayacaktır. Eşitlikçi iktisat politikalarının sağlanması için kadın iktisatçıların politika üretmesi ve iktisat biliminde etkin rol oynaması önem taşımaktadır.

**Anahtar Kelimeler:** İktisat Biliminde Kadın, Cinsiyet Eşitliği, Kadın İktisatçılar

**JEL Kodları:** A11, J16, J71

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## Financial Crisi, Global Liquidity and Trade Credit Channel: Evidence from Türkiye<sup>82</sup>

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### **Abstract**

This paper examines the role of trade credit in the transmission of global liquidity conditions. Specifically, we investigate whether trade credit complements or substitutes the decline in bank lending activity as global liquidity tightens. Using a detailed bank and firm-level dataset for Turkish firms, we find that firms which are more bank-finance constrained have less access to trade credit as global liquidity tightens. The rate of trade credit tightening is amplified during crisis periods. While bank-finance constrained firms borrow significantly less from suppliers, they reduce the amount of trade credit that they extend to customers even more, implying that tight trade credit conditions propagate further through supply chains. In addition, trade credit conditions deteriorate more for small firms and for cash-poor firms in times of crisis.

**Keywords:** Emerging markets; Financial crisis; Trade credit

**JEL Codes:** F34, G01, G20, G32

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<sup>82</sup> The views expressed in this paper are only those of the authors and should not be interpreted as reflecting those of the Central Bank of the Republic of Türkiye.

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## Are SMEs Ready for Climate Action? A Discussion of Access to Finance and Sustainability Reporting Challenges

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### Abstract

Small and medium enterprises (SMEs) are essential drivers of job creation, entrepreneurship, and inclusive economic growth. Although SMEs contribute to economic growth via innovation and value creation, they have historically struggled with the degree of financial sector development, consistency of governance frameworks and the degree of workforce development in their respective jurisdictions. The biggest challenge, however, is access to finance due to the procedural complexities in applying for a loan, high financing costs and the lack of adequate collateral. In the current juncture, there are additional challenges posed to SMEs, by the green transition. Globally, SMEs have a significant environmental footprint, accounting for 50% of the greenhouse gas (GHG) emissions of the business sector. As eco-entrepreneurs and eco-innovators, SMEs develop innovative green solutions to the climate crisis. These stated reasons are enough to support the argument that there can be no net zero without SMEs. In an attempt to support the green transition of SMEs, sustainable finance products tailored for SMEs are beginning to emerge but they are far from being at adequate levels. Thus, there is an urgent need to improve the sustainable financing options for SMEs. To expand sustainable financing opportunities, financial institutions increasingly need data on their clients' sustainability performance, but SMEs have limited capacity to respond. Furthermore, SMEs will be faced with additional challenges in the adoption of sustainability standards, due to increased complexity and costs. The public sector and ecosystem actors have an important role to play, including but not limited to creating a supportive ecosystem to help SMEs navigate the transition.

**Keywords:** Small and Medium Enterprises (SMEs), Access to Finance, Sustainability Standards, Green Transition

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# Why Do Firms Strategically Delay Payments of Corporate Loans?

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## **Abstract**

Firms may prefer to delay some loan payments while continuing to service others due to lender and loan characteristics. This paper explores the impact of bank-level and bank–firm-level indicators on the strategic delay behaviours of non-financial corporations. Three factors play a key role in their strategic delay decisions. First, strategic delay events occur more when the likelihood of obtaining additional and high-quality funding in the future is limited. In this regard, firms strategically delay payments more to foreign banks, financially weak banks, and banks that provide relatively short-term funding and with which they have a short length of relationship. Second, firms are more reluctant to delay payments of loans strategically that are easier to repay. Our analysis reveals that firms prioritize payments of loans that have a low share in their overall loan portfolio and loans denominated in domestic currency. Third, firms are more likely to delay payments when the anticipated cost of delaying is low. As such, strategic delay events occur more when banks maintain lax standards in their loan collection processes. Importantly, as the financial literacy levels of firm owners increase, the likelihood of a strategic delay event decreases.

**Keywords:** Strategic delay, relationship banking, firm behaviour, credit risk, big data.

**JEL Codes:** G21, G32, G33, G53



## Aggregate Earnings and Global Equity Returns

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### Abstract

This paper compares the predictive power of aggregate earnings for equity returns in international markets. We rank 51 non-US countries based on the time-series averages of their price synchronicity and market concentration measures, calculated at the firm-level using daily data. We find that aggregate earnings negatively predict one-quarter-ahead stock returns in country groups that contain less synchronous and concentrated markets, as opposed to country groups that contain more synchronous and concentrated markets. We attribute the negative predictive power of aggregate earnings to a business cycle effect since high (low) corporate earnings correspond to economic expansions (contractions) which tend to be associated with negative (positive) risk premia. However, this business cycle effect is offset by the positive relation between firm-level earnings and future stock returns that translates to the aggregate level in more synchronous and concentrated markets. Our results remain robust after controlling for various macroeconomic variables and in alternative samples.

**Keywords:** aggregate earnings, return predictability, price synchronicity, international asset pricing

**JEL Codes:** G10; G12; G14; G15

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# The Impact of Minimum Wage Shock on Robot Adaption in Turkey

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## Abstract

In recent years, the use of industrial robots has witnessed a significant surge. While the fact that primary driver behind this surge is labor costs is widely acknowledged, there is a little attention on how cost-related shocks influence the decision to integrate robots within a firm. This paper examines how manufacturing firms in Turkey respond to a sudden 33.5% increase in the minimum wage in 2016 concerning their decisions to import robots. Using administrative employer-employee data, along with firm-level trade and balance sheet data and employing a difference-in-differences approach with continuous treatment, the study finds that the minimum wage shock does not significantly impact robot adoption. However, this finding is contingent on firm size. Medium-sized firms exhibit a positive and significant propensity to adopt robots, with this effect being more pronounced for large firms compared to their smaller counterparts. Quantitatively, a one-point increase in the share of minimum wage employment in total employment corresponds to a 0.4% and 2.4% increase in the probability of importing robots for medium and large firms, respectively. These results hold robustly across different definitions of robot adoption. Notably, these firms display a tendency to augment their existing robotic equipment when confronted with a minimum wage shock. Moreover, large firms with high blue-collar workers among minimum wage workers are more likely to adopt robot.

**Keywords:** robots, minimum wage, Turkey, difference-in-differences.

**JEL Codes:** O14, J30, O39

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## Prison Work Programs and Wages in the US

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### Abstract

Alternative work programs in jails, such as the Prison Industry Enhancement Certification Program (PIECP), have shown varying effects on wages. PIECP has been found to increase reported earnings and formal employment, particularly benefiting women in terms of formal employment. However, there is limited evidence of increased job stability, despite obtaining higher-paying jobs. In addition, participation in PIECP has been linked to a significant reduction in the odds of inmate recidivism, indicating a positive impact on post-release outcomes. This suggests that voluntary work programs can be socially beneficial by providing compensation to prisoners without affecting the deterrent effect of imprisonment, while mandatory programs may enhance deterrence and output but may be less effective for prisoners with high disutility from work (Hopper, 2013; Valentine and Redcross, 2015; Bruno and Fiorillo, 2016; Cox, 2016; Polinsky, 2017; Smith et al., 2018; Zatz, 2021). This study examines the impact of work programs on wages in the U.S.<sup>89</sup> using annual survey of jails data from 1990 to 2022. Analyzing county and state levels, it explores how alternative work programs in jails shed light on reservation wages. Incorporating variables such as gender, race, age, unemployment, and education, this study employs Bayesian Model Averaging to navigate variable uncertainty. It highlights county and state-level socioeconomic disparities and employs club convergence analysis to construct homogeneous groups. The findings suggest homogeneity in the reported programs across states, emphasizing the influence of alternative work programs on wages and various socioeconomic factors.

**Keywords:** Alternative work programs, Bayesian model averaging, Regional analysis, Wages

**JEL Codes:** J01, J1, J6, K13

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<sup>89</sup> The data available in this study is limited to the United States only.



## Domestic Outsourcing and Wages in Türkiye

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### Abstract

This paper examines the impact of domestic outsourcing—contracting with another domestic firm for goods or services—on the wages of workers performing the outsourced tasks. Using the Entrepreneurship Information System (EIS), an administrative employee-employer linked dataset, we refine the strategy of Goldschmidt and Scheuer (2017) for identifying the outsourcing events. Our dataset incorporates buyer-supplier transactions, allowing us to confirm that a relationship between the contracting and the contractor firm begins following the outsourcing event. This improves our ability to identify various types of outsourcing beyond low-skilled on-site outsourcing. Our analysis initially provides descriptive insights into the volume of firms and companies involved and sectoral patterns of domestic outsourcing in Türkiye over the last decade. Next, we use an event study design and employ an imputation-based differences-in-differences technique on a sample of matched treated and control workers to estimate the impact of such events on the wages of outsourced workers. Our preliminary findings suggest that workers performing low-skilled tasks, such as food preparation, cleaning, security, and logistics, lose from domestic outsourcing, while workers performing professional tasks benefit.

**Keywords:** domestic outsourcing, wages, labor.

**JEL Codes:** J31, J53, J62

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## Firm-level Effects of Minimum Wages

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### Abstract

What are the supply-side effects of minimum wages? Our paper exploits the quasi-natural experiment that Turkish government introduced an increase to minimum wages by 33.5% in 2016. This sudden event provides a unique opportunity to study the effects of cost-related shocks on firm outcomes that can be directly passed. Using comprehensive product-level PRODCOM data covering manufacturing industry firms that employ more than twenty employees, we first document the unit price effects. Our findings show that while minimum wage shock passes through into weighted firm-level prices by about 3.7% on average, this effect disappears after two consequent years. These findings are also similar when price pass-through model at firm-product level is estimated. In addition, the more firms operate in competitive industries, the less they pass their cost to the prices. Second, we explore broader economic consequences on sales, production, employment, and profit. We find that unlike the prices these outcomes negatively persist after minimum wage shock. Finally, profit rate decrease is stronger in industries with relatively high market power.

**Keywords:** minimum wage, prices, sales, profits, employment, Turkey, difference-in-differences.

**JEL Codes:** C26, I25, J24, J61

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# Key Factors Influencing Household Incomes and the Impact of Inequality in Türkiye

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## Abstract

This research investigates the factors affecting regional household incomes and aims to test the impact of income inequality on the regional growth of household incomes over the period 2006-2018 in Türkiye. The data comes from Survey of Income and Living Conditions (SILC) that is conducted by Turkstat in Turkey from 2006 to 2018. We use the household mean incomes of regions that is estimated from household surveys. The inequality measures for regions is estimated from SILC surveys for Nuts-1 and Nuts-2 level data using OECD equivalence scale. The data for regional economic variables comes from regional statistics of Turkstat. We apply the two stage least squares methodology firstly, then we use Arellona and Bond's (1991) generalized moment methodology and finally we apply Arellona and Bover's (1995) system generalized moment methodology. According to the results of the two-stage regression analysis, socio-political instability increases when regional income inequalities increase. Findings from the GMM suggest that the change in income inequality has a positive impact on incomes in the short term but negative impact on household incomes in the medium term. The share of public investments in GDP, the share of incentive-based investments in GDP, and the share of total employment in the industrial sector have a positive and significant impact on household incomes. Socio-economic development also has a positive impact on household incomes. On the other hand, the unemployment rate and net migration in the region negatively affect household incomes. According to the results of the system GMM model, an increase in the proportion of university graduates, sectoral employment rates and the number of people working in research, and development significantly and positively affects regional growth.

**Keywords:** economic growth, regional inequality, panel data analysis

**JEL Codes:** O18, O47, R11

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## Impact of the places that we live in: Analyzing the influence of regional conditions on individual unemployment

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### Abstract

Unemployment deprivation can result from different individual characteristics ranging from age, gender, education and past job experience among many others. While using individual data is helpful for understanding the influence of individual factors a relatively less examined area is the potential impact of places that individuals live in. Using the Labor Force Statistics for the 2004-2022 period I focus on the regional growth characteristics of the NUTS-2 level Turkish regions and question the impact of regional conditions on the likelihood to be unemployed. There are four main hypotheses to be tested in the paper. First two hypothesis relates to the importance of the places that people live in. After controlling for individual heterogeneity: (H1) Likelihood of being unemployed is lower for individuals who live in economically more vibrant regions (measured by per capita GDP), (H2) Likelihood of being unemployed is lower for individuals who live in regions with dense industrial economic activity (measured by the industrial value-added share in GDP). The follow-up hypotheses are linked with the effect of other regions in close proximity. After controlling for individual heterogeneity: (H3) Likelihood of being unemployed is lower for individuals who live in regions spatially connected to economically more vibrant locations (measured by the spatial lag of per capita GDP), (H4) Likelihood of being unemployed is lower for individuals who live in regions spatially connected to others with higher industrial economic activity (measured by the spatial lag of industrial value-added share in GDP). Preliminary findings confirm that places that we live in matters. Even after controlling for individual characteristics that affect labor market status, individuals who live in economically vibrant and industrially developed regions have less propensity to end up being unemployed. Moreover, additional modifications show that spatial hinterland matters. Individuals who live in regions that are connected to other economically vibrant and industrially developed locations have less possibility to be unemployed.

**Keywords:** industrialization, regional growth, unemployment, Turkey

**JEL Codes:** O43, R11, R12, R50

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## Geography and Economic Development: Subnational Evidence from Türkiye

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### Abstract

We investigate the geographical foundations of economic development in Türkiye by estimating various econometric models. We first construct a novel subnational database of geographical indicators by using raw georeferenced data at three subnational levels: provinces ( $n = 81$ ), districts ( $n = 973$ ), and equally-sized (artificial) hexagons ( $n = 1,842$ ) we create as the smallest subnational units. The geographical indicators we focus on include location variables such as latitude and longitude, topography variables such as elevation and ruggedness, climatic variables such as temperature and precipitation, and others such as river length density, lake area density, caloric suitability, distance to the nearest seacoast, etc. We measure economic development by real GDP per capita at the province level, by socioeconomic development index at the district level, and by nighttime luminosity at the polygon level. Using both the LASSO methodology and the Hendry/LSE approach, we demonstrate that topographical and climatic variables have sizable robust and separately identified effects on economic development. We also show that the distance to the seacoast has a separate direct effect on economic development even when topographic and climatic variables are controlled for. These results help us identify the ultimate underlying causes that govern the historical selection of cultural traits and institutions that in turn explain the diverging patterns of economic development in present-day Türkiye.

**Keywords:** geography, development, georeferenced data, remote sensing, fundamental causes.

**JEL Codes:** O44, R11, C21

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## Skilled Labor Convergence across Turkish regions: A Club Convergence Algorithm Approach

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### Abstract

Human capital and skill differences are among the main determinants of income per capita, technology and productivity differences across regions and countries. This paper uses the Phillips and Sul convergence club algorithm to investigate convergence in skilled labor force shares across Turkish regions between 2005 and 2022. The findings highlight that there is no global convergence in skilled labor shares across Turkish regions and identify two convergence clubs, one consisting of regions with high shares of the skilled labor force and another with relatively low shares of the skilled labor force. The results indicate a distinct east-west division in the skill distribution of the labor force, and there is regional heterogeneity in the convergence of skilled labor across different geographical clusters. Finally, the logistic regression analysis reveals that the likelihood of being part of a highly skilled club increases with GDP per capita, R&D investment per capita, net migration, and the percentage of individuals with higher education.

**Keywords:** White-collar, skilled labor, convergence, convergence clubs.

**JEL Codes:** C25, J24, R10

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## Effect of Agglomeration on Productivity in Turkey

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### Abstract

This paper investigates the impact of agglomeration economies on economic productivity in Turkey using plant-level data from the Entrepreneurship Information System (EIS), provided by the Ministry of Industry and Technology. We employ the Ellison-Glaeser Index, as outlined in Ellison and Glaeser's seminal work from 1997, to measure agglomeration at the 4-digit NACE-Rev2 level for each year spanning from 2006 to 2021. Our analysis sheds light on the agglomeration patterns within Turkey's manufacturing and selected service industries. We focus on two key productivity approximation outcomes: mean wages and value-added at the establishment level, observed across the 81 provinces in Turkey over the study period. Our findings reveal a significant positive association between agglomeration and both wages and value-added. However, this relationship exhibits interesting nuances when examined through the lens of wage distribution. Specifically, the positive association weakens when assessing the 10th percentile of wages and strengthens notably when considering the 90th percentile of wages, suggesting that agglomeration may have a more pronounced impact on higher-income segments of the establishments. This research contributes to the understanding of how agglomeration economies affect economic productivity in the Turkish context and underscores the need for nuanced policy implications that consider the heterogeneous effects of agglomeration on productivity.

**Keywords:** Agglomeration economies, productivity, Ellison-Glaeser Index.

**JEL Codes:** R12, D24, J31



# Productivity Benefits of Denser Cities: Agglomeration and Firm Selection in Manufacturing Sector in Türkiye

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## Abstract

Firms located in more densely populated cities tend to exhibit higher levels of productivity on average. The existing literature predominantly emphasizes the agglomeration effect as a key factor contributing to the enhanced productivity of firms in larger cities, attributing this phenomenon to the facilitation of knowledge spillover. In addition to the agglomeration effect, recent research indicates that the selection effect also plays a significant role, whereby only the most productive firms can survive in the competitive environment of larger cities. It is crucial to distinguish between the selection effect and the agglomeration effect to prevent an overestimation of the latter. This study seeks to disentangle these two effects by utilizing a quantile method by following Combes et al. (2012) to analyze firms operating within the manufacturing sector of Türkiye. The empirical findings suggest that, contrary to the selection effect, the agglomeration effect offers a more precise rationale for the disparities in productivity across regions with varying population densities in Türkiye. Another contribution of this study is the calculation of the weighted densities of the provinces which results with different population density rankings of the provinces compared to standard raw density measure. Furthermore, by utilizing employment density and market potential methodologies for measuring density alongside population density, this study determines that agglomeration economies, rather than selection, are the primary factor explaining the phenomenon of higher firm-level productivity distribution in more densely populated urban areas.

**Keywords:** Agglomeration, Selection, Population Density, TFP, Quantile Method.

**JEL Codes:** R12, C52, D24

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## Daha Yoğun Şehirlerin Verimlilik Faydaları: Türkiye’de İmalat Sektöründe Yığılma ve Firma Seçilimi

### Özet

Daha yoğun nüfuslu şehirlerde bulunan firmalar ortalama olarak daha yüksek verimlilik seviyeleri sergileme eğilimindedir. Mevcut literatür ağırlıklı olarak yığılma etkisini büyük şehirlerdeki firmaların verimliliğinin artmasına katkıda bulunan kilit bir faktör olarak vurgulamakta ve bu olguyu bilginin yayılmasının kolaylaştırılmasına bağlamaktadır. Yığılma etkisine ek olarak, son araştırmalar seçim etkisinin de önemli bir rol oynadığını ve bu sayede yalnızca en üretken firmaların büyük şehirlerin rekabetçi ortamında hayatta kalabildiğini göstermektedir. Seçim etkisi ile yığılma etkisini birbirinden ayırmak, ikincisi lehine yanlılığı önlemek için çok önemlidir. Bu çalışma, Türkiye imalat sektöründe faaliyet gösteren firmaları analiz etmek için Combes ve diğerlerini (2012) takip ederek kuantil yöntemi kullanarak bu iki etkiyi birbirinden ayırmayı amaçlamaktadır. Ampirik bulgular, seçim etkisinin aksine, yığılma etkisinin Türkiye’de farklı nüfus yoğunluklarına sahip bölgeler arasındaki verimlilik farklılıkları için daha kesin bir gerekçe sunduğunu göstermektedir. Bu çalışmanın bir diğer katkısı, illerin ağırlıklı nüfus yoğunluklarının hesaplanması ve bunun sonucunda illerin standart ham nüfus yoğunluk ölçütüne kıyasla farklı nüfus yoğunluğu sıralamalarına sahip olmasıdır. Ayrıca, nüfus yoğunluğunun yanı sıra yoğunluğu ölçmek için istihdam yoğunluğu ve piyasa potansiyeli metodolojilerini kullanan bu çalışma, daha yoğun nüfuslu kentsel alanlarda daha yüksek firma düzeyinde verimlilik dağılımı olgusunu açıklayan birincil faktörün seçimden ziyade yığılma ekonomileri olduğunu tespit etmektedir.

**Anahtar Kelimeler:** Yığılma, Seçim, Nüfus Yoğunluğu, Toplam Faktör Verimliliği, Kuantil Metodu.

**JEL Codes:** R12, C52, D24





## Türkiye’de Para Politikasının İşsizlik Üzerindeki Etkisi<sup>100</sup>

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### Özet

Bu çalışmanın amacı Türkiye’de para politikasının işsizlik oranı üzerindeki etkisini araştırmaktır. 2009:Q1-2020:Q4 döneminin baz alındığı ve VAR yönteminden yararlanılan çalışmanın literatürden farkı, para politikasının farklı yaş gruplarının işsizlik oranları üzerindeki etkisinin incelenmesidir. Bu doğrultuda çalışmada ilk olarak para politikasının 15-24, 25-34, 35-44, 45-54, 55-64 ve 65 üstü yaş gruplarının işsizlik oranlarına etkisi incelenmiştir. Bu incelemede yaş arttıkça para politikasının işsizlik üzerindeki etkisinin azaldığı, en fazla etkilenen grubun 25-34 yaş olduğu tespit edilmiştir. Sonraki adımda 25-34 yaş grubu cinsiyete göre ayrılarak tekrar incelenmiş ve bu yaş grubundaki kadın işsizlerin erkeklere kıyasla para politikasından daha az etkilendiği görüşmüştür.

**Anahtar Kelimeler:** Para Politikası, İşsizlik, Cinsiyet, VAR

**JEL Kodları:** E24, E52, J10, C32

<sup>100</sup> Bu çalışma Nagihan AKSOY’un Pamukkale Üniversitesi, SBE, İktisat ABD, İktisat Bilim Dalında sunulan “Para Politikası Üzerine Üç Deneme” isimli doktora tezinin bir kısmından üretilmiş ve Pamukkale Üniversitesi BAP Komisyonu tarafından kabul edilen 2022SOBE002 No’lu proje kapsamında desteklenmiştir.

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## Effect of Monetary Policy on Unemployment in Turkey

### Abstract

The aim of this study is to investigate the effect of monetary policy on the unemployment rate in Turkey. The difference of the study, which is based on the period 2009:Q1 - 2020:Q4 and uses the VAR method, from the literature is that it examines the effect of monetary policy on the unemployment rates of different age groups. In this direction, the study first examined the effect of monetary policy on the unemployment rates of the 15-24, 25-34, 35-44, 45-54, 55-64 and over 65 age groups. In this analysis, it was determined that the effect of monetary policy on unemployment decreases as age increases, and the most affected group is the 25-34 age group. In the next step, the 25-34 age group was examined again, separated by gender, and it was found that female unemployed people in this age group were less affected by monetary policy compared to men.

**Keywords:** Monetary Policy, Unemployment, Sex, VAR

**JEL Codes:** E24, E52, J10, C32



## New Paradigm on The Determinants of Inflation: Wage Increases or Profit Increases?

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### **Abstract**

Price theories in economic thought methodology are built on the basis of distribution. The price mechanism is designed to ensure the redistribution of income between wages and profits. The inflation problem is directly related to the price formation mechanism. Inflation, defined as a continuous increase in the general level of prices, dramatically reduces the welfare level of the society by causing uncertainty, instability, deterioration in income distribution, and decrease in household purchasing power. The relationship between the main cause of inflation is ignored. The inflation problem, which is mostly discussed within the framework of cost and demand inflation in economic theories, has begun to be discussed within the scope of the new paradigm. A debate has emerged claiming that inflation is largely caused by profit-driven price increases. The uncertainty experienced during the Covid 19 pandemic process has created a suitable environment for companies to increase their profits. Recent studies have emphasized that increasing energy and commodity prices in both the European Union and the USA offered opportunities to firms to increase their profit shares (Lavoie, 2023; Storm, 2023; Hansen, 2023). It is thought that a similar path occurred in the inflationary period experienced by the Turkish economy. The interest rate reduction strategy of the monetary policy implemented in the last quarter of 2021 resulted in the disruption of the price mechanism. In the third quarter of 2023, rational monetary policy practices were returned. However, in order to reduce inflation, it was preferred to limit wage increases. Wage increases could not compensate for the deterioration in household living standards caused by inflation. This indicates that cost increases over wages are accepted as the main cause of inflation by policy makers in Türkiye, not profit increases. In this study, the empirical test of the new paradigm will be conducted for Turkish economy.

**Keywords:** Profit-driven inflation, wages, monetary policy.

**JEL Codes:** E31, E52

## Enflasyonun Belirleyicilerine Dair Yeni Paradigma: Ücret Artışları Mı Kâr Artışları Mı?

### Özet

İktisadi düşünce metodolojisinde fiyat teorileri, bölüşüm temelli inşa edilmiştir. Fiyat mekanizması ücret ve kârlar arasında gelirin yeniden dağıtılmasını sağlayacak şekilde kurgulanmıştır. Enflasyon sorunsalı fiyat oluşum mekanizması ile doğrudan ilintilidir. Fiyatlar genel düzeyinde sürekli artış olarak tanımlanan enflasyon, gelir dağılımında bozulmalara, belirsizliklere, istikrarsızlıklara ve hanehalkı satın alma gücünde düşmelere neden olarak toplumun refah seviyesini ciddi düzeyde düşürmektedir. Ekonomilerin büyük çoğunluğunun kronik sorunu haline gelen enflasyon olgusunun başat nedeni ile ilişkisi göz ardı edilmektedir. Ekonomi teorileri tarafından daha çok maliyet ve talep enflasyonu çerçevesinde ele alınan enflasyon sorunsalı yeni paradigma kapsamında tartışılmaya başlanmıştır. Enflasyonun büyük oranda kâr itilimli fiyat artışları nedeniyle ortaya çıktığını iddia eden bir tartışma zemini oluşmuştur (Yeldan, Köse ve Boratav, 2023). Covid 19 pandemi sürecinde yaşanan belirsizlik ortamı firmaların kârlarını artırmak için uygun bir zemin oluşturmuştur. Hem Avrupa Birliği'nde hem de ABD'de artan enerji ve emtia fiyatlarının firmalara kâr paylarını artırmak için fırsat sunduğu son dönem yapılan çalışmalar ile ortaya konulmuştur (Lavoie, 2023; Storm, 2023; Hansen, 2023). Türkiye ekonomisinin içine girdiği enflasyonist süreçte benzer bir yol izlediği düşünülmektedir. 2021 yılı son çeyreğinde uygulanmaya başlanan para politikasının faizleri düşürme stratejisi fiyat mekanizmasında bozulmalara neden olmuştur. 2023 yılı üçüncü çeyreğinde ise politika faizinin belirlenmesinde rasyonel politikalara dönüş yaşanmıştır. Ancak enflasyonla mücadelede daha çok ücret artışlarının baskılanması tercih edilmiştir. Ücret artışları enflasyonun yaşam standardını bozucu etkisini tazmin edememiştir. Bu durum Türkiye'deki enflasyonun nedeni olarak doğrudan fiyata yansıtılan kâr artışlarının değil, ücretler üzerinden maliyet artışlarının kabul edildiğini göstermektedir. Bu çalışmada Türkiye ekonomisi için kronik hale gelen enflasyon sorunsalının kaynaklarına dair yeni paradigmanın ampirik sınaması yapılacaktır.

**Anahtar Kelimeler:** Kâr itilimli enflasyon, ücret, para politikası.

**JEL Kodları:** E31, E52



# The Impact of Exchange Rate and Political Uncertainty on Market Interest Rates and Inflation in Turkey

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## **Abstract**

This study has two main aims. The first is to model the dollar rate variable for the period February 2003 - February 2024 in Turkey using conditional heteroscedasticity models and in this way obtain and interpret the political uncertainty variable for the relevant period. The second is to reveal the causality relationships both between the dollar rate and the political uncertainty variables and between these variables and various market interest rates (commercial loan & deposit) and the inflation rates (consumer & producer) with Granger causality analysis. In the study, we use seven conditional heteroscedasticity models, four of which are symmetric and three of which are asymmetric. Symmetric models are the autoregressive conditional heteroscedasticity (ARCH), the ARCH-in-Mean (ARCH-M), the generalized ARCH (GARCH) and the GARCH-in-Mean (GARCH-M) models. Asymmetric models are the exponential GARCH (EGARCH), the threshold ARCH (TARCH) and the power ARCH (PARCH) models. The conditional variance series obtained from the PARCH model, which is the most appropriate model according to the model selection criteria, is called the political uncertainty variable. The findings show that the political uncertainty increased significantly in June 2004, July 2006, November 2008, September 2018, January 2022 and July 2023. The findings obtained by Granger causality analysis can be summarized as follows: i) Dollar Rate  $\Rightarrow$  Market Interest Rates, Political Uncertainty and Producer Inflation ii) Dollar Rate  $\Leftrightarrow$  Consumer Inflation iii) Political Uncertainty  $\Leftrightarrow$  Inflation Rates and Commercial Loan Interest Rates iv) Political Uncertainty  $\nRightarrow$  Dollar Rate v) Political Uncertainty  $\nRightarrow$  Deposit Interest Rates. As a result, it can be said that the exchange rate in Turkey has an impact on both the market interest rates and the inflation. However, it is understood that the political uncertainty has only an impact on the commercial loan interest rates, along with the inflation. All these results point out the importance of an effective and independent monetary policy.

**Keywords:** Exchange Rate, Political Uncertainty, Monetary Policy

**JEL Codes:** C22, D81, E44, E52

## Türkiye’de Döviz Kuru ve Politik Belirsizliğin Piyasa Faiz Oranları ve Enflasyon Üzerindeki Etkisi

### Özet

Bu çalışmanın iki temel amacı bulunmaktadır. Birincisi, Türkiye’de Şubat 2003 – Şubat 2024 dönemine ait dolar kuru değişkeninin koşullu değişen varyans modelleri kullanılarak modellenmesi ve bu yolla ilgili döneme ait politik belirsizlik değişkeninin elde edilerek yorumlanmasıdır. İkincisi, Granger nedensellik analizi ile gerek dolar kuru ve politik belirsizlik değişkenlerinin kendi aralarındaki gerekse bu değişkenler ile çeşitli piyasa faiz oranları (ticari kredi & mevduat) ve enflasyon oranları (tüketici & üretici) arasındaki nedensellik ilişkilerinin ortaya konulmasıdır. Çalışmada dördü simetrik üçü asimetrik olmak üzere yedi koşullu değişen varyans modeli kullanılmıştır. Simetrik modeller; otoregresif koşullu değişen varyans (ARCH), ortalamada ARCH (ARCH-M), genelleştirilmiş ARCH (GARCH) ve ortalamada GARCH (GARCH-M) modelleridir. Asimetrik modeller ise; üstel GARCH (EGARCH), eşik değerli ARCH (TARCH) ve üstel ARCH (PARCH) modelleridir. Model seçim kriterlerine göre en uygun model olan PARCH modeli üzerinden elde edilen koşullu varyans serisi politik belirsizlik değişkeni olarak adlandırılmıştır. Elde edilen bulgular politik belirsizliğin Haziran 2004, Temmuz 2006, Kasım 2008, Eylül 2018, Ocak 2022 ve Temmuz 2023 dönemlerinde ciddi şekilde arttığını göstermektedir. Granger nedensellik analizi ile elde edilen bulgular ise şu şekilde özetlenebilir: i) Dolar Kuru  $\Rightarrow$  Piyasa Faiz Oranları, Politik Belirsizlik ve Üretici Enflasyonu ii) Dolar Kuru  $\Leftrightarrow$  Tüketici Enflasyonu iii) Politik Belirsizlik  $\Leftrightarrow$  Enflasyon Oranları ve Ticari Kredi Faiz Oranları iv) Politik Belirsizlik  $\Rightarrow$  Dolar Kuru v) Politik Belirsizlik  $\Leftrightarrow$  Mevduat Faiz Oranları. Sonuç olarak, Türkiye’de döviz kurunun hem piyasa faiz oranları hem de enflasyon üzerinde etkili olduğu söylenebilir. Bununla birlikte, politik belirsizliğin ise enflasyonla birlikte yalnızca ticari kredi faizleri üzerinde etkili olduğu anlaşılmaktadır. Tüm bu sonuçlar bize etkin ve bağımsız bir para politikasının önemine işaret etmektedir.

**Anahtar Kelimeler:** Döviz Kuru, Politik Belirsizlik, Para Politikası

**JEL Kodları:** C22, D81, E44, E52



## In the Shadow of the Interest Rate Cut: A Synthetic Perspective on Turkey's Fight Against Inflation

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### Abstract

This study comprehensively analyzes the effects of the recent interest rate cut policy on inflation in Turkey using the synthetic control method (SCM). In particular, the study examines the consequences of the unconventional monetary policies implemented by the Central Bank of the Republic of Turkey (CBRT) in 2021 on inflation. While previous studies in the literature usually assess the impact of interest rates on inflation using conventional methods, this study aims to provide a clearer and comparative analysis using SCM. The results reveal the negative effects of the decline in policy credibility on inflation expectations and emphasize the difficulties of unconventional monetary policies in controlling inflation in Turkey. Moreover, the paper contributes to the literature on how the SCM can be used to evaluate the effectiveness of monetary policy in developing countries.

**Keywords:** Central Bank, interest rate policy, inflation, synthetic control method

**JEL Codes:** E52, E31, C23

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## Faiz İndiriminin Gölgesinde: Türkiye'nin Enflasyonla Mücadelesine Sentetik Bir Bakış

### Özet

Bu çalışma, Türkiye'de son dönemde uygulanan faiz indirimi politikasının enflasyon üzerindeki etkilerini sentetik kontrol yöntemi (SCM) kullanarak kapsamlı bir şekilde analiz etmektedir. Çalışma, özellikle 2021 yılında Türkiye Cumhuriyet Merkez Bankası (TCMB) tarafından uygulanan geleneksel olmayan para politikalarının enflasyon üzerindeki sonuçlarını incelemektedir. Literatürdeki önceki çalışmalar, faiz oranlarının enflasyon üzerindeki etkisini genellikle geleneksel yöntemlerle değerlendirirken, bu çalışma SCM kullanarak daha net ve karşılaştırmalı bir analiz sunmayı amaçlamaktadır. Sonuçlar, politika güvenilirliğindeki azalmanın enflasyon beklentileri üzerindeki olumsuz etkilerini ortaya koymakta ve Türkiye özelinde geleneksel olmayan para politikalarının enflasyon kontrolündeki zorluklarını vurgulamaktadır. Ayrıca, çalışma SCM'nin gelişmekte olan ülkelerde para politikası etkinliğinin değerlendirilmesinde nasıl kullanılabileceğini literatüre katkı sağlayacak şekilde ele almaktadır.

**Anahtar Kelimeler:** Merkez Bankası, faiz politikası, enflasyon, sentetik kontrol yöntemi.

**JEL Kodları:** E52, E31, C23





## **Corporate vulnerability in Türkiye and its responsiveness to exchange rate and interest rate shocks**

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### **Abstract**

The corporate sector represents the dynamic part of the economy which has proved its resilience against various shocks over the years. A closer look at the soundness of corporates can be traced with corporate vulnerability indicators. Using the detailed sectoral balance sheets provided by the CBRT, a corporate vulnerability indicator comprising of five subcomponents has been generated. The trends in corporate vulnerability is evaluated for different firm sizes and for different subcomponents of vulnerability. Afterwards, to investigate the sensitivity of corporate vulnerability to exchange rate and commercial loan interest rate panel VAR models are estimated. The results suggest that both exchange rate and loan rate shocks significantly increase the corporate vulnerability with heterogenous impacts across firm sizes. To investigate the impact of corporate vulnerability on the financial soundness, another set of panel VARs are estimated. The results suggest that an increase in corporate vulnerability increases the share of bad loans both in services and manufacturing sector.

**Keywords:**

**JEL Codes:**



## We Are Different: The Drivers of Asset Quality in Loan Type and Sectoral Breakdowns

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### Abstract

The asset quality of a banking system has the utmost importance not only for the soundness of the banking sector, but also for other major components of an economy. The lack of consensus on a certain set of variables for modeling asset quality leads to a problem, which is also known as “model uncertainty”. In this study, we investigate how non-performing loans in the Turkish banking system respond to changes in macroeconomic and bank-specific variables. To address model uncertainty, we employ a model averaging approach. Our results confirm the main findings in the literature with regards to the nexus between asset quality and macroeconomic and bank-specific variables. In addition, parameter estimates obtained from 1,023 models using combinations of 10 variables suggest that even under extreme shocks, the NPL ratio of the Turkish banking sector remains within reasonable limits. We also find that different loan segments and definitions present unique relations with macroeconomic and banking variables. We conclude that unique sectoral risk management practices may bring about significant benefits under consideration that sectoral characteristics responds to macroeconomic and banking shocks differently.

**Keywords:** nonperforming loans, model averaging, credit risk, financial stability.

**JEL Codes:** C22, C23, E51, G21



## Regional Cash Usage in Türkiye: Dynamics and Clustering Analyses of Provinces from 2014-2022

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### **Abstract**

This study aims to analyze the dynamics and clustering patterns of Turkish provinces from 2014 to 2022 to understand regional cash usage. Within the scope of the study, by using Principal Component Analysis to reduce the dimensionality of the data and K-means clustering to identify distinct clusters, the study examines changes in these clusters over time. The analysis includes transaction data from various payment channels, such as ATM and branch cash withdrawals, along with sectoral breakdowns of GDP and unemployment rates. The findings highlight significant regional differences and the disappearance of some clusters over the years. This study shows the importance of continuous monitoring and analysis of regional trends to understand the impact of cash usage across Türkiye and to support balanced development. By identifying the specific characteristics of regions with varying cash usage patterns, the study provides valuable insights into cash usage and payment method habits in different regions of the country.

**Keywords:** Clustering, Principal Component Analysis, K-Means.

**JEL Codes:** C02, C14, G18, R11, Z12



## Özet

Bu çalışma, Türkiye'nin illerindeki 2014'ten 2022'ye kadar olan dinamikleri ve kümeleme desenlerini analiz ederek bölgesel nakit kullanımını anlamayı amaçlamaktadır. Temel Bileşenler Analizi (PCA), verinin boyutunu azaltmak ve K-ortalamalar kümeleme yöntemi, farklı kümeleri belirlemek için kullanılmaktadır. Çalışmada bu kümelerin zaman içindeki değişimleri incelenmektedir. Analiz, ATM ve şube nakit çekimleri gibi çeşitli ödeme kanallarından elde edilen işlem verilerinin yanı sıra gayrisafi yurtiçi hasıla ve işsizlik oranlarının sektörel kısımlarını da içermektedir. Bulgular, yıllar içinde bazı kümelerin kaybolduğu ve önemli bölgesel farklılıkların olduğunu ortaya koymaktadır. Bu çalışma, Türkiye genelinde nakit kullanımının etkilerini anlamak ve dengeli kalkınmayı desteklemek için bölgesel eğilimlerin sürekli izlenmesi ve analiz edilmesinin önemini vurgulamaktadır. Farklı nakit kullanım desenlerine sahip bölgelerin özgün özelliklerini belirleyerek ülkenin farklı bölgelerindeki nakit kullanım ve ödeme yöntemi alışkanlıklarına dair faydalı bilgiler sunmaktadır.



## Determinants of Firm Exit: Empirical Evidence from Turkey<sup>104</sup>

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### Abstract

Firm exit is a key issue in economics literature due to its impact on market structure, resource allocation, and broader economic outcomes such as employment, innovation, and industry dynamics. Although many studies analyze the drivers of new firm formation, the determinants of firm exit have received less attention in the literature. This paper investigates the determinants of firm exit in Turkey using provincial level data over the period 2009-2021. Our results indicate that firm exit is strongly affected by positive spatial autocorrelation, suggesting that areas with high exit rates are likely to be surrounded by other locations with similarly high rates. Additionally, we find that specialization and infrastructural development are associated with lower firm exit rates, while urbanization drives higher exit rates. The results suggest that the geographic concentration of firms within the same industry and the development of mobile and internet infrastructure facilitate knowledge spillovers through the exchange of information, ideas, and expertise. In contrast, urbanization intensifies competition, leading to increased firm exits. Finally, our analysis shows that local financial development does not have a statistically significant impact on firm exit rates.

**Keywords:** Firm exit, spatial analysis, specialization.

**JEL Codes:** G33, R11, R12

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## Research and Education in a World of Transformation

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### Abstract

Kenneth Boulding has once written that “We are now in the middle of a long process of transition in the nature of the image which man has of himself and his environment. Primitive men, and to a large extent also men of the early civilizations, imagined themselves to be living on a virtually illimitable plane. There was almost always somewhere beyond the known limits of human habitation, and over a very large part of the time that man has been on earth, there has been something like a frontier. That is, there was always someplace else to go when things got too difficult, either by reason of the deterioration of the natural environment or a deterioration of the social structure in places where people happened to live. The image of the frontier is probably one of the oldest images of mankind, and it is not surprising that we find it hard to get rid of.” These words, as if, have been uttered for today, 58 years ago. Our planet earth is passing through another disruption, fundamental change in the economic and social order, as it has been several times in the past. As the technology develops into higher stages transforming the mode of production and pushing the way of life and the institutional structure of the society into quite different forms, it changes the political and social, institutional structure of the society as well, with it the ruling paradigms of the time. We are not able to foresee what the future is to bring for us clearly yet. All we can do is to rely upon the power of science, through research and education. After all, it is convincingly argued that in eras of all transformative courses these two have played active roles

**Keywords:** From History to Metahistory - Connectivity – Technology – Ruling Paradigms – Transformation – Disruption – Mode of Production

**JEL Codes:** I24, I25, F55

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# Enhancing Transport Policy Decision-Making through AI-Based Innovation System Analysis

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## **Abstract**

To effectively advance the global transition to electromobility, it is essential for policymakers and industries to understand the drivers and barriers involved. Traditional methods for analyzing innovation systems, such as interviews, desk research, social network analysis, regression models, and event history analysis, often incur high costs and time requirements. These methods are prone to biases and typically provide insights into only limited sections of the innovation system due to constraints in available quantitative data sources. As a result, they may overlook critical factors in adoption or are not sufficiently agile for timely policy responses. In response to these limitations, innovation research is increasingly leveraging new text-based indicators and fully automated methods for text analysis. Our study presents a pioneering approach that combines AI-augmented Natural Language Processing (NLP) techniques with Fuzzy Cognitive Maps and the conceptual frameworks of innovation systems. By analyzing textual data from sources like newspapers and academic publications, processed through advanced NLP tools and pretrained AI models, we effectively delineate the relevant innovation system and identify crucial factors and barriers driving its expansion. Our methodology not only facilitates the discovery of new factors and their interconnectedness within the system but also quantifies their mutual influence and prioritization across different subsystems like regions or sectors. The resulting map of impact factors provides a foundation for dynamically simulating various developmental scenarios and their associated strategic options, catering to both sectoral policy-making and industrial strategy.

**Keywords:** innovation system, policy making, text analysis, transportation

**JEL Codes:** O31, O33, Q55



## The identification of critical transport infrastructures

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### **Abstract**

The functionality of transport infrastructures can be drastically reduced by natural events. Extreme weather events are growing exponentially and are widely influenced by human-caused climate change. Even if the goal of the Paris Agreement to stop GHG emissions until the year 2050 will be reached there will be still an increase of the world temperature by 1.5-2oC and accordingly an increase of risk caused by extreme weather events. Risk relevant factors are heat, rain/flooding, storms, drought or wildfire, which may lead to interruptions or capacity reductions of the infrastructure. Transport infrastructures are networks of which the elements show different probabilities to be hit by an extreme event and cause different impacts in case of risk occurrence. In this paper we show how critical spots in the transport infrastructure can be identified using transport demand modeling and economic impact calculus. The results can be used to take precaution measures either by protecting the critical infrastructure elements or by providing alternatives for the endangered transport routes.

**Keywords:** natural events, risk factors, vulnerable infrastructures, identification of criticality, lessons for infrastructure planning

**JEL Codes:** R41, R42, H84, L91





## Boon or Bane? The Impact of Loan Supply and Demand Shocks on Loan Price Dispersion

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### Abstract

By disentangling simultaneous supply and demand shocks in loan market of an emerging economy, we examine how supply and demand shocks to loans in the banking sector impact loan price dispersion. Our fixed effects panel estimations for the period 2012-2023 in Türkiye show that both positive credit supply and demand shocks are associated with heightened loan rate dispersion at the bank level. Our results are invariant to a number of robustness checks. In terms of potential channels, we document that decreasing competitive structure in the banking industry moderates the impact of credit supply shock on interest rate dispersion, while the erosion in monetary policy credibility amplifies the impact of credit demand shock on interest rate dispersion. Our extended set of analyses indicates that increasing credit supply and demand shocks are associated with declining non-performing and stage 2 loan ratios, implying a lower likelihood of financial stability concerns.

**Keywords:** Credit Supply Shocks, Credit Demand Shocks, Credit Price Dispersion.

**JEL Codes:** G21, E51, C33

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## Brokerage house connections and information transmission

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### Abstract

We explore how the relationship between target firms and investment banks leads to the dissemination of private information in electronic limit order markets around mergers and acquisition deals. We analyze broker-level limit order book data on M&A deals for all stocks traded in Borsa Istanbul (BIST) between 2005 and 2015. Our findings suggest that brokers affiliated with the advisors of the target firms initiate more buy trades on the target's stock before the official announcements of M&A deals, allowing them to exert higher price impact and exploit the positive announcement returns. On average, net buy trading flow submitted by the affiliated brokers significantly increases by 72% during the pre-announcement period, which starts 30 days before the official announcement and ends on the announcement day. The average price impact of buy trades initiated by affiliated brokers during this period is around 7.7 basis points, significantly higher than that for unaffiliated brokers (5 bps). Thus, our results suggest that the private information percolated through brokerage houses affiliated with the target firm advisors is statistically and economically significant. To the best of our knowledge, our results are first in offering potential economic mechanisms for the information leakage problem around corporate events in BIST.

**Keywords:** Information leaks, brokerage houses, BIST, Information transmission

**JEL Codes:** G10, G14, G15, G24



# Algorithmic Trading's Effect on Market Liquidity and Volatility in Borsa Istanbul

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## Abstract

This study examines the effects of algorithmic trading (AT) on market conditions within Borsa Istanbul. Using five days of order book data from the BIST database, the analysis focuses on two key stocks: One financial and one industrial firm from BIST 30. Employing the Runs in Process method, algorithmic trading activities are detected to evaluate their impact on specific market metrics. The study assesses the influence of algorithmic trading on number of ticks which is a volatility measure and volume which is a liquidity measure. A model is constructed with volume and number of trades as dependent variables, algorithmic trading as the independent variable, and market capitalization and share turnover ratio are the control variables. Using simple linear regression, the study analyzes the relationship between algorithmic trading and these market conditions. Results indicate a significant positive effect of algorithmic trading on volume and a negative effect on the number of trades. These findings suggest that algorithmic trading plays a substantial role in shaping market dynamics within Borsa Istanbul, particularly affecting trading volume and number of trades. This research sheds light on the effect of algorithmic trading on liquidity and volatility.

**Keywords:** Algorithmic Trading, Borsa Istanbul, High Frequency Trading, Market Capitalization, Volume, Share Turnover.

**JEL Codes:** G14, G12

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<sup>113</sup> This study is derived from the Master thesis of Mohamed Sarhan under the supervision of Umut Ugurlu for the Financial Technology Master degree in Bahçeşehir University.



## The Survival of Export Links for Türkiye

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### Abstract

This paper analyzes the survival of Turkish manufacturing exports and their determinants for the period between 2009 and 2021 using Turkish customs data. The unit of the analysis in this study is firm-product-destination (FPD) triplets rather than firm, in which firm survival is also implied. Besides using the micro-level data, this study contributes to the export survival literature by using a new dataset and analyzing the survival of specific trade links for Türkiye, which provides an enhanced version of firm survival. In line with the related literature, we found that export durations of FPDs are short-lived. As expected, the GDP of the destination country and the initial value of the export relationship increase the chance of survival. Experience, on the other hand, plays a vital role in export survival: importing, having exported the same product or to the same destination before and being familiar with the product or the destination affect survival positively. Also, the number of peers exporting the same product to the same destination decreases the hazard rates of exit from export markets.

**Keywords:** Survival, Exports, Duration.

**JEL Codes:** F14, C41

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## State Separation, Landlockedness, and Trade: Evidence from a Natural Experiment

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### Abstract

To what extent does landlocked geography affect trade? This paper provides causal estimates on the effect of landlocked geography on trade. We exploit a novel natural experiment, a state separation episode, where Ethiopia lost all of its coastline after separating from Eritrea in 1993 and eventually losing its unrestricted access to the Eritrean port of Assab during the Ethiopian-Eritrean war in 1998. To estimate the impact of landlockedness on trade, we employ a triple difference-in-differences approach using country-year-product level variation and the synthetic control approach to visualize its persistence. We find that after Ethiopia became *de facto* landlocked in 1998, its seaborne exports and imports had fallen significantly, by as much as 60-80\% for certain products, and the decline in trade due to landlockedness was rather persistent. Our paper is the first to show how state separation episodes may offer insights into the economic impact of landlockedness, which is challenging to estimate.

**Keywords:** State Separation, Landlockedness, Trade, Ethiopia, Triple-differences, Synthetic Control.

**JEL Codes:** C21, F14, F15, O10, P33

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## The Impact of Expectations and Uncertainty on Export Dynamics: Evidence from Türkiye

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### Abstract

Becoming integrated into global markets has long been recognized as a key driver of economic growth and development. Uncertainty, especially in policy and market expectations, is increasingly shaping the landscape despite the acknowledged benefits of trade. The specific mechanisms through which expectations and uncertainty affect export dynamics in Turkey are investigated in this study. The study aims to provide nuanced insights into exporters' behavior in response to different levels of uncertainty and expectations by employing a rigorous empirical approach and using comprehensive data sources. The Nonlinear Autoregressive Distributed Lag (NARDL) model (Shin et al. 2014) is employed to investigate the asymmetric effects of the real exchange rate and foreign trade expectations on Turkish exports. Quarterly data from Türkiye, ranging from 2011.Q1 to 2023.Q4, are used to investigate the asymmetric effects of exporting expectations on exporting volume. By addressing these issues, this research aims to contribute to a deeper understanding of how expectations and uncertainties shape export dynamics and provide practical recommendations for policymakers to promote sustainable economic growth through enhanced trade strategies.

**Keywords:** Foreign Trade Expectations, Non-Linear, Asymmetric Effects

**JEL Codes:** C13, C54, F14

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# Evaluating Türkiye's Export Performance: The Impact of Product Complexity, Exchange Rates, and Economic Growth

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## **Abstract**

Türkiye has exhibited a remarkable export performance in the last a few decades that differs positively from world, however, discussions on quality of exports and export competitiveness are still up to date. This study investigates determinants of Türkiye's export competitiveness over the period 1996-2021, employing the Generalized Method of Moments (GMM) technique, and evaluates the impact of various factors such as product complexity, real effective exchange rate, gross domestic product, and institutional quality on Türkiye's export performance. Findings show that product complexity has a significant and negative effect on Türkiye's export competitiveness, suggesting that high-complexity products pose challenges in Türkiye's export competitiveness due to high production costs and market entry barriers. Our study also reveals that exchange rate fluctuations do not significantly influence export competitiveness, highlighting the dominance of structural economic conditions and global demand. Conversely, economic growth in major export destinations and general competitiveness, as measured by the weighted average GDP and the Global Competitiveness Index, have positive and significant impacts on export performance. The study concludes policy recommendations including enhancing competitiveness in complex products through cost-effective production, skill development, and technology-oriented transformation.

**Keywords:** International Trade, Export Competitiveness, Product Complexity, Sophistication, Turkish Economy

**JEL Codes:** F1, F14, F47

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# Fiscal Decentralization in the Transition from a Linear to a Circular Economy: A Proposal for Turkey

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## **Abstract**

As is well known, the concept of sustainable development was first defined in the Brundtland Report prepared by the United Nations World Commission on Environment and Development in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". There are various components that make up sustainable development. Perhaps one of the most important of these components is the "Circular Economy". The main idea of circular economy is to ensure the efficient use of resources. In this respect, waste management is of critical importance for the circular economy. Waste management is the responsibility of local governments. Transition from a linear economic structure to a circular economy is a common goal of developed and developing countries. While developed countries prefer to use transfer expenditures such as cash aids, interest-free loans and insurance to achieve this goal, developing countries prefer tax expenditure items such as tax holidays, tax deferrals, tax reductions, exceptions and exemptions. Fiscal decentralization can be briefly defined as the transfer of public expenditures and revenues from the center to the local level. Fiscal decentralization enables more efficient use of resources in the public sector. With these features, fiscal decentralization can play a key role in the establishment of a circular economy. The aim of this study is to propose a holistic policy proposal for Turkey, which has set a net zero carbon emission target for 2053, to ensure the transition to a circular economy. The proposal is based on fiscal decentralization. By proposing fiscal decentralization in the circular economy, the study is the first in its field and will contribute to the literature with this feature.

**Keywords:** Sustainable Development, Circular Economy, Waste Management, Fiscal Decentralization

**JEL Codes:** F01, Q25, H23, E62

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## **Doğrusal Ekonomiden Döngüsel Ekonomiye Geçişte Mali Yerelleşme: Türkiye için Bir Öneri**

### **Özet**

Bilindiği üzere sürdürülebilir kalkınma kavramı ilk defa, 1987 yılında Birleşmiş Milletler Dünya Çevre ve Kalkınma Komisyonu’nca hazırlanan Brundtland Raporu’nda "Bugünün gereksinimlerini, gelecek kuşakların gereksinimlerini karşılama yeteneğinden ödün vermeden karşılayan kalkınma" biçiminde tanımlanmıştır. Sürdürülebilir kalkınmayı vücuda getiren çeşitli bileşenler vardır. Bu bileşenlerin belki de en önemlilerinden birisi ise “Döngüsel Ekonomi”dir. Döngüsel ekonominin ana fikri kaynakların etkin kullanımıdır. Bu doğrultuda atık yönetimi, döngüsel ekonomi bakımından kritik öneme sahiptir. Atık yönetimi ise yerel yönetimlerin sorumluluk alanındadır. Doğrusal ekonomik yapıdan döngüsel ekonomiye geçiş, gelişmiş ve gelişmekte olan ülkelerin ortak hedefidir. Gelişmiş ülkeler bu hedefe varmak adına nakdi yardımlar, faizsiz kredi, sigorta gibi transfer harcamalarını kullanmayı tercih ederken, gelişmekte olan ülkeler ise daha çok vergi tatili, vergi erteleme, vergi indirim, istisna ve muafiyet gibi vergi harcaması kalemlerini tercih etmektedirler. Mali yerelleşme; kısaca kamu harcamalarının ve gelirlerinin merkezden yerele aktarımı şeklinde tanımlanabilir. Mali yerelleşme sayesinde kamu kesiminde kaynakların daha etkin kullanımı sağlanabilmektedir. Sahip olduğu bu özellikleriyle mali yerelleşme, döngüsel ekonominin tesisi bakımından anahtar rol oynayabilecektir. Bu çalışmanın amacı, 2053 yılı için net sıfır karbon emisyonu hedefi belirleyen Türkiye için döngüsel ekonomiye geçişi sağlayacak bütüncül bir politika önerisi getirmektir. Getirilen öneri mali yerelleşmeyi temel almaktadır. Döngüsel ekonomide mali yerelleşmeyi önermesiyle çalışma alanında ilk olup, bu özelliğiyle literatüre katkı sağlayacaktır.

**Anahtar Kelimeler:** Sürdürülebilir Kalkınma, Döngüsel Ekonomi, Atık Yönetimi, Mali Yerelleşme  
**JEL Kodları:** F01, Q25, H23, E62



# Environmental Sustainability in Turkey: The Roles of Economic Growth, Agriculture, Renewable Energy and Trade

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## **Abstract**

This study aims to analyze the impact of agriculture, renewable energy, trade openness and economic growth on carbon dioxide (CO<sub>2</sub>) emissions in Turkey. Using quarterly data for the period 1990Q1-2022Q4, the long-run relationships between the variables are investigated with the autoregressive distributed lags (ARDL) model. Preliminary findings show that increases in agricultural productivity and trade openness lead to a significant increase in CO<sub>2</sub> emissions. Moreover, an increase in renewable energy use has a positive effect on reducing CO<sub>2</sub> emissions and economic growth contributes to a slight decrease in emissions. These findings support the validity of the Environmental Kuznets Curve (EKC) and the Pollution Paradise Hypothesis in the Turkish context. The final conclusions of the study aim to more comprehensively address the effects of increasing the use of renewable energy, low carbon economy and trade reforms as well as sound environmental policies that minimize CO<sub>2</sub> emissions on the agricultural sector and the green economy.

**Keywords:** Carbon emissions, agriculture, renewable energy, trade, environmental sustainability

**JEL Codes:** Q01, Q42, Q56, O13

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## Türkiye'de Çevresel Sürdürülebilirlik: Ekonomik Büyüme, Tarım, Yenilenebilir Enerji ve Ticaretin Roller

### Özet

Bu çalışma, Türkiye'de tarım, yenilenebilir enerji, ticaret açıklığı ve ekonomik büyümenin karbondioksit (CO<sub>2</sub>) emisyonları üzerindeki etkisini incelemeyi amaçlamaktadır. 1990Q1-2022Q4 dönemine ait çeyreklik veriler kullanılarak yapılan analizlerde, değişkenler arasındaki uzun vadeli ilişkiler otoregresif dağıtılmış gecikmeler (ARDL) modeli ile araştırılmıştır. Ön bulgular, tarımsal verimlilik ve ticaret açıklığındaki artışların CO<sub>2</sub> emisyonlarında anlamlı bir artışa neden olduğunu göstermektedir. Ayrıca, yenilenebilir enerji kullanımındaki artışın CO<sub>2</sub> emisyonlarını azaltmada olumlu bir etkisi olduğu ve ekonomik büyümenin emisyonlarda hafif bir azalmaya katkıda bulunduğu gözlemlenmiştir. Bu bulgular, Türkiye bağlamında Çevresel Kuznets Eğrisi (EKC) ve Kirlenme Cenneti Hipotezi'nin geçerliliğini desteklemektedir. Çalışmanın nihai sonuçları, yenilenebilir enerji kullanımının artırılması, düşük karbon ekonomisi ve ticaret reformlarının yanı sıra CO<sub>2</sub> emisyonlarını minimize eden sağlam çevre politikalarının tarım sektörü ve yeşil ekonomi üzerindeki etkilerini daha kapsamlı bir şekilde ele almayı hedeflemektedir.

**Anahtar Kelimeler:** Karbon emisyonları, tarım, yenilenebilir enerji, ticaret, çevresel sürdürülebilirlik  
**JEL Kodları:** Q01, Q42, Q56, O13



# Investigating the Dynamics of Environmental Impacts in the Context of Achieving Sustainability: Evidence from OECD Countries

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## Abstract

Sustainability represents one of the key issues concerning modern societies. Establishing a balance between economic growth and environmental protection is critically important not only to ensure the well-being of today but also to guarantee the prosperity of future generations. In this context, the 21st century signifies a period during which action plans have been developed and implemented to prevent environmental degradation. During this period, environmental protection and sustainability have become shared concerns among all nations. Achieving sustainability involves understanding the dynamics of environmental impacts, which emerge from the interaction of various factors, and these factors provide insights into how ecosystems, human societies, and economic systems are affected. Examining the environmental impacts of countries and investigating the factors that contribute to these impacts are essential for determining the policies to be implemented. This study conducted an empirical analysis using the Stochastic Impacts by Regression on Population, Affluence, and Technology (STIRPAT) model, focusing on data from OECD countries between 2000 and 2023. The study identifies the factors contributing to environmental impacts, as expressed by carbon emissions, and explores their effects. Based on the findings, recommendations and evaluations were made to develop effective policies.

**Keywords:** Carbon Emissions, Environmental Impacts, STIRPAT Model, Panel Data Analysis

**JEL Codes:** Q51, Q54, C23

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## **Sürdürülebilirliğin Sağlanması Bağlamında Çevresel Etkilerin Dinamiklerinin Araştırılması: OECD Ülkelerinden Kanıtlar**

### **Özet**

Sürdürülebilirlik, modern toplumları ilgilendiren önemli olgulardan birini temsil etmektedir. Ekonomik büyüme ile çevresel koruma arasındaki dengeyi kurmak, yalnızca bugünün değil, gelecek nesillerin refahını da garanti altına almak adına kritik bir öneme sahiptir. Bu bağlamda 21. Yüzyıl, çevresel tahribatın önlenmesi adına eylem planlarının oluşturulduğu ve uygulandığı bir dönem olmakla birlikte bu dönemde çevrenin korunması ve sürdürülebilirliği bütün ülkelerin ortak hassasiyeti haline gelmiştir. Sürdürülebilirliğin sağlanması bağlamında ise çevresel etkilerin dinamikleri, çeşitli faktörlerin etkileşimiyle ortaya çıkmakta ve bu faktörler, ekosistemlerin, insan toplumlarının ve ekonomik sistemlerin nasıl etkilendiğine ilişkin öngörüler sağlamaktadır. Ülkelerin çevreye olan etkilerinin incelenmesi ve hangi faktörlerin çevresel etkilere neden olduğunun araştırılması, uygulanacak politikaların belirlenmesi için önemlidir. Çalışmada nüfus, refah ve teknolojiye göre stokastik etkiler (STIRPAT) modeli kullanılarak ampirik analiz yapılmıştır. Çalışmada 2000- 2023 yılları arasında OECD ülkelerinden elde edilen veriler kullanılmış olup karbon emisyonları ile ifade edilen çevresel etkilere neden olan faktörler ve etkileri ortaya konmuştur. Ulaşılan sonuçlardan hareketle, etkin politikalar oluşturulması adına öneriler ve değerlendirmelerde bulunulmuştur.

**Anahtar Kelimeler:** Karbon Emisyonları, Çevresel Etkiler, STIRPAT Modeli, Panel Veri Analizi

**JEL Kodları:** Q51, Q54, C23



## The Role of the Concept of Altruism in Establishing Justice

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### Abstract

Altruism is defined as a set of behaviours that take into account the well-being of others, even at the endower's expense. It is assessed in the context of pro-social preferences, which homoeconomicus is not anticipated to display. According to the literature, actors act philanthropically to create distributive justice, avoid inequality, and/or they expect of receiving rewards in the future. People's willingness to follow religious and spiritual norms may also play a role in altruistic actions. Furthermore, just-world hypothesis actors might approach the person in need of assistance with compassion, thinking that they are not deserving of their worse circumstances. On the other hand, if people feel that they are to blame for the issue, they could be unwilling to assist. This study examines the relationship between altruistic behaviors and justice sensitivity and investigates the role and limits of altruistic behaviors in achieving justice through economics literature.

**Keywords:** Altruism, justice, fairness, inequity aversion.

**JEL Codes:** D63, D64

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## Determination of Learning Difficulties in Introduction to Economics I Course: Izmir Democracy University Faculty of Economics and Administrative Sciences Example

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### Abstract

Introduction to Economics I is among the compulsory courses included in the first-year fall semester of the Economics Programs course plans. This course is also taught as a compulsory course in other programs in economics and administrative sciences. With this importance, this course has a special place for students who are starting to study economics for the first time and for program managers. Effective learning of Introduction to Economics I by students will contribute to both ensuring the competence of the Economics Program and to students' adopt of the field in the following periods. In order to determine the learning difficulties of the course, a survey method was used in the application phase and subject-based difficulty index calculations were used depending on the survey results. The application process was carried out with students of the Economics, Business Administration and Finance Programs of the Faculty of Economics and Administrative Sciences of Izmir Democracy University. It was observed that there were 311 students (152 students from the Economics Program, 143 students from the Program, 16 students from the Business Administration Program) who took the Introduction to Economics I course in the specified programs in the 2023-2024 fall semester, and the sample size was determined as 220 students. The aim of the study was to determine the subjects in which students had learning difficulties within the scope of difficulty index calculations, to determine the reasons why the subjects were difficult to learn, and to develop measures to eliminate learning difficulties.

**Keywords:** Learning of Economics, Learning Difficulties, Difficulty Index.

**JEL Codes:** A20, A22

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## **İktisada Giriş I Dersinde Yaşanan Öğrenme Güçlüklerinin Belirlenmesi: İzmir Demokrasi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Örneği**

### **Özet**

İktisada Giriş I dersi İktisat Programları ders planlarında birinci sınıf güz yarıyılında yer alan zorunlu dersler arasındadır. Bu ders iktisadi ve idari bilimlerdeki diğer programlarda da zorunlu ders olarak okutulmaktadır. Bu önemle, ilk defa iktisat eğitimi almaya başlayan öğrenciler ve Program sorumluları için bu ders ayrı bir yere sahiptir. İktisada Giriş I dersinin öğrenciler tarafından etkin bir biçimde öğrenilmesi gerek İktisat Programının yeterliliklerinin garanti altına almasına gerekse izleyen dönemlerde öğrencilerin alanı benimsemesine katkı sağlayacaktır. Dersin öğrenme güçlüklerinin belirlenebilmesi amacıyla uygulama aşamasında anket yöntemi ve anket sonuçlarına bağlı olarak konu bazlı güçlük endeksi hesaplamaları kullanılmıştır. Uygulama süreci İzmir Demokrasi Üniversitesi İktisadi ve İdari Bilimler Fakültesi İktisat, İşletme ve Maliye Programları öğrencileri ile gerçekleştirilmiştir. Belirtilen programlarda İktisada Giriş I dersini 2023-2024 güz döneminde alan 311 öğrenci (İktisat Programı 152, Maliye Programı 143, İşletme Programı 16 öğrenci) olduğu gözlenmiş, örneklem hacmi 220 öğrenci olarak belirlenmiştir. Çalışmada güçlük endeksi hesaplamaları kapsamında öğrencilerin öğrenme güçlüğü yaşadığı konuların belirlenmesi, konuların güç öğrenilme nedenlerinin saptanması ve öğrenme güçlüklerini ortadan kaldıracı tedbirlerin geliştirilmesi amaçlanmıştır.

**Anahtar Kelimeler:** Ekonomi Öğrenimi, Öğrenme Güçlükleri, Güçlük Endeksi.

**JEL Kodları:** A20, A22





## 100 Years Economic History of Turkey from the Foundation of the Republic to the Present

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### **Abstract**

One hundred years of the Turkish economy have witnessed many fundamental changes and transformations. The collapse of the multi-ethnic, multi-cultural and multi-religious Ottoman Empire and the establishment of the Republic of Turkey reinforced the implementation of the national economic policy. While the Izmir Economic Congress determined the new economic policies of the new regime, factors such as the lack of private capital, the lack of private enterprise and the world depression of 1929 made the implementation of this policy difficult. In the 1930s, there were developments in the field of industry with the implementation of statism. The Turkish economy was adversely affected by World War II, and during the war, the people became impoverished and black marketeering and hoarding became widespread. In the 1960-1980 period, Turkey entered a period of planned development to realize its economic objectives. After 1980, the Turkish economy opened up to foreign markets and started to implement neo-liberal policies. In the following periods, Turkey faced frequent crises and took stabilization measures to address these crises. After the 2008 crisis, Turkey took measures against the crisis by providing incentives to the economy through tax and interest rate cuts. After the exchange rate fluctuations in 2018 and 2019, Turkey started to take steps to create a new model in economic policies. In the following period, the Turkish Economic Model, the most incompatible program with Western capitalist economic policies in the history of the Republic, was adopted. The aim of this study is to examine the Republic of Turkey's one hundred-year adventure in the field of economy within the framework of basic dynamics of change and transformation. This adventure starts with the Economic Congress convened in Izmir shortly before the proclamation of the Republic and continues with the Turkish Economic Model, which has been frequently discussed recently.

**Keywords:** Economic Policy, Production, Employment, Foreign Trade, Inflation

**JEL Codes:** E24, E31, E02

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## Cumhuriyetin Kuruluşundan Günümüze Türkiye'nin 100 Yıllık İktisadi Tarihi

### Özet

Türkiye ekonomisinin yüz yılında birçok temel değişim ve dönüşüm yaşanmıştır. Çok etnik yapılı, çok kültürlü ve çok dinli olan Osmanlı Devleti'nin yıkılarak yerine Türkiye Cumhuriyeti'nin kurulması milli iktisat politikasının uygulanmasını pekiştirmiştir. İzmir İktisat Kongresi ile yeni rejimin yeni iktisat politikaları belirlenirken; özel sermaye yetersizliği, özel girişim eksikliği ve 1929 Dünya bunalımı gibi faktörler bu politikanın uygulanmasını zorlaştırmıştır. 1930'larda devletçilik uygulaması ile sanayi alanında gelişmeler yaşanmıştır. Türkiye ekonomisi, II. Dünya Savaşı'ndan olumsuz yönde etkilenmiş ve savaş sırasında halk yoksullaşmış, karaborsacılık ve istifçilik yaygınlaşmıştır. 1960-1980 döneminde Türkiye ekonomik amaçlarını gerçekleştirmek için planlı kalkınma dönemine girmiştir. 1980'den sonra Türkiye ekonomisi dışı açılarak neo-liberal politikalar uygulamaya başlamıştır. İlerleyen dönemlerde Türkiye sık sık krizlerle karşılaşmış ve bu krizlere yönelik istikrar tedbirleri almıştır. 2008 krizinden sonra Türkiye, vergi ve faiz indirimleri ile ekonomiye teşvikler sağlayarak krize karşı önlemler aldı. Türkiye, 2018 ve 2019 yıllarında kurda yaşanan dalgalanmalar sonrasında ekonomi politikalarında yeni bir model oluşturmaya yönelik adımlar atmaya başlamıştır. İlerleyen dönemde Cumhuriyet tarihinde Batı kapitalist ekonomi politikalarına en uyumsuz program olan Türkiye Ekonomi Modeli'ne geçilmiştir. Bu çalışmanın amacı, Türkiye Cumhuriyeti'nin ekonomi alanındaki yüz yıllık serüvenini temel değişim ve dönüşüm dinamikleri çerçevesinde ele almaktır. Bu serüven, Cumhuriyet'in ilan edildiği tarihten kısa bir süre önce İzmir'de toplanan İktisat Kongresi ile başlamakta ve son dönemde sıkça tartışılan Türkiye Ekonomi Modeli ile devam etmektedir.

**Anahtar Kelimeler:** Ekonomi Politikası, Üretim, İstihdam, Dış Ticaret, Enflasyon

**JEL Kodları:** E24, E31, E02



## Womenomics: Gender Equality as a Development Approach in Japan

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### Abstract

Even though Japan is a developed nation, problems still arise. Key challenges include gender inequity, economic stagnation, and the hyper-aged population. A measure taken by the Japanese government to address the issues of gender inequality, economic stagnation, and the hyper-aging population is the introduction of the Womenomics program in 2013, which aims to empower women in Japan. With a focus on women's empowerment and its relationship to economic growth, this research seeks to identify and investigate Japan's 21st-century concerns. Based on a public policy perspective, the study's results illustrate Japan's endeavours to establish a gender-neutral, innovative policy that grants women in Japan equal access to social, political, educational, and economic spheres. This approach aims to augment the labour force size as a growth tactic to alleviate the effects of the country's hyper-aged population. According to this strategy, the status of Japanese women in the workforce has increased; yet there are still many obstacles to overcome to change the gender-biased paradigm in Japanese society, including issues with pay inequality.

**Keywords:** Japan; Gender Equality, Innovative Policy; Womenomics

**JEL Codes:** A23, I21, J24, J28

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# Examination of the Effects of Signal Mechanism, Selective Perception, and Inertia on Stationary Investment Strategy with Evolutionary Game Theory

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## Abstract

This research delves into the investment strategies employed in stock markets using evolutionary game theory. It aims to explore the impact of signaling mechanisms, selectivity in perception, and inertia on evolutionary stasis. The presence of an evolutionarily stable investment strategy is critical for ensuring market stability. This is because no other mutant strategy can take over, and hence, the mathematical representation of such a strategy is essential. However, the existence of this stability is contingent upon the presence of return-oriented rational investors, which is challenging to observe empirically. As such, evolutionary game theory plays a significant role in highlighting the importance of this situation. It can be used to model the essential characteristics of human beings as social beings, including emotionality, altruism, inertia, myopic vision, selectivity in perception, systematic errors, jealousy, and conditioned thoughts. In the first part of this study, we will briefly examine the differences between classical and evolutionary theories. In the second part, we will model an evolutionarily stable investment strategy. Finally, in the last part, we will consider the effects of the signaling mechanism, selectivity in perception, and inertia on this stationarity.

**Keywords:** Evolutionary Game Theory, Evolutionary Stationary Investment Strategy, Replicator Dynamics, Irrational Decisions

**JEL Codes:** B52, C62, C73, D10

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<sup>133</sup> This study was derived from Aras Yolusever's doctorate thesis named Evolutionary Game Theory and Coordination Failures. The advisor of the thesis is Prof. Dr. Ercan Eren.

## Sinyal Mekanizmasının, Algıda Seçiciliğin ve Ataletin Durağan Yatırım Stratejisi Üzerindeki Etkilerinin Evrimsel Oyun Teorisi ile İncelenmesi

### Özet

Bu çalışmanın amacı, hisse senedi piyasalarında uygulanan yatırım stratejilerini evrimsel oyun teorisi ile incelemek ve sinyal mekanizmasının, algıda seçiciliğin ve ataletin, evrimsel durağanlık üzerindeki etkisini araştırmaktır. Evrimsel olarak istikrarlı bir dengeye sahip bir portföy seçim kuralının varlığını göstermek matematiksel ve teorik olarak mümkündür. Evrimsel durağan bir yatırım stratejisi piyasaya hâkim olduğunda istikrarı sağlar çünkü başka hiçbir mutant strateji piyasayı ele geçiremez. Dolayısıyla böyle bir yatırım stratejisinin varlığının matematiksel gösterimi önemlidir. Ne var ki bu istikrarın sağlanması, getiri odaklı rasyonel yatırımcıların varlığını gerekli kılmaktadır. Ampirik olarak gözlemlenmesi zor olan bu durum, evrimsel oyun teorisinin önemini de ortaya koymaktadır. Evrimsel teori, replikatör dinamikleri aracılığıyla sosyal bir varlık olan insanın ayrılmaz parçalarını- duygusallığı, altruizmi, ataleti, miyobik görüşü, algıda seçiciliği, sistematik hataları, kıskançlığı ve koşullu düşünceleri- modelleyebilmektedir. Çalışmanın ilk bölümünde evrimsel oyun teorisinin, klasik teoriden farkları kısaca incelenecek, ikinci bölümde evrimsel durağan bir yatırım stratejisi modellenecek ve son bölümde sinyal mekanizmasının, algıda seçiciliğin ve ataletin bu durağanlık üzerindeki etkileri modellenecektir.

**Anahtar Kelimeler:** Evrimsel Oyun Teorisi, Evrimsel Durağan Yatırım Stratejisi, Replikatör Dinamiği, İrrasyonel Kararlar

**JEL Kodları:** B52, C62, C73, D10



# **Struggle for Bread: Understanding Intra-Class Conflicts of the Bourgeoisie over Bread and Wheat Prices in Izmir during the Early Years of the Republic (1922-1925)**

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## **Abstract**

The newly established Republic of Turkey inherited a domestic market where traditional foreign trade connections were weakened due to long wars and whose integrity was damaged by the havoc brought by the occupation. Especially in basic consumer goods market, this structure which strengthens oligopolistic tendencies has caused major conflicts of interest in the sharing of profits among the bourgeoisie. However, the literature by ignoring intra-class conflicts, tends to explain post-war inflation only by external economic factors and loss of physical capital. In this context, the aim of the study is, with a specific focus on Izmir, to demonstrate that, in addition to external factors, the competition among different strata of the agricultural, commercial, and industrial bourgeoisie also played a role in post-war inflation. The analysis of qualitative data reveals that the foreign market oriented strata of the commercial and industrial bourgeoisie advocated for the reduction or elimination of customs duties on grain and flour, while the domestic market oriented strata of the industrial and agricultural bourgeoisie supported the preservation of these. Both groups have used their overrepresentation within chamber of commerce, municipality, bourse and press to achieve their goals. The time series we have created convincingly revealed the scale of the inflation. Accordingly, it was seen that the price of bread increased by 57% between October 1922 and February 1925, and the price of wheat increased by 78% between November 1922 and February 1925. Different inflationary effects have also been observed such as skimpflation where the quality of bread ingredients was reduced by 40% while the price remained the same.

**Keywords:** Inflation, Customs Duty, Intra-Class Conflict.

**JEL Codes:** N15, N65, N75, N95

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## **Ekmek Kavgası: Cumhuriyetin İlk Yıllarında İzmir’de Ekmek ve Buğday Fiyatları Üzerinden Burjuvazinin Sınıf İçi Çatışmalarını Anlamak (1922-1925)**

### **Özet**

Yeni kurulan Türkiye Cumhuriyeti miras olarak; uzun süren savaşlar nedeniyle geleneksel dış ticaret bağlantıları oldukça zayıflamış, işgalin getirdiği yıkım ile de bütünlüğü bozulmuş bir iç piyasa devraldı. Özellikle temel tüketim maddelerinde oligopol eğilimleri güçlendiren bu yapı burjuvazi açısından kârın paylaşımında önemli çıkar çatışmalarına neden olmuştur. Buna karşın literatür, sınıf içi çatışmaları göz ardı ederek, savaş sonrası enflasyonunu yalnızca dış iktisadi etkenler ve fiziki sermaye kaybı ile açıklama eğilimindedir. Bu bağlamda çalışmanın amacı savaş sonrası enflasyonunda dış etkenler kadar; tarım, ticaret ve sanayi burjuvazisinin farklı katmanları arasındaki rekabetinin de etkili olduğunu, İzmir özelinde, ortaya koymaktır. Çalışmada temel kaynak olarak dönem basınındaki nicel ve nitel içerikler kullanılmıştır. Nitel veri üzerinden yapılan analiz sonucunda şehrin dış piyasaya yönelmiş olan ticaret ve sanayi burjuvazisinin tahıl ve un üzerindeki gümrük vergisinin kaldırılması-düşürülmesi, iç piyasaya yönelen sanayi ve tarım burjuvazisinin ise vergilerin korunması safında yer aldığı görülmüştür. İki grup da sayıları ile orantısız bir temsiliyete sahip oldukları ticaret odası, belediye, borsa ve basın gibi çeşitli kanalları kullanarak amaçlarına yönelik faaliyet yürütmüştür. Bu çatışma ortamında yaşanan gıda enflasyonunun boyutlarını, oluşturulan zaman serileri ortaya koymuştur. Buna göre Ekim 1922-Şubat 1925 arasında ekmek fiyatının %57, Kasım 1922-Şubat 1925 aralığında buğday fiyatının ise %78 oranında arttığı görülmüştür. Enflasyon çok yönlü etkisini, fiyat aynı kaldığı dönemde dahi ekmek içeriğinde %40 oranında yaşanan kalite düşüşü (skimpflation) gibi örneklerle de göstermiştir.

**Anahtar Kelimeler:** Enflasyon, Gümrük Vergisi, Sınıf İçi Çatışma.

**JEL Kodları:** N15, N65, N75, N95



# Dynamic Inflation Inertia Estimation for Türkiye: Kalman Filter Analysis

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## Abstract

Inflation inertia manifests as a phenomenon in economies wherein a heightened or diminished inflation rate tends to endure, exhibiting a reluctance to promptly adjust to shifts in economic conditions. This phenomenon poses a significant challenge for central banks and economic policymakers. As inflation inertia intensifies, the task of steering the economy and maintaining price stability becomes increasingly formidable. Following the successive Covid-19 crisis and the Russia-Ukraine conflict, there has been an increase in inflation in both developed and developing countries, driven by escalating central bank balance sheets and rising energy commodity prices. The resurgence of the inflation inertia problem has led to significant debate and concern among experts and policymakers. In this research, inflation inertia for Türkiye will be investigated dynamically for the period from January 2003 to February 2024 using the Kalman Filter model. Thus, we will try to analyze the impact of recent geopolitical events, such as the Covid-19 epidemic and the Ukraine-Russia war, on inflation inertia.

**Keywords:** Inflation Inertia, Dynamic Modeling, Kalman Filter Model

**JEL Codes:** C22, C53, E31

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## Türkiye için Dinamik Enflasyon Ataleti Tahmini: Kalman Filtresi Analizi

### Özet

Enflasyon ataleti, artan veya azalan enflasyon oranının kalıcı olma eğiliminde olduğu ekonomilerde, ekonomik koşullardaki değişimlere anında uyum sağlama konusunda isteksizlik sergileyen bir olgu olarak ortaya çıkmaktadır. Bu olgu merkez bankaları ve politika yapıcılar için önemli bir zorluk teşkil etmektedir. Enflasyonun ataleti yoğunlaştıkça ekonomiyi yönlendirme ve fiyat istikrarını koruma görevi giderek zorlaşmaktadır. Art arda gelen Kovid-19 krizi ve Rusya-Ukrayna çatışmasının ardından, şişmiş merkez bankası bilançoları ve artan enerji emtia fiyatlarının etkisiyle hem gelişmiş hem de gelişmekte olan ülkelerde enflasyonda bir artış meydana gelmiştir. Enflasyonun ataleti sorununun yeniden canlanması, uzmanlar ve politika yapıcılar arasında önemli bir tartışmaya ve endişeye yol açmıştır. Bu çalışmada Türkiye için enflasyon ataleti Kalman Filtresi modeli kullanılarak Ocak 2003'ten Şubat 2024 dönemi için dinamik tahmin edilmeye çalışılacaktır. Böylelikle özellikle Kovid-19 salgını ve Ukrayna-Rusya savaşı gibi son dönemdeki jeopolitik olayların enflasyon ataleti üzerindeki etkisi analiz edilmeye çalışılacaktır.

**Anahtar Kelimeler:** Enflasyon Ataleti, Dinamik Modelleme, Kalman Filtresi Modeli

**JEL Kodu:** C22, C53, E31



## Pandemi Kısıtlamalarının Ödeme Alışkanlıklarına Etkisi

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### Özet

Dünya Sağlık Örgütü tarafından Covid-19'un pandemi ilan edilmesiyle başlayan süreçte hastalığın yayılmasını engellemek üzere hükümetlerce alınan önlemler, bireylerin hareket edebilirliklerini kısıtlamanın yanı sıra ödeme alışkanlıklarında da değişim meydana getirmiştir. Bu çalışmada, pandemi döneminde alınan kısıtlayıcı önlemlerin Türkiye ve gelişmiş ve gelişmekte olan 18 ülkedeki ödeme davranışı üzerinde 2020-2022 yılları arasında meydana getirdiği değişim "Future of Payments" veri tabanı kullanılarak incelenmiştir. Analiz sonuçları hem Türkiye hem diğer ülkelerde daha sıkı karantina önlemlerinin emisyon hacminde artışa neden olduğunu ortaya koymaktadır. Bulgular, yeni vaka sayılarındaki artışla birlikte internet üzerinden gerçekleştirilen işlemlerde artış; kısıtlamaların azalmasıyla birlikte artan hareketlilikle ise düşüş olduğuna işaret etmektedir. Ayrıca, sonuçlar Covid-19'un farklı ülkelerde benzer sonuçlar doğurduğunu ortaya koymuştur. Nakit talebindeki artışa paralel olarak kapanmaların etkisiyle artan çevrim içi alışverişler, ülkeler arasında benzer bir eğilim olduğunu göstermektedir. Çalışma, ülkeler arası yapısal farklılıklara rağmen pandeminin geçmiş dönemlerde deneyimlenen teknoloji krizi ve küresel mali krize benzer sonuçlar doğurarak kriz dönemlerinde nakdin "güvenli liman" olma özelliğini koruduğunu göstermiştir.

**Anahtar Kelimeler:** Nakit talebi, Covid-19, Ödeme alışkanlıkları.

**JEL Kodları:** E41, E32, D10



## Learning with State-Dependent Preferences

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### Abstract

Despite the relevance in almost all economic decisions, state-dependent preferences and their impacts on learning have not been studied extensively. While numerous studies demonstrate that exogenous environmental factors can bias individuals' decisions, the long-term learning dynamics with changing states remain an open question. First, I compare recent theoretical models of learning with state-dependent preferences and illustrate the key measures of belief updating. Then, employing a lab experiment with repeated experiences, I examine the predictions of different models. The experimental results indicate that individuals can disentangle the effect of a consumption state after multiple trials, despite initially holding biased evaluations. However, this learning process requires individuals to attend to specific factors, as non-salient factors persist in distorting valuations after repeated experiences. These findings contribute to designing decision environments in various contexts such as consumption, education, or job settings.

**Keywords:** State-dependent preferences, belief updating, attribution bias.

**JEL Codes:** C91, D12, D83, D91

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# Decentralized Many-to-One Matching with Random Search

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## Abstract

I analyze a canonical many-to-one matching market within a decentralized search model with frictions, where a finite number of firms and workers meet randomly until the market clears. I compare the stable matchings of the underlying market and equilibrium outcomes when time is nearly costless. In contrast to the case where each firm has just a single vacancy, I show that stable matchings are not obtained as easily. In particular, there may be no Markovian equilibrium that uniformly implements either the worker- or the firm-optimal stable matching in every subgame. The challenge results from the firms' ability to withhold capacity strategically. Yet, this is not the case for markets with vertical preferences on one side, and I construct the equilibrium strategy profile that leads to the unique stable matching almost surely. Moreover, multiple vacancies enable firms to implicitly collude and achieve unstable but firm-preferred matchings, even under Markovian equilibria. Finally, I identify one sufficient condition on preferences to rule out such opportunities.

**Keywords:** Many-to-one matching, search, stability

**JEL Codes:** C78, D82, D83, J64

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## Will Robots be Taxed?

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### Abstract

Is it socially optimal to tax robots? Despite its significance, this well-known normative debate cannot address whether voters with conflicting interests would actually support such policies. To bridge this gap, we develop a general equilibrium model where robots displace routine workers but enhance the productivity of non-routine workers. The decision to tax or subsidize robots is determined through elections, with two rival parties each representing one of these worker groups. After proving the existence of equilibrium, we analytically show that when robot prices are low, both parties support taxing automation, though at different rates. Conversely, high prices lead to subsidies. Our calibrations indicate that, due to the currently high cost of robots, the political equilibrium favors automation subsidies. Therefore, we argue that robot taxes are politically unviable under current conditions, although this could change if robot prices decrease in the future.

**Keywords:** Automation, political competition, robot taxes.

**JEL Codes:** D58, D72, C62, C70

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# Deciphering Contagion in Turkish Financial Markets: A Novel $R^2$ Decomposed Connectedness Approach

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## **Abstract**

Strong interdependencies among global financial markets induce expeditious risk propagation throughout them, rendering it vital to comprehend how the information is being spilled. Predominantly, cross-market interconnectedness and co-movements are prone to augment around financial/geopolitical downturns. This study explores the evolving relationship between components of financial system in Türkiye (equity market, bond market, foreign exchange market, money market) by utilizing a novel  $R^2$  decomposed connectedness methodology of Balli et al. (2023), a significant leap from mainframe connectedness analyses that mainly focus on the contemporaneous effects, thereby missing out on the nuanced, lagged interactions that develop over time. This approach enables us to encompass both contemporaneous and lagged spillover effects, making it especially apt to examine this intricate system's dynamic interconnections. The findings of the study highlights, i) contemporaneous interlinkages are more pronounced than their lagged counterparts, iii) total connectedness indexes (TCIs) notably escalate around financial/geopolitical stress incidents, iii) the net lagged spillovers are mainly more pronounced than their counterparts and asymmetry is evident for some markets.

**Keywords:** Contemporaneous connectedness; lagged connectedness; financial resilience; connectedness networks.

**JEL Codes:** C32, C5, F3, G15

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## Women's Development from Perspective of Sustainable Development Goals: A Gender-Based Empirical Approach

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### Abstract

There is no country in the world that has yet achieved full gender equality. National and international policies and the roles that societies assign to genders lead to inequalities between individuals, mostly to the detriment of women. In many parts of the world, women are exposed to occupational discrimination and gender pay gaps and are not sufficiently included in political and economic decision-making processes. Empowering women and improving their position is influential on many macroeconomic indicators. Sustainable development goals include, women's equal rights to economic resources and financial services; empowerment through technology; and the adoption and implementation of policies aimed at ensuring gender equality. Based on all these processes, the purpose of the study is to examine and evaluate women's development in line with sustainable development goals in Turkey and European Union countries. In this context, the study examined the development of women in Turkey and EU countries for a period of 10 years between 2009-2019 with factor analysis and cluster analysis. As a result of the analysis, Turkey's women's development performance is most similar to Italy and Greece among the European Union countries.

**Keywords:** Sustainable Development Goals, Women's Development, Factor Analysis, Cluster Analysis.

**JEL Codes:** Q01, J16, C38

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## Female Employment and the Role of Structural Transformation Revisited

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### **Abstract**

Female employment in developed countries has increased significantly over the past decades. Almost all of the rise in female employment is absorbed by the expanding service sector, which is driven by uneven sectoral labor productivity growth, known as structural transformation. As females are assumed to have a comparative advantage in service employment due to gender traits, structural transformation can increase female employment through service sector expansion. In addition, rise in female share within the service sector also contributed to the overall increase in female employment. This paper investigates the role of worker heterogeneity in explaining the increase in the female employment. The paper has a model with a representative household with a continuum of male and female members. A member allocates his/her time between production in the goods sector, service sector, home production, and leisure. These sectors have exogenous sectoral labor productivity growth, generating structural transformation. A worker has sector-specific productivity that s/he draws from a gender-specific joint distribution. Each member observes the market wages and decides how to allocate his/her time. The market productivity distribution may change across gender and over time. Thus, uneven sectoral labor productivity growth affects the sectoral allocation within each gender differently.

**Keywords:** Female employment, structural transformation, service sector, labor productivity, worker heterogeneity

**JEL Codes:** J16, J21, J22, J24, J31





## Social Capital, Fertility Decision, and Economic Growth: Evidence From Turkey

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### Abstract

This paper develops a gender-based Overlapping Generations (OLG) model to explore how social capital can affect long-term growth through fertility decisions because social ties and networks that constitute social capital shape fertility intentions or behaviours. However, as the fertility rate increases, the total amount of time women allocate to child rearing depending on the number of children increases but the amount of time by women allocated to market work and to social capital-creating activities decreases. However, the decrease in women's time allocation to social capital-creating activities can affect women's productivity and bargaining power and therefore economic growth. We calibrate our theoretical model for Turkey to discuss the role of policy experiments in long-run growth. In particular, we discuss two sets of policy experiments: an increase in the share of government spending on education and social capital-creating activities. Our results suggest that social capital has no significant effect on fertility decisions in Turkey.

**Keywords:** Social capital, fertility decisions, OLG model, long-run growth, Turkey

**JEL Codes:** O41, J13, J16



# Analysing The Effect of Exchange Rates on Sectoral Inflation and Terms of Trade in Türkiye

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## **Abstract**

Inflation in Türkiye has been at a high level for about 50 years. For this reason, Türkiye is one of the countries with the longest period of high inflation in the world. This situation reveals that inflation is fuelled not only by economic but also by social, political and cultural factors. However, it is also observed that rapid increases in inflation are mostly in line with exchange rate increases. Therefore, it can be said that inflation is influenced by global as well as domestic factors. On the other hand, regardless of the sources of inflation, it is observed that inflation, i.e. price increases, differ across sectors. This situation affects the terms of trade and may change the direction of resource transfer between sectors. Depending on these developments, resource allocation in the country is also affected. The aim of this study is to reveal the effects of nominal and real exchange rates on prices and then on the terms of trade in Türkiye and to develop possible policy recommendations based on the results. In this framework, the first section of the study analyses the development of nominal and real exchange rates in Türkiye. In the second section, the impact/transition channels of exchange rate developments on sectoral prices will be systematised. In the third section, developments in sectoral price movements will be revealed with the help of deflators and terms of trade will be calculated. Finally, the interaction between terms of trade and exchange rates will be analysed by statistical methods.

**Keywords:** Inflation, sectoral inflation, exchange rate pass-through, internal terms of trade

**JEL Codes:** E31, E64, F31

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## Türkiye’de Döviz Kurlarının Sektörel Enflasyon ve İç Ticaret Hadleri Üzerine Etkisinin Analizi

### Özet

Türkiye’de enflasyon yaklaşık 50 yıldır yüksek düzeyde seyretmektedir. Bu nedenle de dünyada en uzun süreli yüksek enflasyon yaşayan ülkelerin başında Türkiye gelmektedir. Bu durum enflasyonun sadece ekonomik değil, sosyal, politik ve kültürel faktörlerden de beslendiğini ortaya koymaktadır. Bununla birlikte, enflasyondaki hızlı yükselmelerin daha çok döviz kuru artışıyla uyumlu olduğu da görülmektedir. Dolayısıyla enflasyonun içsel olduğu kadar küresel faktörlerden de etkilendiği söylenebilir. Diğer taraftan hangi kaynaklardan beslenirse beslensin, enflasyonun yani fiyat artışlarının sektörler itibarıyla farklılaştığı görülmektedir. Bu durum da iç ticaret hadlerini etkilemekte, sektörler arası kaynak aktarımının yönünü değiştirebilmektedir. Söz konusu bu gelişmelere bağlı olarak ülkede kaynak dağılımı da etkilenmektedir. Bu çalışmanın amacı Türkiye’de nominal ve reel kurların önce fiyatlar sonra da iç ticaret hadleri üzerine etkisini ortaya koymak ve ortaya çıkan sonuçlara bağlı olarak olası politika önerilerini geliştirmektir. Bu çerçevede çalışmanın ilk bölümünde Türkiye’de nominal ve reel kurların gelişimi incelenecektir. İkinci bölümde kurlardaki gelişmelerin sektörel fiyatlar üzerine etki/geçiş kanalları sistematize edilecektir. Üçüncü bölümde ise sektörel fiyat hareketlerindeki gelişmeler deflatörler yardımıyla ortaya konulacak, iç ticaret hadleri hesaplanacaktır. Çalışmada son olarak iç ticaret hadleri ile döviz kurları arasındaki etkileşim istatistiki yöntemlerle analiz edilecektir.

**Anahtar Kelimeler:** Enflasyon, sektörel enflasyon, döviz kuru geçişkenliği, iç ticaret hadleri

**JEL Kodları:** E31, E64, F31



## Inflation and Globalization in Turkey: The Phillips Curve Perspective

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### Abstract

Globalization is a multifaceted phenomenon with various definitions provided by different circles and authors, and there is no universally accepted single definition. This study focuses on the economic definition of globalization and examines its impact on the Turkish economy from 1995 to 2022 using the "Globalization of Inflation Hypothesis" and the Phillips Curve approach. The globalization of inflation hypothesis suggests that determining inflation dynamics requires consideration not only of domestic market supply/demand conditions but also of global supply/demand conditions that affect product prices and input costs. Recent studies have indicated that as markets become increasingly integrated, the impact of the national output gap on inflation has diminished, while the effect of the global output gap has increased. In this study, the Classic, Lagged, and Leading Phillips Curve approaches were analyzed using time series methods. The global output gap series was created by aggregating the output gaps of the 20 countries with which Turkey had the most trade during 2021-2022, weighted by trade volume with these countries. According to the findings, in the Classic Phillips Curve model, both national and global output gap variables affect inflation dynamics. Results from the Lagged Phillips Curve model indicate that inflation in Turkey is more affected by the global output gap than by the national output gap. The Leading Phillips Curve model results suggest that inflation expectations impact current inflation. There is no explanatory power of the national and global output gap variables on the changes in domestic inflation rates.

**Keywords:** The Globalization of Inflation Hypothesis, The Phillips Curve

**JEL Codes:** E31, F60, F62, E52

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## Türkiye'de Enflasyon ve Küreselleşme: Phillips Eğrisi Perspektifi

### Özet

Küreselleşme, çeşitli çevreler ve yazarlar tarafından farklı tanımlamalara sahip, herkes tarafından kabul edilen tek bir tanımı olmayan çok boyutlu bir olgudur. Bu çalışma kapsamında küreselleşmenin ekonomik tanımı üzerinde durularak Türkiye ekonomisi için 1995-2022 yıllarında “Enflasyonun Küreselleşme Hipotezi” Phillips Eğrisi yaklaşımıyla ele alınmıştır. Enflasyonun küreselleşme hipotezi temel olarak, enflasyon dinamiklerinin belirlenmesinde yalnızca yurtiçi piyasalardaki arz/talep koşullarının değil aynı zamanda ürün fiyatları ve girdi maliyetlerini etkileyen küresel arz/talep koşullarının da dikkate alınması gerektiğini öne sürer. Son yıllarda Phillips Eğrisi üzerine yapılan çalışmalarda piyasaların giderek birbirine entegre hale gelmesi nedeniyle enflasyon üzerinde ulusal çıktı açığının etkisinin azaldığı küresel çıktı açığının etkisinin ise arttığı yönündedir. Çalışmada, Klasik, Geriye Dönük ve İleriye Dönük Phillips Eğrisi yaklaşımları zaman serileri analiz yöntemiyle incelenmiştir. Küresel çıktı açığı serisi, Türkiye’nin 2021-2022 yıllarında en çok ticaret yaptığı 20 ülkenin çıktı açıklarının, bu ülkelerle olan ticaret ağırlıklarına göre birleştirilmesiyle oluşturulmuştur. Elde edilen bulgulara göre Klasik Phillips Eğrisi modelinde ulusal ve küresel çıktı açığı değişkenleri enflasyon dinamiği üzerinde etkilidir. Geriye dönük Philips Eğrisi model sonuçlarına göre Türkiye’de enflasyon küresel çıktı açığından daha fazla etkilenmektedir. İleriye dönük Philips Eğrisi model sonuçlarına göre ise enflasyon beklentileri cari enflasyonu etkilemektedir. Ulusal ve küresel çıktı açığı değişkenlerinin yurtiçi enflasyon oranı değişimi üzerinde açıklayıcılığı bulunmamaktadır.

**Anahtar Kelimeler:** Enflasyonun Küreselleşme Hipotezi, Phillips Eğrisi

**JEL Kodları:** E31, F60, F62, E52



## Kripto Paralar Portföy Çeşitliliği Midir? Kıymetli Metaller İle Arasında Doğrusal Olmayan Eşbütünleşme Analizi

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### Abstract

Recently, sudden increases in the cryptocurrency market have led to high returns, attracting investors to these markets. While precious metals have traditionally been considered optimal portfolio diversifiers for traditional financial assets, the rise of cryptocurrencies has sparked debate about whether these markets can also serve as diversifiers. Therefore, this study conducts a nonlinear cointegration analysis to examine the relationship between Bitcoin, Ethereum, and Litecoin cryptocurrencies and gold, silver, and platinum precious metals. Fifteen separate models are established to individually investigate the relationship between each cryptocurrency and precious metal. Additionally, relationships among the cryptocurrencies themselves are examined. The study first tests the series for linearity using the KSS (2003) test. Subsequently, it proceeds with the nonlinear cointegration test, KSS (2006). The findings indicate a long-term cointegration relationship between each cryptocurrency and precious metals, converging towards long-term equilibrium in a nonlinear manner. Furthermore, long-term cointegration relationships are observed among cryptocurrencies themselves, also converging towards long-term equilibrium nonlinearly. Therefore, the study concludes that cryptocurrencies cannot be utilized as portfolio diversifiers. It suggests that cryptocurrencies and precious metals move together in the long term in a nonlinear manner, indicating a lack of diversification benefits between cryptocurrencies and precious metals.

**Keywords:** Bitcoin, Financial Assets, Precious Metals, KSS (2003) Linearity Test, KSS (2006) Nonlinear Cointegration Test.

**JEL Codes:** C1, C10, G1, G10

## Kripto Paralar Portföy Çeşitliliği Midir? Kıymetli Metaller İle Arasında Doğrusal Olmayan Eşbütünleşme Analizi

### Özet

Son zamanlarda da kripto para piyasasında meydana gelen ani artışların, bu piyasaların getirilerinin yüksek olmasına ve yatırımcıların kripto para piyasalarına yönelmesine sebep olmuştur. Yatırımcılar için kıymetli metaller, geleneksel finansal varlıklar için en iyi portföy çeşitlendiricisi iken, kripto paraların yükselişe geçmesiyle birlikte bu piyasaların da portföy çeşitlendiricisi olup olamayacağı tartışma konusu olmuştur. Bundan dolayı çalışmada Bitcoin, Ethereum ve Litecoin kripto para birimleri ile altın, gümüş ve platin kıymetli metalleri arasındaki ilişki doğrusal olmayan eşbütünleşme analizi ile test edilmektedir. Çalışmada on beş ayrı model kurulmuş olup her bir kripto para birimi ile kıymetli metaller arasındaki ilişki tek tek incelenmektedir. Buna ek olarak kripto para birimlerinin de kendi aralarındaki ilişki incelenmektedir. Çalışmada öncelikle seriler KSS(2003) doğrusallık testi ile test edilmiştir. Akabinde doğrusal olmayan eşbütünleşme testi olan KSS (2006) ile çalışmaya devam edilmiştir. Elde edilen bulgulara göre, her bir kripto para birimi ile kıymetli metaller arasında uzun dönemli eşbütünleşme ilişkisi olduğu ve bu ilişkinin uzun dönem dengeye doğrusal olmayan bir şekilde yakınsadığı bulunmuştur. Ayrıca kripto paraların kendi arasında da uzun dönemli eşbütünleşme ilişkisi bulunmuş olup uzun dönem dengeye doğrusal olmayan bir şekilde yakınsadığı gözlenmektedir. Dolayısıyla kripto paraların portföy çeşitlendiricisi olarak kullanılamayacağı, kripto paralar ile kıymetli metallerin uzun dönemde birlikte doğrusal olmayan şekilde hareket ettiği sonucuna ulaşılmıştır.

**Keywords:** Bitcoin, Finansal Varlıklar, Kıymetli Metaller, KSS (2003) Doğrusallık Testi, KSS (2006) Doğrusal Olmayan Eşbütünleşme Testi

**JEL Codes:** C1, C10, G1, G10



# Analyzing the Environmental Phillips Curve: The Impact of Globalization, Economic Growth, and Institutional Quality on Load Capacity Factor in Highly Globalized European Countries

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## **Abstract**

This study investigates the validity of the Environmental Phillips Curve (EPC) hypothesis by examining the relationship between the unemployment rate (UR) and Load Capacity Factor (LCF) in the 10 most globalized European countries from 1996 to 2021. Utilizing modern econometric approaches such as the STIRPAT model and CS-ARDL methodology, the study evaluates the impact of economic growth (GDP), energy consumption (PEC), institutional quality (INQ), and globalization (KOF) on environmental sustainability. The findings provide robust evidence supporting the EPC hypothesis, indicating that higher unemployment rates positively impact LCF, thereby enhancing environmental quality. This effect is particularly evident in highly globalized nations such as Germany, Sweden, and Switzerland, where a decrease in economic activity leads to reduced environmental pressures. The results also reveal that economic growth has a detrimental long-term impact on LCF, underscoring the need for sustainable development policies. Additionally, energy consumption is found to contribute to environmental degradation, while strong institutional quality and globalization positively influence environmental sustainability. A unique contribution of this study is the inclusion of the interaction term  $UR*INQ$ , which reveals that institutional quality moderates the relationship between unemployment and environmental sustainability, further validating the EPC hypothesis. These findings offer significant insights for policymakers, emphasizing the importance of integrated strategies that address both economic and environmental objectives in the most globalized European countries.

**Keywords:** Environmental Phillips Curve, Load Capacity Factor, Unemployment Rate, Economic Growth, Institutional Quality, Globalization, CS-ARDL, STIRPAT Model

**JEL Codes:** Q56, O44, E24, F64, C33

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# **Çevresel Phillips Eğrisinin Analizi: Yüksek Düzeyde Küreselleşmiş Avrupa Ülkelerinde Küreselleşme, Ekonomik Büyüme ve Kurumsal Kalitenin Yük Kapasitesi Faktörü Üzerindeki Etkisi**

## **Özet**

Bu çalışma, 1996-2021 yılları arasında en küreselleşmiş 10 Avrupa ülkesinde işsizlik oranı (UR) ile Yük Kapasite Faktörü (LCF) arasındaki ilişkiyi inceleyerek Çevresel Phillips Eğrisi (EPC) hipotezinin geçerliliğini araştırmaktadır. STIRPAT modeli ve CS-ARDL metodolojisi gibi modern ekonometrik yaklaşımları kullanan çalışma, ekonomik büyüme (GSYH), enerji tüketimi (PEC), kurumsal kalite (INQ) ve küreselleşmenin (KOF) çevresel sürdürülebilirlik üzerindeki etkisini değerlendirmektedir. Bulgular, EPC hipotezini destekleyen sağlam kanıtlar sunmakta, daha yüksek işsizlik oranlarının LCF'yi olumlu yönde etkilediğini ve böylece çevresel kaliteyi artırdığını göstermektedir. Bu etki özellikle ekonomik faaliyetlerdeki azalmanın çevresel baskıların azalmasına yol açtığı Almanya, İsveç ve İsviçre gibi yüksek düzeyde küreselleşmiş ülkelerde belirgindir. Sonuçlar aynı zamanda ekonomik büyümenin LCF üzerinde uzun vadede zararlı bir etkisi olduğunu ortaya koymakta ve sürdürülebilir kalkınma politikalarına duyulan ihtiyacın altını çizmektedir. Ayrıca, enerji tüketiminin çevresel bozulmaya katkıda bulunduğu, güçlü kurumsal kalite ve küreselleşmenin ise çevresel sürdürülebilirliği olumlu yönde etkilediği tespit edilmiştir. Bu çalışmanın benzersiz bir katkısı, kurumsal kalitenin işsizlik ve çevresel sürdürülebilirlik arasındaki ilişkiyi ılımlı hale getirdiğini ortaya koyan ve EPC hipotezini daha da doğrulayan  $UR \cdot INQ$  etkileşim teriminin dahil edilmesidir. Bu bulgular, küreselleşmiş Avrupa ülkelerinde hem ekonomik hem de çevresel hedefleri ele alan entegre stratejilerin önemini vurgulayarak politika yapıcılar için önemli bilgiler sunmaktadır.

**Anahtar Kelimeler:** Çevresel Phillips Eğrisi, Yük Kapasite Faktörü, İşsizlik Oranı, Ekonomik Büyüme, Kurumsal Kalite, Küreselleşme, CS-ARDL, STIRPAT Modeli

**JEL Kodları:** Q56, O44, E24, F64, C33



## Determinants of Energy Security Risk in Turkey

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### Abstract

Energy security has recently become a national security issue and has gained great importance on a global scale. Especially with the Ukraine-Russia war, the possibility of Russian gas interruption has caused great concern in energy-dependent countries. In this period, Turkey acted as a bridge between Russia and European countries and ensured the transportation of Russian gas to Europe, but the sustainability of this situation is questionable. In addition to this, there is a constant war and instability in the south of Turkey. Therefore, the energy security of an energy-dependent country like Turkey is under threat. The current study analyzes the macroeconomic variables affecting Turkey's energy security. The fact that energy security has been discussed quite frequently in the recent period has led the literature to try to develop various methods to measure this security. For this purpose, the US Chamber of Commerce Global Energy Institute has started to publish energy security risk index scores on a global scale and its use in the literature has recently increased. The current study utilizes this index and analyzes the variables affecting Turkey's energy security during the 1980-2018 period. As a result of the ARDL analysis, it is found that urbanization and savings rate increase the energy security risk, while trade, total expenditures, CPI, FDI and exchange rate decrease it. After this stage, the effects of energy security on per capita income in the same period were analyzed. As a result of the analysis, it was determined that as the risk increases, per capita income decreases.

**Keywords:** Energy security, growth, Turkey.

**JEL Codes:** Q43, Q13

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## Türkiye’de Enerji Güvenliği Riskinin Belirleyicileri

### Özet

Enerji güvenliği son dönemde ulusal güvenlik meselesi haline gelmiş ve küresel ölçekte büyük önem kazanmıştır. Özellikle Ukrayna-Rusya savaşı ile beraber Rus gazının kesilme ihtimali enerjide dışa bağımlı ülkelerde büyük bir endişe oluşturmuştur. Bu dönemde Türkiye Rusya ile Avrupa ülkeleri arasında bir köprü görevi görerek Rus gazının Avrupa’ya taşınmasını sağlamışsa da bu durumun sürdürülebilirliği tartışmalıdır. Buna ek olarak Türkiye’nin güneyinde de sürekli olarak savaş ve istikrarsızlıklar devam etmektedir. Bu nedenle Türkiye gibi enerjide dışa bağımlı olan bir ülkenin enerji güvenliği tehlike altında kalmaktadır. Mevcut çalışma kapsamında Türkiye’nin enerji güvenliğini etkileyen makro ekonomik değişkenler incelenmiştir. Enerji güvenliğinin son dönemde oldukça sık konuşuluyor olması literatürde bu güvenliğin ölçülmesi amacıyla çeşitli yöntemler geliştirilmeye çalışılmasına neden olmuştur. ABD Ticaret Odası Küresel Enerji Enstitüsü bu amaç doğrultusunda küresel ölçekte enerji güvenliği risk endeksi puanları yayınlamaya başlamış ve alanda oluşan literatürde kullanımı son dönemde artmıştır. Mevcut çalışmada bu endeks kullanılmış ve 1980-2018 döneminde Türkiye’nin enerji güvenliğini etkileyen değişkenler incelenmiştir. Uygulanan ARDL analizi sonucunda şehirleşme ve tasarruf oranının enerji güvenliği riskini artırırken, ticaret, toplam harcamalar, TÜFE, FDI ve döviz kurunun düşürdüğü bulunmuştur. Bu aşamadan sonra aynı dönemde enerji güvenliğinin kişi başına düşen gelir üzerindeki etkileri incelenmiştir. Analiz sonucunda risk arttıkça kişi başına düşen gelirin düştüğü belirlenmiştir.

**Anahtar Kelimeler:** Enerji güvenliği, büyüme, Türkiye.

**JEL Kodları:** Q43, Q13



# The Effects of Geopolitical Risk on Investor Attention in Renewable Energy: Evidence from the Global Context and Türkiye

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## Abstract

The aim of this study is to reveal the impact of the geopolitical risks experienced globally since 2008 on investor attention to renewable energy both globally and in Turkey. First, it aims to reveal the impact of geopolitical risks on investor attention on a global scale, and then to reveal whether investors are affected by the recent geopolitical uncertainties in Turkey, especially the increasing use of renewable energy resources in accordance with the National Energy Policy adopted in 2017. In the econometric analysis, Diebold-Yilmaz (2012)'s connectedness approach is used, and a monthly investor attention variable is created through Google Trends with the keyword "renewable energy". In addition to the geopolitical risk index, the world uncertainty index is also included in the model. As a result of the analysis, it is concluded that the connectedness between variables is higher on a global scale than in Turkey. Moreover, in the long-run, global investor attention to renewable energy is more affected by geopolitical risk and the world uncertainty index than investors in Turkey, while in the short-run, investor attention in Turkey to renewable energy is more affected by geopolitical risk. Finally, while investor attention in Turkey do not affect the global geopolitical risk index during the Covid-19 period, investor attention in Turkey starts to affect the global geopolitical risk index more during the Russian-Ukrainian war. On the global scale, it is concluded that the global geopolitical risk index affects the global investor attention the most during the Russia-Ukraine war period and the Israeli invasion of Palestine.

**Keywords:** Geopolitical risk, uncertainty, investor attention, Türkiye.

**JEL Codes:** Q42, Q43, D81

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# Jeopolitik Riskin Yatırımcıların Yenilenebilir Enerjiye Olan İlgi Üzerindeki Etkileri: Küresel Düzeyde ve Türkiye'de Kanıtlar

## Özet

Bu çalışmanın amacı 2008 yılından itibaren küresel ölçekte yaşanan jeopolitik risklerin hem küresel ölçekte hem de Türkiye düzeyinde yatırımcıların yenilenebilir enerjiye olan dikkati üzerindeki etkisini ortaya koymaktır. İlk olarak, küresel ölçekte yaşanan jeopolitik risklerin küresel ölçekteki yatırımcıların dikkati üzerindeki etkisini, ardından Türkiye’de özellikle 2017 yılında kabul edilen Milli Enerji Politikası uyarınca artan yenilenebilir enerji kaynaklarının kullanımının son dönemlerde yaşanan jeopolitik belirsizliklerden yatırımcıların etkilenip etkilenmediğini ortaya koymak amaçlanmaktadır. Yapılan ekonometrik analizde Diebold-Yılmaz (2012)’in bağlantılılık analizi kullanılmış ve “renewable energy” anahtar kelimesi ile Google Trends aracılığıyla aylık yatırımcı dikkati değişkeni oluşturulmuştur. Jeopolitik risk endeksine ilave olarak dünya belirsizlik endeksi de modele dahil edilmiştir. Yapılan analizler sonucunda, küresel ölçekte değişkenler arası bağlantılılığın Türkiye’ye göre daha yüksek olduğu sonucuna ulaşılmıştır. Ayrıca, uzun dönemde küresel ölçekteki yatırımcıların yenilenebilir enerjiye olan dikkatinin Türkiye’deki yatırımcılara kıyasla jeopolitik riskten ve dünya belirsizlik endeksinden daha fazla etkilendiği, kısa dönemde ise, Türkiye’deki yatırımcıların yenilenebilir enerjiye olan dikkatinin jeopolitik riskten daha fazla etkilendiği sonucuna ulaşılmıştır. Son olarak, Türkiye’deki yatırımcı dikkati küresel jeopolitik risk endeksini Covid-19 döneminde etkilemezken, Rusya-Ukrayna savaşı ile birlikte Türkiye’deki yatırımcı dikkatinin, küresel jeopolitik risk endeksini daha fazla etkilemeye başladığı sonucuna ulaşılmıştır. Küresel ölçekte ise küresel jeopolitik risk endeksinin küresel ölçekteki yatırımcı dikkatini en fazla Rusya-Ukrayna savaşı döneminde ve İsrail’in Filistin’i işgalinde etkilediği sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** Jeopolitik risk, belirsizlik, yatırımcı dikkati, Türkiye.

**JEL Kodları:** Q42, Q43, D81



## Do Financial Innovation and Renewable Energy Consumption Improve Environmental Quality? Evidence from European Union Countries

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### **Abstract**

Empirical literature shows that financial innovations are one of the main drivers for the European Union (EU) to overcome environmental challenges and achieve sustainable development. This study investigates the long-run effects of financial innovations on carbon dioxide emissions (CO<sub>2</sub>) in the EU context. Westerlund cointegration and Dumitrescu and Hurlin causality analyses are used to examine the long-run effects of renewable energy and financial innovation on environmental quality in European Union countries, controlling for GDP and primary energy consumption. According to the results, (i) financial innovations and renewable energy consumption reduce environmental degradation in European Union countries; (ii) GDP and primary energy consumption increase (and cause) environmental degradation.

**Keywords:** Financial Innovation, Renewable Energy, Carbon Dioxide Emissions, EU Countries

**JEL Codes:** G21 · E40 · Q52 · C33 · C31



## Finansal İnovasyon ve Yenilenebilir Enerji Tüketimi Çevresel Kaliteyi İyileştiriyor mu? Avrupa Birliği Ülkelerinden Kanıtlar

### Özet

Ampirik literatür, Avrupa Birliği'nin (AB) çevresel zorlukların üstesinden gelmek ve sürdürülebilir kalkınmayı sağlamak için finansal yenilikleri kullanma konusunda başlıca faktörlerden biri olduğunu göstermektedir. Bu çalışma, AB bağlamında finansal yeniliklerin karbondioksit emisyonları (CO<sub>2</sub>) üzerindeki uzun dönem etkilerini araştırmaktadır. Bu çalışmada Westerlund eşbütünleşme ve Dumitrescu ve Hurlin nedensellik analizleri kullanılarak Avrupa Birliği ülkelerinde yenilenebilir enerji ve finansal yeniliklerin çevresel kalite üzerindeki uzun vadeli etkileri GSYİH ve birincil enerji tüketimi kontrol edilerek incelenmiştir. Sonuçlara göre, (i) finansal yenilikler ve yenilenebilir enerji tüketimi Avrupa Birliği ülkelerinde çevresel bozulmayı azaltmakta; (ii) GSYİH ve birincil enerji kullanımı çevresel bozulmayı artırmaktadır (ve buna neden olmaktadır).

**Anahtar Kelimeler:** finansal inovasyon, yenilenebilir enerji, çevresel, Karbondioksit Emisyonları

**JEL Kodları:** G21 · E40 · Q52 · C33 · C31



# The Impact of the Additional Six-Point Regional Insurance Premium Subsidy on Employment and Formality

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## **Abstract**

This study examines the impact of a subsidy program that had been put into practice since 2013 on employment and the rate of formality. According to this program, labor costs were reduced by subsidizing social security contribution rates in cities with low socioeconomic development status. Thus, some of the cities/regions in Türkiye constituted a potential experimental group and rest of the cities formed a potential control group. Samsun, a province in the TR-83 region, is not among the provinces that can benefit from regional incentives, while Tokat, Çorum and Amasya in the same region could benefit from this incentive. All provinces in the TR-90 region were able to benefit from this incentive. Samsun, which corresponds to approximately half of the TR-83 region in terms of both population and economic size, has reduced this region to a potential control group. The impact of the regional subsidy on the labor market was estimated using the Household Labor Force Survey annual datasets and the difference-in-differences method. The lower-bound results of the analysis show that the regional subsidy program on non-agricultural employment was positive and statistically significant. The positive effect on non-agricultural employment was observed in the regression results for men and women.

**Keywords:** Employment, Employment incentives, Difference in differences

**JEL Codes:** J08, J18, J23



## **İlave 6 Puanlık Bölgesel Sigorta Prim Teşvikinin İstihdama ve Kayıtlılığa Etkisi**

### **Özet**

Bu çalışma, 2013 yılından itibaren uygulamaya konulan bir sübvansiyon teşvik istihdam ve kayıtlılık oranı üzerindeki etkisini incelemektedir. Bu programa göre, sosyoekonomik gelişmişlik düzeyi düşük illerde sosyal güvenlik prim oranları sübvansiyon edilerek işgücü maliyetleri azaltılmıştır. Böylece, Türkiye'deki bazı şehirler/bölgeler potansiyel bir deney grubu, geriye kalan iller ise potansiyel bir kontrol grubu oluşturmuştur. TR-83 bölgesinde yer alan Samsun ili bölgesel teşviklerden yararlanabilecek iller arasında yer almazken, aynı bölgede yer alan Tokat, Çorum ve Amasya bu teşvikten yararlanabilmiştir. TR-90 bölgesindeki tüm iller bu teşvikten yararlanabilmiştir. Samsun'un hem nüfus hem de ekonomik büyüklük açısından TR-83 bölgesinin yaklaşık yarısına tekabül etmesi, bu bölgeyi potansiyel bir kontrol grubuna indirgemıştır. Bölgesel sübvansiyonun işgücü piyasası üzerindeki etkisi Hanehalkı İşgücü Anketi yıllık veri setleri ve farklar içinde fark yöntemi kullanılarak tahmin edilmiştir. Alt-sınır tahminlerini içeren analiz sonuçları, bölgesel sübvansiyon programının tarım dışı istihdam üzerindeki etkisinin pozitif ve istatistiksel olarak anlamlı olduğunu göstermektedir. Tarım dışı istihdam üzerindeki pozitif etki, erkekler ve kadınlar için regresyon sonuçlarında gözlemlenmiştir.

**Anahtar Kelimeler:** İstihdam, İstihdam teşvikleri, Farkların farkı

**JEL Kodları:** J08, J18, J23



# The Economic Effects of E-Commerce in Türkiye from a Regional and Sectoral Perspective

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## Abstract

This paper investigates impact of the rapid rise of digitalization on regional economic growth in Türkiye through e-commerce. Türkiye's Information and Communication Technologies (ICT) index, calculated by the United Nations International Telecommunication Union, was 87.5 in 2024. Türkiye ranks 61st out of 169 countries, with its index value below the average of high-income countries (91.7). Although e-commerce can be conducted regardless of time and place, provinces with higher economic development and ICT index have higher adaptation and volume of e-commerce. This study examines the impact of e-commerce on regional economic growth in Türkiye between 2021 and 2022. In contrast to studies that explore the impact of e-commerce on economic growth at regional and sectoral levels, this study selected 12 sectors that involve product sales. Sectors that require rapid delivery, such as markets, food, and supermarkets, as well as sectors limited to public payments, coupons, and similar expenditures, were excluded. Previous studies at regional and sectoral levels have typically focused on specific sectors and have not utilized a sufficient range of variables. There is no study for Türkiye that considers sectors at the provincial level. In the study, per capita gross domestic product (GDP) was used as the dependent variable, while independent variables included e-commerce volume (%GDP), total exports (%GDP), population density, labor force participation rate, ICT index, credit card usage rate, public expenditure (%GDP), credit card usage rate, and deposit rate. The study concluded that e-commerce positively contributes to regional economic growth.

**Keywords:** e-commerce, regional economy, digitalization, economic growth, information and communication technologies

**JEL Codes:** R11, R15

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<sup>150</sup> This study is derived from the doctoral thesis conducted in the Department of Urban and Regional Planning at Istanbul Technical University.

## Bölgesel ve Sektörel Perspektiften Türkiye’de E-Ticaretin Ekonomik Etkileri

### Özet

Bu makale, dijitalleşmenin hızla yayılmasıyla birlikte Türkiye’de e-ticaretin bölgesel ekonomik büyümeye etkilerini incelemektedir. Türkiye’nin Birleşmiş Milletler Uluslararası Telekomünikasyon Birliği tarafından hesaplanan bilgi iletişim teknolojileri (BİT) endeksi 2024 yılında 87,5’dir. Türkiye 169 ülke arasında 61. sırada yer alırken endeks değeri yüksek gelir seviyesine sahip ülkelerin ortalamasının aşağısındadır (91,7). E-ticaret zaman ve mekâna bağlı olmaksızın her yerde yapılabiliyor olmasına karşın ekonomik gelişimi ve BİT endeksi yüksek olan illerin e-ticarete adaptasyonu ve e-ticaret hacmi daha yüksektir. Çalışmada Türkiye’de 2021-2022 yılları arasında e-ticaretin bölgesel ekonomik büyümeye etkisi incelenmiştir. Bölge ve sektör düzeyinde yapılmış e-ticaretin ekonomik büyümeye etkisini inceleyen çalışmalardan farklı olarak, ürün satan 12 sektör seçilmiştir. Hızlı teslimat içeren market, gıda ve süpermarket ile yalnızca kamu ödemeler, kupon vd. gibi harcamaların yapıldığı sektörler dışarıda bırakılmıştır. Bölge ve sektör düzeyinde yapılan çalışmalar; belirli sektörlerle odaklanmıştır ve kullanılan değişkenler yeterli değildir. Türkiye için yapılmış il düzeyinde ve sektörleri dikkate alan çalışma bulunmamaktadır. Çalışmada bağımlı değişken olarak kişi başı gayri safi yurtiçi hasıla; bağımsız değişkenlerde ise e-ticaret hacmi (%GSYH), toplam ihracat (%GSYH), nüfus yoğunluğu, işgücüne katılma oranı, bilgi iletişim teknolojileri endeksi, kredi kartı kullanım oranı, kamu harcaması (%GSYH), kredi kartı kullanım oranı ve mevduat oranı değişkenleri kullanılmıştır. Çalışmanın sonucunda e-ticaretin bölgesel ekonomik büyümeye katkısının olumlu olduğu tespit edilmiştir.

**Anahtar Kelimeler:** e-ticaret, bölgesel ekonomi, dijitalleşme, ekonomik büyüme, bilgi iletişim teknolojileri  
**JEL Kodları:** R11, R15



## Taşra Üniversitelerinin Bölgesel Ekonomik Etkisi: Muğla Üniversitesi Örneği

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### Özet

Weberian anlamda kent, bireylerin bağımsız hukuk içerisinde ticari ve sosyal alanlarda iktidarların seçimle el değiştirdiği yerler olarak tanımlanır. Kentler belirli kurumlara da ev sahipliği yapar. Üniversiteler kent kültürünü etkileyen temel odaklardan biridir. Kent cübbe ilişkisi akademik alanla kent ilişkilerinin örüntüsünü anlatır. Ülkemizde kentlerde ekonomik yaşam kuruluş yıllarından itibaren özellikle garnizon ve askeri yerleşim temelli olmuştur. Böylelikle küçük Anadolu kentlerine bir refah aktarımı yaratılmıştır. Kentleşme Cumhuriyet döneminde bu şekilde olmuştur. Türkiye’de üniversiteleşme özellikle Süleyman Demirel hükümetleri sonrasında artmış son yirmi yılda ise ciddi anlamda her kentte bir üniversite açılmıştır. Ticari aktivitenin sınırlı olduğu az nüfuslu kentlerde kent dışından on binlerce gencin belirli bir süre için eğitim amaçlı gelmesi orada ciddi bir yapısal değişim ve dönüşüm yaratmıştır. Burada kurulan üniversiteler iki yönden kentte ekonomik refahta değişim yaratır. İlk olarak personel maaşları, cari ve inşaat harcamaları ile o kentte yatırım ve tüketim harcamaları, çarpan ve hızlandırıcı etkisi ile bir bölgesel gelir artışı yaratılır. Diğer taraftan kent dışından gelen öğrenciler ticari hayatta ciddi bir canlanma yaratır. Muğla Üniversitesi kurulduğu 1992 yılından itibaren personel istihdamı, yatırım bütçesi, bağışçılar ve sürekli sayısı artan öğrencilerin yaptıkları harcamalar ile kent ekonomisine yüksek ölçekte bir katkı sağlamaktadır. Yapılan ekonomik katkı bölgesel fert başına milli gelirde yıllık değişimden gayet açık bir şekilde görülmektedir. Bu çalışmada ilk olarak Üniversitenin kuruluşundan itibaren kamu ve özel sektör vasıtası ile yapılan yatırım harcamaları ve personel harcamaları özetlenecek ve ardından bu harcamaların kent ekonomisine katkısı analiz edilmeye çalışılacaktır.

**Anahtar Kelimeler:** Kent ekonomisi. Türk Üniversiteleri, Muğla

**JEL Kodları:** R11, P43



## Hand-To-Mouth Households in Türkiye: Evidence from Household Finance and Consumption Survey

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### Abstract

Households categorized as "hand-to-mouth" (HtM) exhibit significantly high marginal propensity to consume, indicating a consumption behavior that is particularly responsive to short-term income fluctuations and external shocks. This sensitivity to changes in income is prominent among low-income households, which often lack substantial savings and are therefore compelled to adjust their consumption levels in response to income variations. These households, often referred to as "poor hand-to-mouth," rely heavily on immediate income for their daily needs. There exists another category known as "wealthy hand-to-mouth." Unlike the former, these households possess significant illiquid assets such as real estate but have limited liquid wealth to buffer against unexpected income drops. Consequently, optimizing long-term returns on illiquid assets becomes a priority for them, as opposed to holding large balances of low-return liquid assets. This paper analyzes HtM households using Central Bank of the Republic of Türkiye Household Finance and Consumption Survey (CBRT-HFCS) data. We aim to identify poor and wealthy HtM households in the country. Empirical findings show that 66.7% of households are HtM, and 80.9% of which can also be categorized as wealthy. We find that while more than half of wealthy HtM households hold both housing and other forms of illiquid wealth, a small portion holds only housing wealth. Evidence also shows that home ownership status across age and income is similar for wealthy and non-HtM households. On the other hand, wealthy HtM households have higher amounts of labor and pension income than non-HtM households.

**Keywords:** Hand-to-mouth households, liquidity constraint, household wealth.

**JEL Codes:** D12, D15, E21



## Analyzing Gold as a Saving Instrument through Household Budget Survey: “Altın Günü” in the Economy

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### Abstract

The existing applied literature about Türkiye posits that the household saving is closely associated with the household head's age, education level, and the households' income level. Moreover, there is a significant cultural backdrop when it comes to the importance of gold for Turkish household portfolio choice. The aim of this study is to investigate the consistency between gold savings and domestic and global economic developments through the micro data set of household budget statistics for 2019 and 2022. In addition to this dataset, macroeconomic indicators are also used to help analyze the household saving tendency. Moreover, changes between these two years and the effects of macroeconomic variables on gold savings are analyzed through cross-sectional data analysis. In this context, gold saving preferences of households by income groups and the relationship between these choices and macroeconomic indicators are analyzed. Understanding households' preferences for saving instruments, especially gold, across different income groups in Turkey will help to understand the transmission of economic policies in more detail. Moreover, this study will be enlightening in understanding the importance of gold as a savings instrument in the Turkish economy beyond cultural demand and in developing new financial instruments.

**Keywords:** Household Budget Survey, Savings, Gold.

**JEL Codes:** D14, E21, G1

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## Revenge Consumption and Financial Behavior Post-Crisis: The Role of Saving Incentives and Risk Tolerance

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### Abstract

This study investigates the economic impact of health-related crises, such as the Covid-19 pandemic, on consumer behavior, with a focus on revenge consumption of hedonic products. We explore how saving incentives mediate the relationship between crises and consumer behavior, and how individual risk tolerance moderates this relationship. By analyzing these interrelated factors, we aim to clarify how such crises influence financial and consumption decisions in the aftermath. Our findings indicate that crises prompt individuals to reassess their financial strategies, with saving incentives playing a crucial role in this adjustment process. Additionally, we examine how risk tolerance affects the relationship between health crises and both savings behavior and revenge consumption, particularly with regard to hedonic goods. This research addresses a critical gap in understanding the long-term economic effects of health crises. It offers valuable insights for financial institutions, policymakers, and businesses, helping them develop targeted economic interventions, optimize resource allocation, and strengthen consumer resilience. Retailers of hedonic products can leverage these insights to better forecast demand and manage supply chains during recovery phases, ensuring they effectively meet consumer needs.

**Keywords:** Risk Tolerance, Saving Incentive, Health-Crises, Hedonic Product, Revenge Consumption, Post-Crisis Recovery, Financial Decision-Making.

**JEL Codes:** E21, D14, D81

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## Socio-Economic Determinants of Household Consumption Expenditures in Türkiye

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### Abstract

Household consumption expenditures that influences both short-term macroeconomic goals and for long-term total factor productivity perspective like education, health, and cultural expenditures is among critical economic indicators for Turkish economy. However, existing literature for Turkish economy analyze household consumption using insufficient time span or lack of theoretical framework. The aim of this study is to reveal the socio-economic determinants of household consumption expenditures via Marshallian demand function for the years between 2005 and 2019. Different components of Household Budget Surveys and data of regional consumer price index are merged to construct dataset of the study. Although we use a broad variable set of socio-economic determinants, we intend to focus on household age, household education level and household size which represent recent demographic transition in Türkiye. Understanding the socio-economic determinants of household consumption behavior will be of critical benefit in managing demand in a sustainable way. Moreover, with the help of population projections, this study will be enlightening in interpreting future demand conditions of subcategories of household consumption.

**Keywords:** Household Budget Survey, Household Consumption, Demographic Transition.

**JEL Codes:** C81, D12, D91





## Analysis of Disinflationary Policies in Turkey within the Framework of Inflation Theories by ARDL Bounds Test

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### Abstract

In this study, inflation structure was analyzed with macroeconomic indicators and ARDL Bounds test with monthly data obtained between 2010-2022 in Turkey. According to the test results, the variables are cointegrated. In the long and short run results, only a positive and significant relationship is observed between inflation and the policy rate. This result could not be interpreted with the Fisher Effect. On the other hand, according to the Neo-Fisher effect, expected and actual inflation should fall as interest rates are decreased. In this respect, the situation in Turkey could not be explained by these two approaches. The other results show that although inflation and unemployment, current account deficit and direct investments are cointegrated, there is no relationship in the long and short run. In countries like Turkey, with complex economic dynamics and high external dependence, the situation in a variable cannot be explained by a single reason. Therefore, it can be that other factors are also involved in the increase in inflation when interest rates fall. In Turkey, fiscal policies should be prioritized and monetary policies should be formulated accordingly before focusing on external factors.

**Keywords:** Inflation, Policy Rate, Unemployment Rate, Current Account Deficit, Direct Investments, ARDL Boundary Test

**JEL Codes:** C12, E24, E3, E40, E52

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## Does the Inverse Interest Rate-Investment Nexus Hold in the USA?

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### Abstract

One of the most widely held beliefs in macroeconomics is that there is an inverse relationship between interest rates and investment. However, the ambiguous results of empirical studies in this area raise question marks about the validity of this belief. This study attempts to shed light on the controversial findings on the interest rate-investment nexus. A thorough investigation of the determinants of private investment suggests that it is crucially important to decompose the related series into permanent and transitory components and model their dual co-movements as suggested by the novel Dual Adjustment Approach (DAA). By using the Dual Adjustment Approach and considering the crucial role of expectations, we argue that while the monetary authorities may affect the investment spending via the expected (permanent) component of interest rate in line with the conventional view, its transitory component may yield different effects. By integrating the DAA with ARDL technique, our empirical analysis on U.S. private fixed investment, over the period 1967-2022, confirms this argument.

**Keywords:** Private fixed investment, Expectations, Dual Adjustment approach, ARDL.

**JEL Codes:** E22, C1

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## Türkiye's Economic Trilemma: Inflation, Inequality, and Growth

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**Bilge Çipe**

### Abstract

The relationship between inflation, income inequality, and economic growth is a subject of intense debate among economic researchers and policymakers. This study aims to analyze this relationship in Türkiye. The unconventional monetary policy and artificial interest rate cuts implemented in recent years have exacerbated existing economic imbalances in the country. The research will investigate the causal relationship between economic growth and income inequality, as well as between economic growth and inflation in the Turkish context. It is hypothesized that the expansionary monetary policy has disproportionately benefited wealthy individuals with access to financial resources, leading to increased income inequality. This concentration of wealth has fueled consumption, contributing to persistent inflation and demand-side pressures. Moreover, the study will explore the impact of tight monetary policy and increased interest rates on the behavior of wealthy individuals and its influence on inflation inertia. By examining these interconnections, the study seeks to provide insights into the complex dynamics driving inflation, income inequality, and economic growth in Türkiye. Based on the findings, the research will propose policy recommendations aimed at mitigating the negative consequences of these imbalances. These recommendations may include redistribution policies, social safety nets, promoting inclusive economic growth, coordinating effective monetary and fiscal policies, implementing progressive taxation, and reforming the labor market. The objective is to develop a comprehensive policy framework that addresses the root causes of inflation and income inequality while fostering sustainable economic growth in Türkiye.

**Keywords:** interest rates, wealth inequality, demand-side inflation, inflation inertia

**JEL Codes:** E31, E62, O44, E58



## Spillover effects of contract farming

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### Abstract

This study examines for the first time the impact of contract farming on non-contracted crops (barley and wheat). For the data set of the study, 304 face-to-face surveys were conducted with farmers in 11 districts of Konya province. A total of 438 observations were obtained from the surveys, 184 of which were for barley and 254 for wheat. Stochastic Frontier Analysis findings showed that contract farming increases efficiency for both barley and wheat. Analyses also show that some demographic, farming and soil related factors (age, education, disaster, delay in harvest, ownership of agricultural equipment, stony soil and hilly slopes) also have impact on the efficiency of barley and wheat.

**Keywords:** Contract farming, efficiency, crop production

**JEL Codes:** D86, D61, Q12

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## Sözleşmeli Tarımın Yayılma Etkileri

### Özet

Bu çalışma, sözleşmeli tarımın sözleşmesiz ürünler (arpa ve buğday) üzerindeki etkisini ilk kez incelemektedir. Çalışmanın veri seti için Konya ilinin 11 ilçesindeki çiftçilerle 304 yüz yüze anket yapılmıştır. Anketlerden 184'ü arpa ve 254'ü buğday olmak üzere toplam 438 gözlem elde edilmiştir. Stokastik Sınır Analizi bulguları, sözleşmeli tarımın hem arpa hem de buğday için verimliliği artırdığını göstermiştir. Analizler ayrıca bazı demografik, tarım ve toprakla ilgili faktörlerin (yaş, eğitim, afet, hasatta gecikme, tarımsal ekipman sahipliği, taşlı toprak ve eğimli araziler) de arpa ve buğdayın verimliliği üzerinde etkisi olduğunu göstermektedir.

**Anahtar Kelimeler:** Sözleşmeli tarım, verimlilik, bitkisel üretim

**JEL Kodları:** D86, D61, Q12



# The Effect of Agricultural Foreign Trade on Sectoral Growth in Turkey

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## Abstract

In Türkiye, which has large agricultural lands, the share of the agricultural sector in GDP decreased from 10% in 2000 to 4.4% in 2023. In the same period, Türkiye's rural population decreased from 35% to 23%. Developments in the economy have not been reflected in the agricultural sector, and structural problems in the sector have brought along the problem of contraction of agricultural production. According to the farmer registration system, there are approximately 2 million farmers in Turkey. However, the number of actively insured farmers is approximately 500 thousand. In addition, the average age of the active population working in agriculture is 58 according to TZOB records, which is quite high. The fact that urban life is much more attractive, the income obtained in the industrial and service sectors in cities is much higher, and the opportunity to access education, health and cultural opportunities in urban life have driven people away from rural life in Türkiye. On the other hand, actors such as intermediaries, traders and exporters in agricultural markets are price determinants, and agricultural producers cannot get the real value of their production. In the inflationary process experienced in Türkiye since 2018, the continuous increases in input prices, combined with factors such as global climate change, food inflation has become the main problem of the economy. Decreases in agricultural production have also been effective in increasing imports in this sector. Türkiye, which was once considered an exporter of agricultural products, has moved away from this position. Throughout the 2000s, imports remained above exports. In this study, the effects of agricultural exports and imports on sectoral growth in Türkiye will be examined. Economic development in the agricultural sector will be discussed in terms of the data of the last 18 years and the impact of these economic variables on the sector will be analyzed within the framework of the Frouier ARDL model.

**Keywords:** Agricultural Foreign Trade, Agricultural GDP  
**JEL Codes:** Q17, O13

## Türkiye’de Tarımsal Dış Ticaretin Sektörel Büyümeye Etkisi

### Özet

Geniş tarım topraklarına sahip Türkiye’de tarım sektörünün GSYİH içerisindeki payı 2000 yılında %10 seviyesinde iken 2023’te %4,4 seviyesine gerilemiştir. Aynı dönemde kırsal nüfusta %35’ten %23’e düşmüştür. Ekonomideki gelişmeler tarım sektörüne yansımamış, sektördeki yapısal problemler tarımsal üretimin giderek daralması sorununu da beraberinde getirmiştir. Türkiye’de çiftçi kayıt sistemine göre yaklaşık 2 milyon çiftçi bulunmaktadır. Ancak aktif sigortalı çiftçi sayısı ise yaklaşık 500bin kadardır. Ayrıca tarımda çalışan aktif nüfusta yaş ortalaması ise TZOB kayıtlarına göre 58 olup oldukça yüksektir. Kent yaşamının çok daha cazip olması kentlerde sanayi ve hizmet sektöründe elde edilen gelirin çok daha yüksek olması, kent yaşamındaki eğitim, sağlık ve kültürel olanaklara erişim imkanı insanları Türkiye’de kır yaşamından uzaklaştırmıştır. Diğer taraftan tarım piyasalarında aracılar, tüccarlar, ihracatçılar gibi aktörler fiyat belirleyici olmakta, tarımsal üretici üretimlerinin gerçek karşılığını alamamaktadır. Türkiye’de 2018’den bu yana yaşanan enflasyonist süreçte girdi fiyatlarındaki sürekli artışlar, küresel iklim değişimi gibi faktörlerle de birleşince gıda enflasyonu ekonominin başat sorunları haline gelmiştir. Üretimde yaşanan sorunlar ithalatı da beraberinde getirmektedir. Geçmişte tarım ürünleri ihracatçısı olarak tanımlanan Türkiye bu konumundan hızlı bir şekilde uzaklaşmıştır. 2000’li yıllar boyunca ithalat ihracatın üzerinde seyretmiştir. Bu çalışmada Türkiye’de tarım sektörünün ihracat ve ithalat potansiyelinin sektörel büyümeye etkisi incelenecektir. Tarım sektöründeki iktisadi gelişme son 18 yıllık veriler itibari ile ele alınacak ve bu iktisadi değişkenlerin sektöre etkisi Frouier ARDL modeli çerçevesinde analiz edilecektir.

**Anahtar Kelimeler:** Tarımsal Dış Ticaret, Tarımsal GSYİH

**JEL Kodları:** Q17, O13



## Impact of Climate Change on the Agriculture Sector: An Empirical Analysis

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### Abstract

While the increase in production volume with industrialization and technological progress increases economic growth, it creates negative externalities by causing serious damage to the environment. Environmental pollution and climate change, which have become global problems, have reached a level that threatens country economies. Climate change significantly affects many areas such as health, tourism and environment, especially the agriculture sector. Countries can be affected by climate change at different levels depending on their characteristics. Many studies have revealed that climate change has significant impacts on the agriculture sector, threatening food security, especially in developing countries. These countries are particularly vulnerable to the impacts of climate change in the areas of agricultural productivity and food security. The change in climate creates extreme changes in temperature and precipitation, and the resulting extreme temperature and precipitation conditions can significantly affect agricultural production. This situation may reduce economic output by negatively affecting agricultural added value. In this study, the impact of climate change on the agricultural sector in developing G20 countries for the period 1990-2022 is analyzed using Panel Data Analysis. In order to reduce the negative effects of climate change on the agriculture sector all over the world, studies should be carried out to make the agriculture sector less dependent on climate changes by making use of technological advances and the sensitivity of this sector to climate change should be reduced.

**Keywords:** Climate Change, Agriculture Sector, Panel Data Analysis.

**JEL Codes:** Q18, Q54, O13

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# İklim Değişikliğinin Tarım Sektörü Üzerine Etkisi: Ampirik Bir Analiz

## Özet

Sanayileşme ve teknolojik ilerlemeyle birlikte üretim hacminin artması ekonomik büyümeyi artırırken çevreye ciddi zararlar vererek olumsuz dışsallıklar yaratmaktadır. Küresel sorunlar haline gelen çevre kirliliği ve iklim değişikliği ülke ekonomilerini tehdit eder dereceye ulaşmıştır. İklim değişikliği, tarım sektörü başta olmak üzere sağlık, turizm ve çevre gibi birçok alanı önemli ölçüde etkilemektedir. Ülkeler sahip oldukları özelliklere bağlı olarak iklim değişikliğinden farklı düzeylerde etkilenebilmektedir. Birçok araştırma, iklim değişikliğinin özellikle gelişmekte olan ülkelerde gıda güvenliğini tehdit eden tarım sektörü üzerinde önemli etkiler yarattığını ortaya koymuştur. Bu ülkeler, özellikle tarımsal üretkenlik ve gıda güvenliği alanlarında iklim değişikliğinin etkilerine karşı savunmasız durumdadır. İklimde meydana gelen değişim, sıcaklık ve yağışta ekstrem değişiklikler yaratmakta ve ortaya çıkan aşırı sıcaklık ve aşırı yağış durumları tarımsal üretimi önemli ölçüde etkileyebilmektedir. Bu durum tarımsal katma değeri olumsuz etkileyerek ekonomik çıktıyı azaltabilmektedir. Bu çalışmada, 1990-2022 dönemi için gelişmekte olan G20 ülkelerinde iklim değişikliğinin tarım sektörü üzerindeki etkisi Panel Veri Analizi kullanılarak analiz edilmektedir. Tüm dünyada iklim değişikliğinin tarım sektörü üzerindeki olumsuz etkilerini azaltabilmek için, teknolojik ilerlemelerden de yararlanılarak tarım sektörünün iklim değişikliklerine daha az bağımlı hale getirecek çalışmalar yapılmalı ve bu sektörün iklim değişikliğine duyarlılığı azaltılmalıdır.

**Anahtar Kelimeler:** İklim Değişikliği, Tarım Sektörü, Panel Veri Analizi

**JEL Kodları:** Q18, Q54, O13



## Is There Asymmetric Price Transmission in the Animal Feed Industry in Turkey? NARDL Approach

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### Abstract

Global food supply chains are at risk of disruption from many different types of shocks, including conflict, climate vulnerability, human and animal diseases, financial shocks and natural disasters. Recent major events such as the COVID-19 pandemic, the war in Ukraine and extreme weather events linked to climate change have exposed structural vulnerabilities in food supply chains. This has led to both higher food prices and problems with access to food. The FAO Food Price Index, which tracks monthly changes in the international prices of a range of globally traded food commodities, rose until the first quarter of 2022 and then started to decline. In contrast, food prices in Turkey have been increasing continuously since 2020, the year of the Covid-19 outbreak, in a negative divergence from the FAO Food Price Index. In discussions on what factors have led to this dramatic increase in the prices of animal food such as red meat and milk in Turkey, feed costs are emphasized. This is because animal feed is the largest cost item in cattle breeding and fattening. Feeds constitute approximately 50-70% of operating input costs in animal production. This study aims to assess how and to what extent positive and negative price shocks in raw material and input prices affect the final price of these feeds in the production of fattening and dairy feed, which are widely used in cattle breeding and fattening in Turkey for the period 2011-2023. For this purpose, the Nonlinear Lag Distributed Autoregressive Model (NARDL) is used in the econometric analysis of the study. To the best of our knowledge, our study is the first study on asymmetric price transmission in the compound feed industry in Turkey using the NARDL model. The findings of the study reveal that there is an asymmetric cointegration relationship between raw materials and inputs used in the production of both fattening feed and dairy feed.

**Keywords:** Animal feed, Asymmetric Price Transmission Mechanism, NARDL.

**JEL Codes:** Q10, C10, C39

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## Türkiye’de Hayvan Yemi Endüstrisinde Asimetrik Fiyat İletimi Var mı? NARDL Yaklaşımı

### Özet

Küresel gıda tedarik zincirleri, çatışma, iklim kırılganlığı, insan ve hayvan hastalıkları, finansal şoklar ve doğal felaketler dâhil olmak üzere birçok farklı şok türünden dolayı kesintiye uğrama riskiyle karşı karşıyadır. Yakın zamanda yaşanan COVID-19 salgını, Ukrayna'daki savaş, iklim değişikliğine bağlı aşırı hava olayları gibi önemli olaylar gıda tedarik zincirlerindeki yapısal kırılganlıkları ortaya çıkarmıştır. Buna bağlı olarak hem gıda fiyatlarının yükselmesine hem de gıdaya erişim ile ilgili sorunlara yol açmıştır. Dünya genelinde ticareti yapılan bir dizi gıda ürününün uluslararası fiyatlarındaki aylık değişimleri izleyen FAO Gıda Fiyat Endeksi 2022 yılının birinci çeyreğine kadar yükseldikten sonra düşme eğilimine girmiştir. Buna karşılık, Türkiye’de gıda fiyatları, FAO Gıda Fiyat endeksinden negatif ayrışarak Covid-19 salgınının ortaya çıktığı 2020 yılından bu yana aralıksız olarak artmaya devam etmektedir. Türkiye’de kırmızı et ve süt gibi hayvansal gıda fiyatlarındaki söz konusu dramatik artışa hangi faktörlerin yol açtığına ilişkin tartışmalarda yem maliyetleri ön plana çıkarılmaktadır. Bunun nedeni, hayvansal yemlerin büyükbaş hayvan yetiştiriciliği ve besiciliğinde en büyük maliyet kalemi olmasıdır. Yemler, hayvansal üretimde işletme girdi maliyetlerinin yaklaşık olarak %50-70’ini oluşturmaktadır. Bu çalışma, 2013-2023 dönemi için Türkiye’de büyükbaş hayvan yetiştiriciliği ve besiciliğinde yoğun olarak kullanılan besi ve süt yeminin üretiminde, hammadde ve girdi fiyatlarında meydana gelen pozitif ve negatif fiyat şoklarının söz konusu yemlerin nihai fiyatını nasıl ve ne ölçüde etkilediğini değerlendirmeyi amaçlamaktadır. Bu amaçla, çalışmanın ekonometrik analizinde Doğrusal Olmayan Gecikmesi Dağıtılmış Otoregresif Model (NARDL) kullanılmıştır. Bildiğimiz kadarıyla, çalışmamız NARDL modelini kullanarak Türkiye’de karma yem endüstrisi ile ilgili asimetrik fiyat iletimi üzerine yapılan ilk çalışmadır. Çalışmanın bulguları, hem besi yemi hem de süt yemi ile üretimde kullanılan hammadde ve girdiler arasında asimetrik eşbütünleşme ilişkisinin olduğunu ortaya koymaktadır.

**Anahtar Kelimeler:** Hayvan yemi, Asimetrik fiyat iletimi mekanizması, NARDL.

**JEL Kodları:** Q10, C10, C39



## Prospects for Logistics and Transportation Education in Turkey and Greece

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### Abstract

This paper proposes a comprehensive analysis of the current landscape of logistics and transportation education in Turkey and Greece, examining how each country prepares future professionals in alignment with emerging industry trends and technological advancements. The study aims to identify the similarities and differences in educational approaches and curricula, assess alignment with future labour market demands, and suggest enhancements to foster regional competitiveness and sustainability. Additionally, the paper examines the supportive frameworks and research activities that accompany educational programs, with the goal of understanding how these structures enhance preparedness and innovation in the logistics and transportation industries. This includes an assessment of alliances with the private sector, government support, and international collaborations that enhance learning and research opportunities. The findings aim to suggest improvements that could enhance regional competitiveness and sustainability in the global logistics arena. This study contributes to the continued improvement of higher education and research development strategies in line with future industry needs and prospects.

**Keywords:** Comparative Education Analysis, Logistics Industry Trends, Educational Innovation and Sustainability

**JEL Codes:** I21 – I23 – L91

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## Complexity management inspired by nature for managing existential risk in the economy and in transportation

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### **Abstract**

The economy and its sectors like transportation are complex systems. They are widely self-organizing, showing nonlinear dynamic feedback mechanisms which include phase transitions and bifurcations so that deterministic forecasts are not possible. Neo-classical economic theory, which was the mainstream of economic thinking in the past, abstracts from complexity and is still the base of applied assessment concepts like cost-benefit analysis. This paper introduces complexity theory starting with the work of Nobel Prize laureates in physics of 2021. It analyzes the complexity characteristics of economic and transportation systems and the shortcomings with respect to the treatment of existential risk. This holds particularly for the climate risk. It will be shown that some processes in nature give metaphors for essential principles. This includes the strict observation of constraints and the development of innovative concepts within a sustainability space. A famous example from nature is the folding of proteins towards a native state.

**Keywords:** complex systems, complex phenomena in nature, existential risk, constraint perception, folding processes, lessons for transportation planning

**JEL Codes:** Q01, Q34, Q57, R42



## **Strengthening Disaster Response through Global Collaboration: A case study aiming to be a Success Story**

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### **Abstract**

This study highlights the crucial role of collaboration in transportation and logistics planning in the context of disaster response, particularly examining the aftermath of the devastating earthquake in Turkey on February 6, 2023. The earthquake clearly exposed the deficiencies in coordination and readiness across both the public and private sectors, intensifying the extent of damage to property and loss of life.

In response, the International Transporters Association (ITA), in collaboration with Özyeğin University and New York University Tandon School of Economics, C2Smart Center has initiated a pioneering effort to connect diverse stakeholders within a global network. This initiative, launched in December 2023, aims to centralize and integrate research and experiences related to disaster response at both local and global levels. The network aims to enhance the effectiveness of disaster logistics by promoting a more systematic approach to resource mobilization and coordination. This study presents the formation and strategic objectives of this network, emphasizing its role in bridging gaps between academia, non-governmental organizations, government agencies, and the private sector. The findings suggest that such collaborative networks can significantly mitigate the impacts of disasters on economic systems by improving response mechanisms and readiness at all levels of governance and industry.

**Keywords:**

**JEL Codes:**



# The Moderate Steps in the Leaps: A Complexity Analysis of the Past Structural Transformation Cases

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## **Abstract**

The economic complexity literature highlights the negative correlation between a product's complexity and proximity to developing countries' export basket. As a result, these countries remain dependent on a limited range of non-complex products. Successful development and structural transformation cases have managed to reverse this negative correlation to a positive one, a phenomenon observed in only a few countries during the latter half of the 20th century. This study aims to explore these transitions and identify the factors contributing to success. To investigate these transitions, I use the world trade data to focus on "candidate products" that are exported without a comparative advantage. These candidate products fall into four categories: high density-low complexity, low density-high complexity, high density-high complexity, and low density-low complexity. The data reveals that successful countries engage intensely in high density-high complexity products, unlike others focusing on high density-low complexity or low density-high complexity categories. High density-high complexity products, which balance density and complexity, are crucial to achieve structural transformation.

**Keywords:** Economic complexity, product space, structural transformation, economic development.

**JEL Codes:** O14, O25, O57

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# Mapping E-Wom ans Purchase Intention in Times of Digital Era

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## **Abstract**

The development of online technologies has emerged as electronic word of mouth (eWOM), which is the new form of word of mouth (WOM). Today's consumers use online information search widely. The online area is rapidly spreading through various channels. Some of these channels are social media, websites, blogs and various platforms. A part of word of mouth communication is also formed and continues in the form of electronic word of mouth communication. Word of mouth communication, which is an important way of transferring information, also seriously affects the consumer's purchasing behavior. Word of mouth has spread rapidly with digitalization. There is no complete bibliometric study on this subject. This study aims to map the relationship between e-wom and purchase intention. It highlights the most influential research trends by conducting a bibliometric study based on subject search analysis in the Web of Science database. Thus, it is possible to see the trends in the field. In this context, the most influential articles in the field and the keyword link strength between these articles are revealed. It is hoped that it will be useful for research in this field. The findings obtained by visualizing different focus areas and trends will be helpful in terms of addressing under-researched areas.

**Keywords:** E-wom, purchase intention, digitalization

**Jel Codes:** D90,D-91





# Poverty and Employment Dependency in OECD Countries: A Comparative Empirical Analysis of Different Convergence Clubs

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## Abstract

Poverty has been one of the most prominent socioeconomic challenges globally for centuries, but it can be alleviated if its main roots are revealed. Employment-related factors and household dependency may considerably explain poverty. In this study, we merge the concepts of employment and dependency, and produce a variable called employment dependency. We define employment dependency as the ratio of total population to the employed population and observe a notable variation between countries. This variable indicates how many people an employed person maintains on average. We define poverty as the ratio of population who have difficulty in making ends and investigate the connection between poverty rates and employment dependency ratios in 27 OECD countries for the 2004-2021 period. We estimate a fractional probit model by controlling for average wage levels and social expenditures. Findings reveal that an increase in employment dependency rates significantly exacerbates poverty rates. Afterwards, considering the heterogeneity of the countries, we apply the PS club convergence analysis and identify three convergence clubs. Applying the fractional probit estimations separately for the clubs we conclude that factors influencing poverty rates differ between clubs and therefore differentiated poverty alleviation strategies are required rather than a one-size-fits-all approach.

**Keywords:** Poverty, employment dependency, convergence clubs

**JEL Codes:** I32, O11, O15

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## Kayıt-Dışı İstihdamda Toplumsal Cinsiyet Ayak İzi: Girdi-Çıktı Modeli İle Bulgular

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### **Abstract**

Rey (2013) identifies a global financial cycle characterized by synchronized capital flows, asset prices, and credit growth, often linked to the VIX, a measure of market volatility and risk aversion and the US monetary policy. In literature, it is argued that this cycle influences national economies irrespective of their individual macroeconomic conditions, often leading to financial instability, such as asset price bubbles and excessive credit growth. Moreover, the impact of cross-border financial spillovers is found to be the same for countries with fixed or flexible exchange rates, challenging the traditional Mundell-Fleming Trilemma framework and suggesting that the exchange rate regime does not significantly alter the dynamics, leading to a "dilemma" where the primary policy trade-off is between capital mobility and monetary autonomy. In this context, this study aims to explore the dynamic relationship between risk aversion and uncertainty proxied by VIX and the global financial cycle by using the Factor Augmented Vector Autoregressive (FAVAR) model, including global real variables and financial variables that characterize the global financial cycle. We find that an increase in VIX leads to a decrease in global risky asset prices, leverage of global banks, global cross-border credit, global domestic credit, world trade and world production.

**Keywords:** Volatility index; Global financial cycle; International spillovers

**JEL Codes:** E44, E52, F33, F42



## Türkiye’de Evli Kadınların Yerleşim Yerine Göre Göç Sayısı Farklılıkları: Ayrıştırma Analizi

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### Özet

Göç, bir topluluğun ya da kişinin belirli bir zaman diliminde bir yerden başka bir yere hareketi olarak tanımlanmakla birlikte hem başlangıç hem de varış yerleri açısından sosyo-ekonomik birçok sebebi ve sonucu olan çok yönlü bir olgudur. Literatürde, başlangıçta kadının göç sürecindeki rolü, ailedeki erkeğin (baba, erkek kardeş veya eş) kararlarına uyan kişi olarak ele alınmıştır. Ancak, göç sürecinde kadının incelendiği ilk çalışmalarda göç mesafesi ön planda tutulurken, özellikle son yıllarda yapılan araştırmalarda yaş, eğitim, işteki statü ve çocuk sayısı gibi birçok değişkenin kadının göç etme kararları üzerinde etkili olduğu ortaya konulmuştur. Bu çalışmada, 2018 yılı Hacettepe Üniversitesi Nüfus Etütleri Enstitüsü Türkiye Nüfus ve Sağlık Araştırması (TNSA) verileri kullanılarak, Türkiye’de 15-49 yaş arasındaki evli kadınların ele alınan sosyo-ekonomik değişkenlerin varış noktasına göre göç etme sayıları üzerindeki etkileri incelenmiş ardından yerleşim yerine göre göç sayısındaki farklılıklar Blinder-Oaxaca ayrıştırma yöntemiyle ortaya konulmuştur. Yapılan analizlerde özellikle kadının çalışması, çocuk sayısı, erkeğin çalıştığı sektör gibi değişkenlerin etkili olduğu gözlemlenmiştir.

**Anahtar kelimeler:** Kadın Göçü, Göç sayısı farklılıkları, Blinder-Oaxaca Ayrıştırma analizi  
**JEL Kodları:** R23, C20, D10

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# The Analysis and Comparison of Regional Financial Inclusion with a Focus on Women

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## **Abstract**

Financial inclusion is a concept that aims to ensure access to financial products and services for all segments of society. While it is essential for financial products and services to be accessible and usable by the majority of the population, financial exclusion emphasizes the barriers that prevent individuals in disadvantaged groups, such as the elderly, low-income (poor), and women, from accessing and utilizing financial services. Financial inclusion is crucial as it not only supports growth and development in national economies but also has a significant impact on reducing poverty. Given the positive relationship between financial inclusion and economic growth, it is essential to ensure access to financial services for all segments of society to improve living standards and reduce poverty. Despite the growth observed in the global financial system, it is noteworthy that the use of financial services has not spread to large segments of the population. The fact that women, who make up half of the population, are among the disadvantaged groups has a negative impact on the social, cultural, and economic development and progress of countries. Many countries are working on strategies to increase the inclusion of low-income and disadvantaged groups in the financial system. Inequalities in financial inclusion could vary not only between countries but also within the geographical regions of the same country. Therefore, it has become inevitable to design policies that minimize these disparities when formulating regional development policies today. In this context, considering the contribution of financial inclusion to economic growth and development, it plays a crucial role in reducing inequalities between regions. Especially, the inclusion of women in the financial system not only increases financial inclusion but also creates a positive impact on growth and development. The objectives of this study are to conceptually examine financial inclusion, focus on its relationship with economic growth and development, and analyze the factors affecting women's financial inclusion. Following this, a financial inclusion index specifically for women will be developed for Level-2 regions in Turkey, and a regional comparison will be conducted.

**Keywords:** Financial Inclusion, Women Employment, Regional Development

**JEL Codes:** G29, C10, R23

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## Bölgesel Finansal Kapsayıcılığın Kadınlar Özelinde Analizi ve Karşılaştırması

### Özet

Finansal kapsayıcılık toplumun tüm kesimlerinin finansal ürün ve hizmetlere erişimini sağlamayı hedefleyen bir olgudur. Finansal ürün ve hizmetlerin toplumun çoğunluğu tarafından erişilebilir ve kullanılabilir durumda olmasını esas alınırken finansal dışlanma ise literatürde yaşlılar, dar gelirli (yoksullar) ve kadınlar olarak kabul gören dezavantajlı gruplardaki bireylerin finansal hizmetlere erişmesinin ve kullanabilmesinin önündeki engellere vurgu yapmaktadır. Finansal kapsayıcılık ülke ekonomileri üzerinde büyüme ve kalkınmaya yardımcı olmakla birlikte yoksulluğu azaltıcı yönde bir etkiye sahip olması sebebiyle oldukça önemlidir. Finansal kapsayıcılık ile ekonomik büyüme arasındaki pozitif ilişki düşünüldüğünde toplumda yaşam standartlarında bir iyileşme yaratmak ve yoksulluğu azaltmak amacıyla toplumun tüm kesimlerinin finansal hizmetlere erişimini sağlamak elzemdir. Dünya genelinde finansal sistemde görülen büyümeye karşın finansal hizmetlerin kullanımının nüfusun geniş kesimine yayılmadığı dikkat çekmektedir. Toplumun yarısını oluşturan kadınların dezavantajlı gruplar arasında yer alması ülkelerin sosyal, kültürel ve ekonomik açıdan gelişmesi ve kalkınması üzerinde olumsuz bir etkiye sahip olmaktadır. Birçok ülkede düşük gelirli ve dezavantajlı olarak kabul edilen grupların finansal sisteme daha fazla eklenmesini sağlayacak stratejiler geliştirmek için çalışmalar yürütülmektedir. Finansal kapsayıcılık konusunda yaşanan eşitsizlikler sadece ülkeler arasında değil ülkelerin kendi coğrafi bölgelerinde bile farklılık gösterebilmektedir. Bu nedenle günümüzde bölgesel kalkınma politikaları oluştururken farklılıkları minimize edecek politikaların dizayn edilmesi kaçınılmaz hale gelmiştir. Bu bağlamda finansal kapsayıcılığın ekonomik büyüme ve kalkınmaya sağladığı katkı düşünüldüğünde bölgeler arasında eşitsizliklerin azaltılmasında finansal kapsayıcılık önemlidir. Özellikle kadınların finansal sisteme dahil edilmesi finansal kapsayıcılığı arttırmakla birlikte büyüme ve kalkınma üzerinde de olumlu bir etki yaratacaktır. Çalışmanın amaçları finansal kapsayıcılığı kavramsal olarak inceleyip, finansal kapsayıcılığın ekonomik büyüme ve kalkınma ile ilişkisi üzerinde durulacak olup, kadınların finansal kapsayıcılığını etkileyen faktörler irdelenecektir. Ardından Türkiye’de Düzey-2 bölgeleri bazında kadın özelinde finansal kapsayıcılık endeksi oluşturulacak ve bölgelerarası karşılaştırma yapılacaktır.

**Anahtar Kelimeler:** Finansal Kapsayıcılık, Kadın İstihdamı, Bölgesel Kalkınma,

**JEL Kodları:** G29, C10, R23



## How does tax progressivity affect inequality when fertility is endogenous?

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### Abstract

This paper studies the implications of progressive labor income taxation on income and wage inequality when fertility is endogenous. In the model, parental time can be substituted by low-skilled workers, leading to a U-shaped pattern in the income-fertility relationship. Higher tax progressivity increases education spending and fertility at the lower tail relative to the upper tail. The former decreases income inequality as the distribution of human capital is compressed. However, the relative increase in fertility leads to a higher population share at the lower tail, thereby increasing income inequality. In general equilibrium, higher tax progressivity increases the wage premium, which amplifies the rise in income inequality. When the fertility and general equilibrium effects are sufficiently large, higher tax progressivity can increase both before-tax and after-tax income inequality. Quantitative experiments show that a 20% rise in the progressivity parameter increases the disposable income Gini by 2.3% and the gross income Gini by about 7%. Additionally, I find that higher tax progressivity can lead to wage polarization by decreasing relative wages in the middle of the distribution.

**Keywords:** Income inequality, differential fertility, redistribution, taxation.

**JEL Codes:** D63, J13, H21, H23

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## How Ageing Will Affect the Pension System in Türkiye? An Analysis of Public Transfers for the Elderly

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### **Abstract**

Social security is a crucial government expenditure and a key indicator of a welfare state. Developing countries face difficulties due to resource shortages and structural economic deficiencies. In Turkey, rising life expectancies and changes in elderly dependency ratios necessitate long-term planning for financing the retirement system. Although Turkey currently has a young population, it is gradually losing this demographic advantage. Therefore, it is important to assess demographic factors to maintain the sustainability of the retirement system. The decreasing working-age population poses a challenge to the social security system, as a rising number of elderly will place a financial burden on the working-age generations and strain the pay-as-you-go system. In the previous election, one of the promises was a new reform called EYT meaning “those hindered from retirement due to age” and the new reform will increase the current workload of the system. Pensions constitute a significant portion of public cash transfers and largely determine the inflow of public transfer payments. This study shows the public transfers and elderly deficit (consumption minus labor income) in Turkey and the proportion of pension transfers in total cash transfers. The study also aims to show the effect of a new reform on the social security system and provide important information for policymakers.

**Keywords:** public transfers, population aging, pension income.

**JEL Codes:** J14, J18

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## Social welfare indicators of poverty and pro-poor development in Türkiye

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### **Abstract**

The pro-poor growth analysis focuses on the changes in income distribution between income groups along with growth. For this purpose, most studies look at the growth and distributional effects of changes in the average income of the bottom 40%. Recently, it has been emphasized that this methodology should go beyond an income-focused analysis and that the pro-poor growth process should also mean progress in terms of certain welfare indicators. Shared prosperity is examined using the approaches of pro-poor development and inclusive development. Defining the social welfare function as poverty-oriented, the Poverty Social Welfare Approach aims to use income distribution data and basic social well-being indicators for pro-poor development. Infant mortality rate (or infant survival rate), life expectancy at birth, literacy rate, and the percentage of children under five free of stunting and wasting are among the basic social well-being indicators. In this paper, the welfare function developed within the scope of the Poverty Social Welfare Approach and inclusive development will be implemented for Türkiye. The basic indicators used within the scope of pro-poor growth analysis and selected welfare indicators will be included in the poverty social welfare function in order to examine the growth-poverty-welfare nexus for the period 2004-2023.

**Keywords:** Development, Pro-poor, Inclusive, Inequality, Türkiye

**JEL Codes:** D63, D31, O11, O47

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# Risk and Interconnectedness between Financial Concerns and Türkiye Financial Markets: A Quantile Vector Autoregressive Approach

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## **Abstract**

In this study, we analyse the interconnectedness between financial concerns and Turkish financial markets by taking into account major economic, political and geopolitical events. For this, we apply the Quantile Vector Autoregressive connectedness approach for the first time using a dataset from 1 August 2006 to 8 July 2024. The findings presented in this manuscript yield several significant insights. First, the mean spillover index reacts to major economic and geopolitical events such as the 2008 Global Financial Crisis (GFC) and the COVID-19 pandemic. Second, it reveals a notable level of interconnectedness between financial concerns and Turkish financial markets in both bullish and bearish market conditions. Third, BIST100 and BIST Bank variables act as net risk transmitters of shocks in the lower and upper quantiles in all periods except for the GFC, while the 2-year bond yield and exchange rate variables act as net risk receivers of shocks in the relevant quantiles and in all periods. Finally, cumulative portfolio returns decrease significantly before during the GFC and COVID-19, but increase significantly after COVID-19. The results of this study are expected to assist investors in portfolio and risk management, as well as provide valuable information to policymakers on current financial market conditions.

**Keywords:** Volatility Index; Türkiye Financial Markets; Quantile Vector Autoregressive

**JEL Codes:** C58, D53, G11



## **Finansal Endişeler ile Türkiye Finansal Piyasaları Arasındaki Risk ve Bağlantılılık: Kantil Vektör Otoregresif Yaklaşımı ile Bir İnceleme**

### **Özet**

Bu çalışmada, finansal endişeler ile Türkiye finansal piyasaları arasındaki bağlantılılık, önemli ekonomik, siyasi ve jeopolitik olayları da dikkate alarak analiz ediliyor. Bunun için 1 Ağustos 2006'dan 8 Temmuz 2024'e kadar olan bir veri kümesi kullanarak Kantil Vektör Otoregresif bağlantılılık yaklaşımını ilk kez biz uyguluyoruz. Bu çalışmada sunulan bulgular birkaç önemli görüş ortaya koymaktadır. İlk olarak, ortalama yayılma endeksi 2008 Küresel Finansal Krizi (KFK) ve COVID-19 salgını gibi önemli ekonomik ve jeopolitik olaylara tepki göstermektedir. İkinci olarak, hem boğa hem de ayı piyasa koşullarında finansal endişeler ile Türkiye finans piyasaları arasında kayda değer düzeyde bir bağlantılılık olduğunu göstermektedir. Üçüncü olarak, BIST100 ve BIST Banka değişkenleri KFK hariç tüm dönemlerde alt ve üst kantillerde şokların net risk aktarıcısı olarak hareket ederken, 2 yıllık tahvil faizi ve döviz kuru değişkenleri ilgili kantillerde ve tüm dönemlerde şokların net risk alıcısı olarak hareket etmektedir. Son olarak, kümülatif portföy getirileri KFK ve COVID-19 sırasında önemli ölçüde azalmakta, ancak COVID-19'dan sonra önemli ölçüde artmaktadır. Bu çalışmanın sonuçlarının, yatırımcılara portföy ve risk yönetimi konusunda yardımcı olması ve aynı zamanda politika yapıcılara mevcut finansal piyasa koşullarına ilişkin değerli bilgiler sunması beklenmektedir.



# Does the impact of geopolitical risks on bank performance differ according to bank ownership structure? Evidence from Turkey

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## **Abstract**

Although banks are institutions operating under high risk, these risks can be minimised with risk management techniques. Geopolitical risks, on the other hand, are highly complex and pose a significant threat to the stability of the banking sector as they can disrupt financial markets, impede cross-border transactions and erode investor confidence. One of the main consequences of these risks is the potential for banks to face increased uncertainty, leading to fluctuations in asset values, credit risks and regulatory pressures. The importance of geopolitical risks in financial markets is increasingly recognised. Therefore, analysing the vulnerability of the banking sector, which is the main element of the financial system in Turkey, to geopolitical risks is very important for the stability of the financial system. For this purpose, the study analyses the impact of geopolitical risks, bank-specific and macroeconomic variables on the performance of deposit banks in Turkey for the period between 2002 and 2023 by using the seemingly uncorrelated regression method, taking into account the ownership structure distinction (public, domestic, foreign).

**Keywords:** geopolitical risk, bank performance, financial stability, bank ownership structure

**JEL Codes:** G21, G11, G20

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## Jeopolitik risklerin banka performansı üzerinde etkisi banka sahiplik yapısına göre farklılaşıyor mu? Türkiye’den kanıtlar

### Özet

Bankalar yüksek risk altında çalışan kurumlar olmakla birlikte bu riskler risk yönetim teknikleri ile minimize edilebilir. Buna karşın jeopolitik riskler, finansal piyasaları bozabildiği, sınır ötesi işlemleri engelleyebildiği ve yatırımcı güvenini aşındırabileceği için oldukça karmaşık olup bankacılık sektörünün istikrarı için önemli tehdit unsurudur. Bu risklerin temel sonuçlarından biri bankaları artan belirsizlikle karşı karşıya kalma potansiyelidir ve bu da varlık değerinde, kredi risklerinde ve düzenleyici baskılarda dalgalanmalara yol açmasıdır. Finans piyasalarında jeopolitik risklerin önemi giderek daha fazla kabul görmektedir. Bu nedenle Türkiye’de finansal sistemin temel unsuru olan bankacılık sektörünün jeopolitik risklere karşı kırılganlığının analizi finansal sistemin istikrarı açısından oldukça önemlidir. Bu amaçla çalışmada 2002- 2023 dönemi için jeopolitik risklerin, bankaya özgü ve makroekonomik değişkenlerin Türkiye'deki mevduat bankalarının performansı üzerindeki etkisi sahiplik yapısı ayrımı (kamu, yerli, yabancı) dikkate alınarak görünürde ilişkisiz regresyon yöntemi kullanılarak incelenmiştir.

**Anahtar Kelimeler:** jeopolitik risk, banka performansı, finansal istikrar, banka sahiplik yapısı.

**JEL Kodları:** G21, G11, G20



## Makine Öğrenmesi Teknikleriyle Kredi Riski Analizi

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### Özet

Bu çalışma, Türkiye'deki bankacılık sektörüne odaklanarak kredi riski yönetiminde makine öğrenmesi tekniklerinin uygulanabilirliğini ve potansiyelini incelemektedir. Kredi riski, finansal kurumlar için önemli bir endişe kaynağı olup, borçluların borçlarını zamanında ve tam olarak ödeyememe riskini ifade eder. Firmanın finansal göstergeleri, kullandığı kredilerin özellikleri ve firma yapısına ilişkin özellikler analiz edilerek, firmaların gelecek 12 ay içinde borçlarını zamanında ve tam olarak ödeyip ödemeyeceklerini tahmin eden modeller geliştirilmiştir. Bu çalışma, 2018-2023 yılları arasında Türkiye'de faaliyet gösteren firmalara ait toplam 1.264.123 gözlem üzerinden çeşitli makine öğrenmesi algoritmalarının kredi riski tahminindeki etkinliği değerlendirilmektedir. Analiz, kredi riskinin tahmininde şirketlerin mali geçmişi, operasyonel işleyişi, borçlanma yapısı, bankaların kredi riskine yaklaşımı ve makro ekonomik koşul değişkenlerinin önemli olduğunu belirlemiştir. Çalışma, logistik regresyon, cezalı logistik regresyon, karar ağacı, rastgele orman, gradyan artırma algoritmaları ve yapay sinir ağı gibi farklı makine öğrenmesi modellerinin kredi riskini tahmin etmedeki başarısı karşılaştırmıştır. Çalışmada Aşırı Dereceli Artırma modelinin en iyi performansı sergilediği bulgulanmıştır, bu da makine öğrenmesi tekniklerinin geleneksel yöntemlere göre daha adaptif ve doğru tahminler yapma potansiyeline sahip olduğunu göstermektedir. Bu çalışmada makine öğrenmesi tekniklerinin kredi riski analizindeki uygulamalarının, finansal istikrarın korunması ve ekonomik sistemin daha dirençli hale getirilmesine katkı sağlayacağı vurgulanmaktadır.

**Anahtar Kelimeler:** Kredi Riski, Makine Öğrenmesi Teknikleri, Finansal Oranlar, Bankacılık Sektörü, Makro Özellik Önem Derecesi

**JEL Kodları:** C52, C53, C55, G17, G2, G32, G33

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## Effects of Special Condition Disclosures of Companies on Stock Prices in Turkey: Companies New To Their Sector

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### **Abstract**

This study examines the impact of special condition disclosures on the stock prices of firms newly established in their sectors in Turkey, specifically within the technology and energy sectors. The analysis includes 11 rapidly growing firms listed on the Istanbul Stock Exchange, with data on special condition disclosures from the Public Disclosure Platform (KAP) and corresponding stock closing prices. The firms that went public in 2023 were analyzed from their IPO dates, while those that went public before 2023 were analyzed from January 1, 2023, to March 27, 2024. Using an unbalanced panel data analysis, the study investigates the effects of potential positive, negative, and neutral news on stock prices. The findings indicate that news regarding new business relationships, independent audit firm selection, general meeting processes, dividend distribution, and capital increase/decrease have statistically significant impacts on stock prices. The study also considers the asymmetric effects of news during bullish and bearish periods of stock prices and includes delayed reactions to news announcements. The results show that positive news tends to have a more substantial effect during bullish periods, while negative news can have delayed effects during bearish periods. Overall, this research provides valuable insights into how market participants react to specific disclosures and how these reactions can vary depending on the timing and nature of the news. The implications of these findings are significant for investors, regulators, and company management, highlighting the importance of transparency and timely information dissemination in the stock market.

**Keywords:** Special Condition Disclosures, Stock Prices, Panel Data Analysis, Istanbul Stock Exchange, Technology and Energy Sectors, Positive and Negative News

**JEL Codes:** G14, G32, C33

## Türkiye’de Firmaların Özel Durum Açıklamalarının Hisse Senedi Fiyatlarına Etkileri: Sektöründe Yeni Olan Şirketler

### Özet

Bu çalışma, Türkiye'deki sektörlerinde yeni kurulan firmaların hisse senedi fiyatları üzerindeki özel durum açıklamalarının etkisini, özellikle teknoloji ve enerji sektörlerinde incelemektedir. Analiz, İstanbul Menkul Kıymetler Borsası'nda listelenen ve hızla büyüyen 11 firmayı içermekte olup, Kamu Aydınlatma Platformu'ndan (KAP) alınan özel durum açıklamaları ve ilgili hisse senedi kapanış fiyatları verilerini içermektedir. 2023 yılında halka arz edilen firmalar, halka arz tarihlerinden itibaren analiz edilirken, 2023'ten önce halka arz edilen firmalar 1 Ocak 2023'ten 27 Mart 2024'e kadar analiz edilmiştir. Dengesiz panel veri analizi kullanılarak, potansiyel olumlu, olumsuz ve nötr haberlerin hisse senedi fiyatları üzerindeki etkileri araştırılmıştır. Bulgular, yeni iş ilişkileri, bağımsız denetim firması seçimi, genel kurul süreçleri, temettü dağıtımı ve sermaye artışı/azaltılması ile ilgili haberlerin hisse senedi fiyatları üzerinde istatistiksel olarak anlamlı etkileri olduğunu göstermektedir. Çalışma ayrıca hisse senedi fiyatlarının yükseliş ve düşüş dönemlerinde haberlerin asimetrik etkilerini ve haber duyurularına gecikmeli tepkileri dikkate almaktadır. Sonuçlar, olumlu haberlerin yükseliş dönemlerinde daha büyük bir etkiye sahip olduğunu, olumsuz haberlerin ise düşüş dönemlerinde gecikmeli etkiler gösterebileceğini ortaya koymaktadır. Genel olarak, bu araştırma piyasa katılımcılarının belirli açıklamalara nasıl tepki verdiklerine ve bu tepkilerin haberlerin zamanlaması ve niteliğine bağlı olarak nasıl değişebileceğine dair değerli bilgiler sunmaktadır. Bu bulguların etkileri yatırımcılar, düzenleyiciler ve şirket yönetimi için önemli olup, borsada şeffaflık ve zamanında bilgi yayımının önemini vurgulamaktadır.

**Anahtar Kelimeler:** Özel Durum Açıklamaları, Hisse Senedi Fiyatları, Panel Veri Analizi, Borsa İstanbul, Teknoloji ve Enerji Sektörleri, Pozitif ve Negatif Haberler

**Jel Kodları:** G14, G32, C33