

## Assoc. Prof. SELMA TOKER KUTAY

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: C-2783-2018

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### Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, Turkey 2011 - 2015

Postgraduate, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, Turkey 2008 - 2011

Undergraduate Double Major, Cukurova University, Fen Edebiyat Fakültesi, İstatistik, Turkey 2005 - 2008

Undergraduate, Cukurova University, Fen Edebiyat Fakültesi, Matematik, Turkey 2004 - 2008

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, IMPROVED ESTIMATORS IN SIMULTANEOUS EQUATIONS MODEL, Cukurova University, Fen Edebiyat Fakültesi, İstatistik Bölümü, 2015

Postgraduate, Ridge Regression Estimator and Related Estimators, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik Anabilim Dalı, 2011

### Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2021 - Continues

Assistant Professor, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2016 - 2021

Research Assistant PhD, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2015 - 2016

Research Assistant, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2008 - 2015

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **How global warming data are modeled via some novel mathematical programming scenarios in distributed lag model?**  
ÖZBAY N., Toker S.  
Stochastic Environmental Research and Risk Assessment, 2024 (SCI-Expanded)
- II. **Two-parameter estimation for Tobit model: An application to national health and nutrition examination survey dataset**  
ÖZBAY N., ÜSTÜNDAĞ ŞİRAY G., TOKER KUTAY S., Yenilmez I.  
CONCURRENCY AND COMPUTATION-PRACTICE & EXPERIENCE, vol.34, no.18, 2022 (SCI-Expanded)
- III. **Mixed data sampling regression: Parameter selection of smoothed least squares estimator**  
Toker Kutay S., Özbay N., Mansson K.  
JOURNAL OF FORECASTING, vol.41, no.4, pp.718-751, 2022 (SCI-Expanded)
- IV. **Restricted estimation of distributed lag model from a Bayesian point of view**  
Toker Kutay S., Özbay N.  
Communications In Statistics-Theory And Methods, vol.0, pp.1-13, 2021 (SCI-Expanded)
- V. **Defining a two-parameter estimator: a mathematical programming evidence**  
ÜSTÜNDAĞ ŞİRAY G., TOKER KUTAY S., ÖZBAY N.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.91, no.11, pp.2133-2152, 2021 (SCI-Expanded)
- VI. **Tobit Liu estimation of censored regression model: an application to Mroz data and a Monte Carlo simulation study**  
TOKER KUTAY S., ÖZBAY N., ÜSTÜNDAĞ ŞİRAY G., Yenilmez I.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.91, no.6, pp.1061-1091, 2021 (SCI-Expanded)
- VII. **Prediction framework in a distributed lag model with a target function: an application to global warming data**  
Özbay N., Toker Kutay S.  
ENVIRONMENTAL AND ECOLOGICAL STATISTICS, vol.28, no.1, pp.87-134, 2021 (SCI-Expanded)
- VIII. **Investigating the two parameter analysis of Lipovetsky for simultaneous systems**  
TOKER KUTAY S.  
STATISTICAL PAPERS, vol.61, no.5, pp.2059-2089, 2020 (SCI-Expanded)
- IX. **Efficiency of Mansson's method: Some numerical findings about the role of biasing parameter in the estimation of distributed lag model**  
ÖZBAY N., TOKER KUTAY S.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.49, no.9, pp.2333-2346, 2020 (SCI-Expanded)
- X. **The effect of target function on the predictive performance of the two-stage ridge estimator**  
Toker S., ÖZBAY N.  
JOURNAL OF FORECASTING, vol.38, no.8, pp.749-772, 2019 (SSCI)
- XI. **Multicollinearity in simultaneous equations system: evaluation of estimation performance of two-parameter estimator**  
ÖZBAY N., Toker S.  
COMPUTATIONAL & APPLIED MATHEMATICS, vol.37, no.4, pp.5334-5357, 2018 (SCI-Expanded)
- XII. **Robust two parameter ridge M-estimator for linear regression**  
Ertaş H., Toker S., KAÇIRANLAR S.  
JOURNAL OF APPLIED STATISTICS, vol.42, no.7, pp.1490-1502, 2015 (SCI-Expanded)
- XIII. **On the Restricted Liu Estimator in the Logistic Regression Model**  
Siray G. U., Toker S., KAÇIRANLAR S.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.44, no.1, pp.217-232, 2015 (SCI-Expanded)
- XIV. **RESTRICTED TWO PARAMETER RIDGE ESTIMATOR**  
Siray G., Toker S.  
AUSTRALIAN & NEW ZEALAND JOURNAL OF STATISTICS, vol.55, no.4, pp.455-469, 2013 (SCI-Expanded)
- XV. **Inequality constrained ridge regression estimator**

Toker S., Siray G., KAÇIRANLAR S.

STATISTICS & PROBABILITY LETTERS, vol.83, no.10, pp.2391-2398, 2013 (SCI-Expanded)

XVI. **On the performance of two parameter ridge estimator under the mean square error criterion**

Toker S., KAÇIRANLAR S.

APPLIED MATHEMATICS AND COMPUTATION, vol.219, no.9, pp.4718-4728, 2013 (SCI-Expanded)

### Articles Published in Other Journals

I. **Determining the Effect of Some Biasing Parameter Selection Methods for the Two Stage Ridge Regression Estimator**

ÖZBAY N., TOKER KUTAY S.

SAKARYA UNIVERSITY JOURNAL OF SCIENCE, no.22, pp.1878-1885, 2018 (Peer-Reviewed Journal)

II. **Evaluation of Two Stage Modified Ridge Estimator and Its Performance**

TOKER KUTAY S., ÖZBAY N.

SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.22, no.6, pp.1631-1637, 2018 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

I. **Liu Estimation for Tobit Regression Model**

TOKER KUTAY S., ÖZBAY N., ÜSTÜNDAĞ ŞIRAY G., YENİLMEZ İ.

20th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2020), Ankara, Turkey, 12 - 14 February 2020

II. **On the Predictive Performance of Distributed Lag Model**

ÖZBAY N., TOKER KUTAY S.

20th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2020), Ankara, Turkey, 12 - 14 February 2020

III. **Two Parameter Ridge Estimator for Simultaneous System: A Mathematical Programming Evidence for Selecting Biasing Parameters**

TOKER KUTAY S., ÖZBAY N.

V. International Congress on Natural and Health Sciences (ICNHS-2019), Adana, Turkey, 13 - 15 December 2019, pp.423-433

IV. **A BAYESIAN APPROACH TO THE RESTRICTIONS IN ALMON MODEL**

TOKER KUTAY S., ÖZBAY N.

ICOAEF19, VI International Conference on Applied Economics and Finance, Balıkesir, Turkey, 16 - 17 November 2019, pp.54

V. **Mixed Frequency Estimation by Smoothed Least Squares**

TOKER KUTAY S., ÖZBAY N., Månsson K.

11. INTERNATIONAL STATISTICS CONGRESS (ISC 2019), Muğla, Turkey, 4 - 08 November 2019, pp.101

VI. **Defining Some Adaptive Optimal Estimators for the Distributed Lag Model**

ÖZBAY N., TOKER KUTAY S.

5th International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2019), Aydın, Turkey, 18 - 20 October 2019

VII. **Improving Two Stage Two Parameter Ridge Estimator under Linear Restrictions**

TOKER KUTAY S., ÖZBAY N.

5th International Researchers, Statisticians and Young Statisticians Congress, Aydın, Turkey, 18 - 20 October 2019, pp.254-271

VIII. **A Mathematical Programming Procedure for Examining Biasing Parameters of Two Stage Two Parameter Estimator**

TOKER KUTAY S., ÖZBAY N.

11. INTERNATIONAL STATISTICS CONGRESS (ISC2019), Muğla, Turkey, 4 - 08 October 2019, pp.319-327
- IX. **Considering Linear Constraints for Almon Two Parameter Ridge Estimation**  
ÖZBAY N., TOKER KUTAY S.  
11. INTERNATIONAL STATISTICS CONGRESS (ISC2019), Muğla, Turkey, 4 - 08 October 2019, pp.374-386
- X. **Developing a First Order Two Parameter Estimator for Generalized Linear Model**  
Toker Kutay S., Üstündağ Şiray G., Qasim M.  
11th International Statistics Congress, Muğla, Turkey, 4 - 08 October 2019, pp.987-1001
- XI. **Examination of a two parameter estimator with mathematical programming method**  
ÖZBAY N., TOKER KUTAY S., ÜSTÜNDAĞ ŞİRAY G.  
International Conference on Mathematics and Mathematics Education (ICMME 2019), Konya, Turkey, 11 - 13 July 2019, pp.203-204
- XII. **Determination of Biasing Parameters for Almon Liu Type Estimator via a Mathematical Programming Approach**  
ÖZBAY N., TOKER KUTAY S.  
6th International IFS and Contemporary Mathematics Conference (IFSCOM 2019), Mersin, Turkey, 7 - 10 June 2019
- XIII. **Eşanlı Denklemler Modeli için Bazı Uyarlanabilir Optimal Tahmin Edicilerin Tanımlanması**  
ÖZBAY N., TOKER KUTAY S.  
4 International Mediterranean SCIENCE AND ENGINEERING CONGRESS (IMSEC 2019), Antalya, Turkey, 25 - 27 April 2019, pp.832-838
- XIV. **İki Aşamalı Liu Tipi Tahmin Edici için Matematiksel Programlama Yaklaşımıyla Parametre Seçimi**  
TOKER KUTAY S., ÖZBAY N.  
4 International Mediterranean SCIENCE AND ENGINEERING CONGRESS (IMSEC 2019), Antalya, Turkey, 25 - 27 April 2019, pp.825-831
- XV. **INVESTIGATION OF TWO STAGE RIDGE ESTIMATOR UNDER LINEAR CONSTRAINTS**  
TOKER KUTAY S., ÖZBAY N.  
International Conference on Multidisciplinary Sciences, İstanbul, Turkey, 15 - 16 December 2018, pp.752-764
- XVI. **IMPLEMENTATION OF LINEAR CONSTRAINTS IN DISTRIBUTED LAG MODEL**  
ÖZBAY N., TOKER KUTAY S.  
International Conference on Multidisciplinary Sciences, İstanbul, Turkey, 15 - 16 December 2018, pp.765-775
- XVII. **Almon Modelinde Çapraz Geçerlilik Kriterinin Kullanımı ile Ridge ve Liu Tahmin Edicilerin Ön Tahmin Performansının Geliştirilmesi**  
ÖZBAY N., TOKER KUTAY S.  
3rd International Mediterranean Science and Engineering Congress (IMSEC2018), Adana, Turkey, 24 - 26 October 2018, pp.651-654
- XVIII. **İki Aşamalı İki Parametrelili Ridge Tahmin Edicinin Performansını Değerlendirmede Çapraz Geçerlilik Kriterinin Kullanılması**  
TOKER KUTAY S., ÖZBAY N.  
3rd International Mediterranean Science and Engineering Congress (IMSEC2018), Adana, Turkey, 24 - 26 October 2018, pp.1010-1016
- XIX. **Evaluating Some Two Stage Ridge Regression Parameters: A Monte Carlo Evidence**  
ÖZBAY N., TOKER KUTAY S.  
7th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2018), Kiev, Ukraine, 28 - 31 August 2018
- XX. **The Prediction of a Simultaneous Equations Model by Utilizing Biased Estimation Techniques**  
TOKER KUTAY S., ÖZBAY N.  
7th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2018), Kiev, Ukraine, 28 - 31 August 2018
- XXI. **EXAMINATION ON THE PERFORMANCE OF SOME BIASING PARAMETERS FOR SHILLER'S ESTIMATOR IN DISTRIBUTED LAG MODEL**  
ÖZBAY N., TOKER KUTAY S.

4th International researchers, Statisticians and Young Statisticians Congress (IRSYSC2018), İzmir, Turkey, 28 - 30 April 2018, pp.74

- XXII. **ASSESSING THE PERFORMANCE OF MODIFIED RIDGE ESTIMATOR IN SIMULTANEOUS SYSTEMS**  
TOKER KUTAY S., ÖZBAY N.  
4th International researchers, Statisticians and Young Statisticians Congress (IRSYSC2018), İzmir, Turkey, 28 - 30 April 2018, pp.77
- XXIII. **Bayesian Estimation of Simultaneous Equations Model in the Existence of Multicollinearity**  
TOKER S., ÖZBAY N.  
18th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2017), Trabzon, Turkey, 5 - 07 October 2017
- XXIV. **Assessment of Two Parameter Estimator at the Second Stage via a Monte Carlo Experiment**  
ÖZBAY N., TOKER CİNLİ S.  
INTERNATIONAL CONFERENCE ON APPLIED ANALYSIS AND MATHEMATICAL MODELING, İstanbul, Turkey, 3 - 07 July 2017, pp.113
- XXV. **Biased estimators in simultaneous equations model**  
TOKER S., KAÇIRANLAR S., Güler H.  
? 1. International Mediterranean science and engineering congress(IMSEC 2016), Adana, Turkey, 26 - 28 October 2016, pp.1
- XXVI. **Selection Methods of the parameter k for Two Parameter Ridge Estimator**  
TOKER S., ERTAŞ H., KAÇIRANLAR S.  
16th International Symposium on Econometrics, Operations Research and Statistics, Edirne, Turkey, 7 - 12 May 2015, pp.1
- XXVII. **A Survey of Liu Estimator**  
KAÇIRANLAR S., SAKALLIOĞLU S., TOKER S.  
3. International Eurasian Conference on Mathematical sciences and Applications, IECMSA-2014, Vienna, Austria, 25 - 28 August 2014, pp.1
- XXVIII. **Ridge estimator with Correlated errors under Inequality Restrictions**  
TOKER S., KAÇIRANLAR S.  
International Eurasian Conference on Mathematical sciences and Applications, IECMSA-2014, Vienna, Austria, 25 - 28 August 2014, pp.1
- XXIX. **Two Stage Liu Estimator**  
TOKER KUTAY S., KAÇIRANLAR S.  
15th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2014), Isparta, Turkey, 22 - 25 May 2014
- XXX. **A New Restricted Estimator**  
ÜSTÜNDAĞ ŞİRAY G., TOKER S.  
International 8th Statistics Congress, Antalya, Turkey, 27 - 30 October 2013, pp.110-111
- XXXI. **Inequality Constrained Ridge Regression Estimation**  
TOKER KUTAY S., ÜSTÜNDAĞ ŞİRAY G., KAÇIRANLAR S.  
14th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2013), Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2013
- XXXII. **M Kestiricilere Dayalı İki Parametrelili Ridge Regresyon**  
ERTAŞ H., TOKER KUTAY S., KAÇIRANLAR S.  
14th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2013), Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2013
- XXXIII. **Inequality Constrained Ridge Regression Estimation**  
TOKER S., ÜSTÜNDAĞ ŞİRAY G., KAÇIRANLAR S.  
14th International Symposium On Econometrics, Operations Research and Statistics, Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2013, pp.339
- XXXIV. **A New Two Parameter Robust-Ridge Estimator Based On M-Estimator**  
ERTAŞ H., TOKER S., KAÇIRANLAR S.

14th International Conference on Econometrics, Operations Research and Statistics, Bosna-Hersek, 2013., Sarajova, Bosnia And Herzegovina, 24 - 28 May 2013, pp.362

**XXXV. On the restricted Liu estimator for the logistic regression model**

Siray G. U., TOKER S., KAÇIRANLAR S., ÜSTÜNDAĞ ŞİRAY G.

8. Uluslararası İstatistik Günleri Sempozyumu, Eskişehir, Turkey, 11 - 13 October 2012, pp.1

**XXXVI. İki parametrelili ridge tahmin edici ve bazı karşılaştırmalar**

TOKER S., KAÇIRANLAR S.

19. İstatistik Araştırma Sempozyumu 2010, Ankara, Turkey, 6 - 07 May 2010, pp.1

## Supported Projects

TOKER KUTAY S., ÖZBAY N., Project Supported by Higher Education Institutions, Determining Some Estimation and Parameter Selection Approaches for the Model of Simultaneous Equations, 2019 - 2020

TOKER KUTAY S., ÖZBAY N., Project Supported by Higher Education Institutions, New Bayesian and Non-bayesian Estimation Methods in Simultaneous Systems, 2018 - 2019

ÖZBAY N., TOKER CİNLİ S., Project Supported by Higher Education Institutions, Evaluation of parameter estimation by theoretical and computational methods in distributed lag models, 2018 - 2019

TOKER KUTAY S., ÖZBAY N., Project Supported by Higher Education Institutions, Bayesian Estimation of Simultaneous Equations Model in the Existence of Multicollinearity, 2017 - 2018

KAÇIRANLAR S., TOKER S., Project Supported by Higher Education Institutions, IMPROVED ESTIMATORS IN THE SIMULTANEOUS EQUATIONS MODEL, 2015 - 2015

KAÇIRANLAR S., TOKER S., Project Supported by Higher Education Institutions, . TOKER,S.; KAÇIRANLAR, S. (2013) On the performance of two parameter ridge estimator under the mean square error criterion. Applied Mathematics and Computation. 219, 4718-4728., 2014 - 2015

KAÇIRANLAR S., TOKER S., SAKALLIOĞLU S., Project Supported by Higher Education Institutions, A SURVEY OF LIU ESTIMATOR, 2014 - 2015

## Metrics

Publication: 55

Citation (WoS): 65

Citation (Scopus): 80

H-Index (WoS): 5

H-Index (Scopus): 5