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Statistical Analysis of "Structural Change" - An Annotated Bibliography

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STATISTICAL ANALYISIS OF 'STRUCTURAL CHANGE'
AN ANNOTATED BIBLIOGRAPHY

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FOREWORD

Within the framework of the Economic Structural Change Program, a cooperative research activity of IIASA and the University of Bonn, FRG, a project is carried out on "Statistical and Econometric Identification of Structural Change"; the project involves studies on the formal aspects of the analysis of structural changes. On the one hand, they include statistical methods to detect non-constancies, such as stability tests, detection criteria, etc., and on the other hand, methods which are suitable for models which incorporate non-constancy of the parameters, such as estimation techniques for time-varying parameters, adaptive methods, etc.

The present paper provides a documentation of the state of the art in the form of a bibliography.

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Acting Leader
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STATISTICAL ANALYSIS OF 'STRUCTURAL CHANGE' AN ANNOTATED BIBLIOGRAPHY

CONTENTS

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Chapter I: INTRODUCTION

The typical 'structural change' situation is - from the point of view of a statistician - as follows: To cope with a particular economic phenomenon a model is specified, and it is suspected that for different periods of time, or for different spacial regions, different sets of parameter values are needed in order to describe the reality adequately; the 'change point' which separates these periods, or regions, is unknown. Questions that arise in this context include: Is it necessary to assume that the parameters are changing? When, or where, does a change occur or - if it takes place over a certain period of time - what is its onset and duration? How much do parameters before and after the change differ? What type of model is appropriate in a particular situation (e.g., two-phase regression, stochastic parameter models)?

Non-constancy of the parameters is an essential element of 'structural change'. This non-constancy of the parameters can appear as an inadequacy of the model which is specified to represent the phenomenon in question; diagnostic checking methods can be applied to identify such non-constancies. On the other hand, parameter variability can be incorporated in the model.

References included in this bibliography concentrate on two topics:

(1) Detection of non-constancy of parameters in regression and time series models.
(2) Statistical analysis of models with time-varying parameters.

The first group of references deals mainly with the change point problem in the context of regression models. Constancy of a sequence of random variables is related to the analysis of residuals which might be performed in order to detect non-constancy of the regression parameters; therefore, papers are also included which discuss the analysis of parameter

constancy of (time-ordered) sequences of random variables. Several papers discuss the analysis of constancy of parameters of time series models.

The second group of references is concerned with estimation procedures for regression models with time-varying parameters. These papers are of interest because time-varying parameter models might be appropriate for model specification in the presence of non-constancy. Also, such parameterizations can be used to detect instability in the coefficients. Some papers are included which discuss forecasting problems in the situation of non-constant parameters. No or nearly no weight is given some topics which are related to those mentioned above, viz., continuous sampling inspection, heteroscedasticity, analysis of non-constancy of time-series parameters in the frequency domain, and disequilibrium models. The reasons for this limitations lie partly in the subjects, partly in the fact that our efforts had to be restricted.

The close connection of questions of model stability with economic problems leads us to discuss briefly what is known under 'structural change' among economists. In economics this notion is not clearly defined. However, a notion related to 'structural change' which, in the context of a linear dynamic model, is clearly defined, is the concept of stability. It refers to the dominant root of the characteristic equation of the system: The system is stable if the dominant root lies within the unit circle (cf.Theil & Boot, 1962; Oberhofer & Kmenta, 1973). This concept, however, is of little help for defining 'structural change' if it is accepted that 'structural change' implies non-constant relations between elements (variables) of the system. Economists speak about structural change not only in this rather concrete sense but also if there are substantial changes in certain characteristics, e.g., the mean, of the endogenous variables of the system. Consequently, the borderline between structural change and stability is not strict, the notion 'structural change' is not well-defined, and questions

concerning the theoretical motivation of structural change, its measurability, and others, cannot be discussed properly. An attempt to clarify the subject within an economic framework has been made by Westlund (1985).

Most references included in this bibliography were published in methodological (statistical and econometric) journals; only a few were taken from economic journals. In these papers typical problems which arise in the context of modelling real economic phenomena are rarely discussed. For example, what implies shortness of time series? How can special patterns of parameter changes be treated, particularly slowly moving parameters? Also, very few papers could be found which deal with non-linear or multi-equation models.

Although both of us are responsible for this bibliography, the 'mining' for references was divided: P.Hackl was concerned with papers that discuss analysis of constancy in sequences of random variables, in regression models, and in time series models; A.Westlund supplied the references that refer to the estimation of regression models with time-varying parameters. Our work is partially based on four bibliographies which delivered about 60 % of the references cited here: Shaban (1980), Hinkley (1980), Johnson (1977), and Johnson (1980). Most of the remaining papers appeared after these bibliographies were published, a fact that indicates the still growing interest in this subject. Papers who mainly deal with applications were not incorporated, except papers which were published in methodological journals. We don't claim that this bibliography is complete; we are grateful for further references and suggestions which would help make a future edition more complete.

References:

Hinkley,D.V., Chapman,P., Ranger,G. (1980). Change-Point Problem. Techn.Report No.382, Nov.80, Univ.Minnesota, School of Statistics.

Johnson,L.W. (1977). Stochastic parameter regression: an annotated bibliography. Intern.Statist.Rev., 45, 257-272.

Johnson,L.W. (1980). Stochastic parameter regression: an additional annotated bibliography. Intern.Statist.Rev., 48, 95-102.

Oberhofer,W., Kmenta,J. (1973). Estimation of Standard Errors of Characteristic Roots of a Dynamic Econometric Model. Econometrica, 41, 171-177.

Shaban,S.A. (1980). Change point problem and two-phase regression: an annotated bibliography. Intern.Statist.Rev., 48, 83-93.

Theil,H., Boot,J.C.G. (1962). The Final Form of Econometric Equation Systems. Rev.Intern.Statist.Institute, 30, 136-152.

Westlund,A. (1985). Analysis and Prediction of Structurally Changing Economic Systems: Some Conceptual Comments. Unpublished Manuscript.

Acknowledgement: This bibliography was produced as a part of our activity in the Working Group on 'Statistical and Econometric Identification of Structural Change' which is organized within IIASA's Project 'Analysis and Forecasting of Economic Structural Change'. We are indebted to IIASA, especially to Dr.Anatoli Smyshlyaev, for supporting this work.

Chapter II: LIST OF PAPERS

The list contains some 300 references to research papers. Each entry is annotated by one or more codes which refer to the subject-matter of the paper. The references are arranged in the alphabetic order of its (first) author.

The entries are constructed as follows: After the author's (or authors') names the year of publication is indicated; this is followed by the above-mentioned subject-matter codes. For each separate set of authors the entries are listed chronologically. Entries with more than one author are supplemented by entries corresponding to all other authors except the first one: Each of these supplemental entry consists of an author's name and of a reference to the original entry.

LIST OF PAPERS

Abraham,B. (1980) <4.8;M> 1
Intervention analysis and multiple time series.
Biometrika,67,73-78.

Abraham,B., Minder,C.E. (1982) <3.8> 2
A time series model with random coefficients.
Comm.Statist.,Theory and Methods,11,1381-1391.

Abraham,B., Wei,W.W.S. (1979) <4.5> 3
Inferences in a switching time series.
ASA,Proc.Business Econ.Statist.Section,354-358.

Abrams,R.M. see also
237 Royston,J.P., Abrams,R.M. (1980)

Akkina,K.R. (1974) <3.1;C> 4
Application of random coefficient regression models to the aggregation problem.
Econometrica,42,369-375.

Ali,M.M., Giaccotto,C. (1982) <1.1;NE> 5
The identical distribution hypothesis for stock market prices - location- and scale-shift alternatives.
J.Amer.Statist.Assoc.,77,19-28.

Amemiya,T. (1978) <2.6> 6
A note on a random coefficients model.
Intern.Econ.Rev.,19,793-796.

Anderson,G.J., Mizon,G.E. (1983) 7
Parameter constancy tests: old and new.
Disc.Papers Econ.Econometrics, No.8325, Univ.Southampton.

Anderson,R.L., Nelson,I.A. (1975) 8
A family of models involving straight lines and concomitant expon. designs useful in evaluating response to fertilizer nutrients.
Biometrics,31,303-310.

Anderson,T.W. (1978) <4.3;MA> 9
Repeated measurements on autoregressive processes.
J.Amer.Statist.Assoc.,73,371-378.

Aroian,L.A., Robison,D.E. (1966) <1.2> 10
Sequential life tests for the exponential distribution with changing parameter.
Technometrics,8,217-227.

Arora,S.S. (1976) <3.2;CE> 11
Alternative estimators of the determinants of inter-regional migration.
ASA,Proc.1976 Annual Meeting,217-219.

Athans,M. (1974) <3.3> 12
The importance of Kalman filtering methods for economic systems.
Ann.Econ.Soc.Measurement,3,49-64.

LIST OF PAPERS

Bacon,D.W. see also
295 Watts,D.G., Bacon,D.W. (1974)

Bacon,D.W., Watts,D.G. (1971) <2.4,2.5;A> 13
Estimating the transition between two intersecting straight lines.
Biometrika,58,525-534.

Bagshaw,M. see also
147 Johnson,R.A., Bagshaw,M. (1974)

Bagshaw,M., Johnson,R.A. (1975) <1.1,1.2,4.1> 14
The effect of serial correlation on the performance of CUSUM tests II.
Technometrics,17,73-80.

Bagshaw,M., Johnson,R.A. (1975) <1.1,1.2> 15
Sequential detection of a drift change in a Wiener process.
Comm.Statist.,4,787-796.

Bagshaw,M., Johnson,R.A. (1977) <4.3> 16
Sequential procedures for detecting parameter changes in a time-series model.
J.Amer.Statist.Assoc.,72,593-597.

Balmer,D.W. (1976) <4.6> 17
On a quickest detection problem with variable monitoring.
J.Appl.Prob.,13,760-767.

Barnard,G.A. (1959) <1.2> 18
Control charts and stochastic processes (w.discussion).
J.Roy.Statist.Soc.,B,21,239-271.

Barten,A.P., Bronsard,L.S. (1970) 19
Two-stage least-squares estimation with shifts in the structural form.
Econometrica,38,938-941.

Bass,F.M., Wittink,D.R. (1975) <3.2;E> 20
Pooling issues and methods in regression analysis with examples in marketing research.
J.Marketing Research,12,414-425.

Basseville,M., Benveniste,A. (1983) <4.2;ACE> 21
Sequential detection of abrupt changes in spectral characteristics of digital signals.
IEEE Trans.Inform.Theory,IT-29,709-724.

Bather,J.A. (1967) 22
On a quickest detection problem.
Ann.Math.Statist.,38,711-724.

Baudin,A., Nadeau,S., Westlund,A. (1984) <3.3,3.7;CE> 23
Estimation and prediction under structural instability: the case of the US pulp and paper market.
J.Forecasting,3,63-78.

LIST OF PAPERS

Bauer,P., Hackl,P. (1978) <1.1,1.2> 24
The use of MOSUMs for quality control.
Technometrics,20,431-436.

Bauer,P., Hackl,P. (1980) <1.1,1.2> 25
An extension of the MOSUM technique for quality control.
Technometrics,22,1-7.

Bauer,P., Hackl,P. (1985) <2.1;V> 26
The application of Hunter's inequality in simultaneous testing.
Biometr.J.,27,43-46.

Beckman,R.J., Cook,R.D. (1979) <2.1;AS> 27
Testing for two-phase regressions.
Technometrics,21,65-69.

Bellman,R., Roth,R. (1969) <2.3;VE> 28
Curve fitting by segmented straight lines.
J.Amer.Statist.Assoc.,64,1079-1084.

Belsley,D.A. (1973) <3.3;C> 29
The applicability of the Kalman filter in the determination of systematic parameter variation.
Ann.Econ.Soc.Measurement,2,531-533.

Belsley,D.A., Kuh,E. (1973) <3.3;C> 30
Time-varying parameter structures: an overview.
Ann.Econ.Soc.Measurement,2,375-379.

Bennett,R.J. (1977) <3.3;CS> 31
Consistent estimation of non stationary parameters for small sample situations - a Monte Carlo study.
Intern.Econ.Rev.,18,489-502.

Benveniste,A. see also
21 Basseville,M., Benveniste,A. (1983)

Bhattacharya,P.K. (1978) <1.4;A> 32
Estimation of change-point in the distribution of random variables.
Unpubl.manuscript.

Bhattacharya,P.K., Brockwell,P.J. (1976) <1.4> 33
The minimum of an additive process with applications to signal estimation and storage theory.
Z.Wahrschein.verw.Gebiete,37,51-75.

Bhattacharya,P.K., Frierson,D. (1981) <1.1;NA> 34
A non-parametric control chart for detecting small disorders.
Ann.Statist.,9,544-554.

Bhattacharyya,G.K. (1984) <1.1,1.2,1.3;NA> 35
Tests of randomness against trend or serial correlation.
In: Krishnaiah,P.R.,Sen,P.K.(Eds.),Handbook of Statistics,Vol.4.
Amsterdam:North-Holland,89-111.

LIST OF PAPERS

Bhattacharyya,G.K., Johnson,R.A. (1968) <1.1;NAS> 36
Nonparametric tests for shift at an unknown time point.
Ann.Math.Statist.,39,1731-1743.

Bhimasankaram,P. see also
192 Mitra,S.K., Bhimasankaram,P. (1971)

Blight,B.J.N. see also
55 Carter,R.L., Blight,B.J.N. (1981)

Bookstein,F.L. (1975) <2.3;V> 37
On a form of piecewise linear regression.
American Statistician,29,116-117.

Booth,N.B., Smith,A.F.M. (1982) <2.4,4.5;UM> 38
A Bayesian approach to retrospective identification of change-points.
J.Econometrics,19,7-22.

Borjas,G.J. (1982) <3.2;AC> 39
On regressing regression coefficients.
J.Statist.Planning and Inference,7,131-137.

Bowman,H.W., LaPorte,A.M. (1972) <3.6;CE> 40
Stochastic optimization in recursive equation systems with random parameter with an application to control of the money supply.
Ann.Econ.Soc.Measurement,1,419-436.

Box,G.E.P., see also
166 Ledolter,J., Box,G.E.P., Tiao,G.C. (1976)

Box,G.E.P., Tiao,G.C. (1965) <4.8;B> 41
A change in level of a non-stationary time series.
Biometrika,52,181-192.

Box,G.E.P., Tiao,G.C. (1975) <4.8> 42
Intervention analysis with applications to economic and environmental problems.
J.Amer.Statist.Assoc.,70,70-79.

Brannas,K. see also
297 Westlund,A., Brannas,K. (1979)

Brannas,K. see also
298 Westlund,A., Brannas,K. (1982)

Brannas,K., see also
299 Westlund,A., Brannas,K., Eklof,J.A., Stenlund,K. (1981)

Brannas,K., Uhlin,S. (1984) <2.3;EC> 43
Improper use of the ordinary least squares estimator in the switching regression model.
Comm.Statist.,Theory and Methods,13,1781-1791.

LIST OF PAPERS

Bretschneider,S.I., Carbone,R., Longini,R.L. (1979) <3.7> 44
An adaptive approach to time series forecasting.
Decision Sciences,10,232-244.

Bretschneider,S.I., Carbone,R., Longini,R.L. (1982) <3.7> 45
An adaptive multivariate approach to time series forecasting.
Decision Sciences,13,666-680.

Brockwell,P.J. see also
33 Bhattacharya,P.K., Brockwell,P.J. (1976)

Broemeling,L.D. see also
57 Chin_Choy,J.H., Broemeling,L.D. (1980)

Broemeling,L.D. see also
131 Holbert,D., Broemeling,L.D. (1977)

Broemeling,L.D. see also
160 Land,M., Broemeling,L.D. (1983)

Broemeling,L.D. see also
193 Moen,D.H., Broemeling,L.D. (1984)

Broemeling,L.D. (1972) <1.5> 46
Bayesian procedures for detecting a change in a sequence of random variables.
Metron,XXX-N-1-4,31-XII,1-14.

Broemeling,L.D. (1974) <1.5> 47
Bayesian inference about a changing sequence of random variables.
Comm.Statist.,3,243-255.

Broemeling,L.D. (1977) <1.5> 48
Forecasting future values of a changing sequence.
Comm.Statist.,A6,87-102.

Broemeling,L.D. (1977) <3.9;8> 49
Forecasting future values of a changing sequence.
Comm.Statist.,A6,87-102.

Broemeling,L.D., see also
240 Salazar,D., Broemeling,L.D., Chi,A. (1981)

Broemeling,L.D., Chin_Choy,J.H. (1981) <2.4> 50
Detecting structural change in linear models.
Comm.Statist.,A10,2551-2561.

Bronsard,L.S. see also
19 Barten,A.P., Bronsard,L.S. (1970)

Brown,R.L., Durbin,J. (1968) <2.1,2.2> 51
Methods or investigating whether a regression relationship is constant over time.
Selected Statistical Papers I. Amsterdam:Mathematisch Centrum, European Meeting,37-45.

LIST OF PAPERS

Brown,R.L., Durbin,J., Evans,J.M. (1975) <2.1,2.3,2.2;V> 52
Techniques for testing the constancy of regression relationships over time (w.discussion).
J.Roy.Statist.Soc.,B,37,149-192.

Bucy,R.S. see also
150 Kalman,R.E., Bucy,R.S. (1961)

Burnett,T.D., Guthrie,D. (1970) <3.8;S> 53
Estimation of stationary stochastic regression parameters.
J.Amer.Statist.Assoc.,65,1547-1553.

Carbone,R., see also
44 Bretschneider,S.I., Carbone,R., Longini,R.L. (1979)

Carbone,R., see also
45 Bretschneider,S.I., Carbone,R., Longini,R.L. (1982)

Carbone,R., Longini,R.L. (1977) <3.7> 54
A feedback model for automated real estate assessment.
Manag.Science,24,241-248.

Carleton,W.T. see also
184 McGee,V.E., Carleton,W.T. (1970)

Carter,R.L., Blight,B.J.N. (1981) <2.4;E> 55
A Bayesian change-point problem with an application to the prediction and detection of ovulation in women.
Biometrics,37,743-751.

Chapman,P., see also
128 Hinkley,D.V., Chapman,P., Ranger,G. (1980)

Chaturvedi,A. see also
273 Srivastava,V.K., Mishra,G.D., Chaturvedi,A. (1981)

Chernoff,H., Zacks,S. (1964) <1.4,1.1;BXCS> 56
Estimating the current mean of a normal distribution which is subjected to changes in time.
Ann.Math.Statist.,35,999-1018.

Chi,A. see also
240 Salazar,D., Broemeling,L.D., Chi,A. (1981)

Chin_Choy,J.H. see also
50 Broemeling,L.D., Chin_Choy,J.H. (1981)

Chin_Choy,J.H., Broemeling,L.D. (1980) <2.4;E> 57
Some Bayesian inferences for a changing linear model.
Technometrics,22,71-78.

Choudhry,N.K., see also
264 Singh,B., Nagar,A.L., Choudhry,N.K., Raj,B. (1976)

LIST OF PAPERS

Chow,G.C. (1960) <2.1> 58
Tests of equality between sets of coefficients in two linear regressions.
Econometrica,28,591-605.

Chow,G.C. (1984) <2.1,2.3> 59
Random and changing coefficient models.
In: Griliches,Z.,Intriligator,M.D.,Handbook of Econometrics,Vol.2.
Amsterdam:North-Holland,1213-1245.

Cobb,G.W. (1978) <1.4;CBE> 60
The problem of the Nile: conditional solution to a changepoint problem.
Biometrika,65,243-251.

Cook,D.G. see also
268 Smith,A.F.M., Cook,D.G. (1980)

Cook,R.D. see also
27 Beckman,R.J., Cook,R.D. (1979)

Cooley,T.F. (1975) <3.5;C> 61
A comparison of robust and varying parameter estimates of a macro-econometric model.
Ann.Econ.Soc.Measurement,4,373-388.

Cooley,T.F. (1977) <3.2> 62
Generalized least squares applied to time varying parameter models: a comment.
Ann.Econ.Soc.Measurement,6,313-314.

Cooley,T.F., DeCanio,S.J. (1977) <3.5> 63
Rational expectations in American agriculture 1866-1914.
Rev.Econ.Statist.,59,9-17.

Cooley,T.F., Prescott,E.G. (1973) <2.6> 64
An adaptive regression model.
Intern.econ.Rev.,14,364-371.

Cooley,T.F., Prescott,E.G. (1973) <3.5;E> 65
Varying parameter regression: a theory and some applications.
Ann.Econ.Soc.Measurement,2,463-473.

Cooley,T.F., Prescott,E.G. (1976) <3.5;A> 66
Estimation in the presence of stochastic parameter variation.
Econometrica,44,167-184.

Cooley,T.F., Rosenberg,B., Wall,K.D. (1977) <3.3> 67
A note on optimal smoothing for time varying coefficient problems.
Ann.Econ.Soc.Measurement,6,453-456.

Cooper,J.P. (1973) <2.6,3.6> 68
Time-varying regression coefficients: a mixed estimation approach and operational limitations of the general Markov structure.
Ann.Econ.Soc.Measurement,2,525-553.

LIST OF PAPERS

Cox,M.G. (1971) <2.8> 69
Curve fitting with piecewise polynomials.
J.Inst.Maths.Applics.,8,36-52.

Curnow,R.N. (1973) <2.3,2.8;E> 70
A smooth population response curve based on an abrupt threshold and plateau model for individuals.
Biometrics,29,1-10.

Darkhovskh,B.S. (1976) <1.1;N> 71
A nonparametric method for the a posteriori detection of the "disorder" time of a sequence of independent random variables.
Theory Prob.Appl.,21,178-183.

Davis,P.S. see also
209 Parhizgari,A.M., Davis,P.S. (1978)

Dent,W.T., Hildreth,C. (1977) <3.4;CS> 72
Maximum likelihood estimation in random coefficient models.
J.Amer.Statist.Assoc.,72,69-72.

Desnayes,J., Picard,D. (1980) <2.1;A> 73
Tests de rupture de regression: comparaison asymptotique.
Techn.Report, Universite de Paris-Sud, Department de Mathmatique.

DeCanio,S.J. see also
63 Cooley,T.F., DeCanio,S.J. (1977)

Diaz,J. (1982) <1.5> 74
Bayesian detection of a change of scale parameter in sequences of independent gamma random variables.
J.Econometrics,19,23-29.

Dielman,T., see also
310 Wright,R.L., Dielman,T., Nantell,T.J. (1977)

Draper,N.R., Guttman,I., Lipow,P. (1977) <2.8> 75
All-bias designs for spline functions, joined at the axes.
J.Amer.Statist.Assoc.,72,424-429.

Dufour,J.-M. (1982) <2.1;C> 76
Recursive stability analysis of linear regression relationships.
J.Econometrics,19,31-76.

Dufour,J.-M. (1982) <2.1;E> 77
Predictive tests for structural change and the St.Louis equation.
ASA,Proc.Business Econ.Statist.Section,323-329.

Duncan,D.B. see also
132 Horn,S.D., Horn,R.A., Duncan,D.B. (1975)

Duncan,D.B., Horn,S.D. (1972) <3.3> 78
Linear dynamic recursive estimation from the view-point of regression analysis.
J.Amer.Statist.Assoc.,67,815-821.

LIST OF PAPERS

Durbin,J. see also
51 Brown,R.L., Durbin,J. (1968)

Durbin,J., see also
52 Brown,R.L., Durbin,J., Evans,J.M. (1975)

Eklof,J.A., see also
299 Westlund,A., Brannas,K., Eklof,J.A., Stenlund,K. (1981)

El-Sayyad,G.M. (1975) <2.4> 79
A Bayesian analysis of the change-point problem.
Egypt.Statist.J.,19,1-13.

El-Shaarawi,A.H. see also
82 Esterby,S.R., El-Shaarawi,A.H. (1981)

Enns,P.G., Wrobleski,W.J. (1974) <3.3;CE> 80
A Bayesian model for explaining money supply growth rates.
ASA,Proc.1974 Annual Meeting,361-366.

Ertel,J.E., Fowlkes,E.B. (1976) <2.8;V> 81
Some algorithms for linear spline and piecewise multiple regression.
J.Amer.Statist.Assoc.,71,640-648.

Esterby,S.R., El-Shaarawi,A.H. (1981) <2.1,2.3> 82
Inference about the point of change in a regression model.
Appl.Statist.,30,277-285.

Eubank,R.L. (1984) <0.1,2.8> 83
Approximate regression models and splines.
Comm.Statist.,Theory and Methods,13,433-484.

Evans,J.M. see also
52 Brown,R.L., Durbin,J., Evans,J.M. (1975)

Faith,R. (1980) <2.1,2.3;NP> 84
Perception of short duration sounds.
Biostatistics Casebook,3,19-43. Stanford Univ.,Div.of Biostat.

Farley,J.U. see also
122 Hinich,M., Farley,J.U. (1966)

Farley,J.U., Hinich,M.J. (1970) <2.1;S> 85
A test for a shifting slope coefficient in a linear model.
J.Amer.Statist.Assoc.,65,1320-1329.

Farley,J.U., Hinich,M.J. (1970) <1.5> 86
Detecting "small" mean shifts in time series.
Manag.Science,17,189-200.

Farley,J.U., Hinich,M.J., McGuire,T.W. (1975) <2.1;CS> 87
Some comparisons of tests for a shift in the slopes of a multivariate linear time series model.
J.Econometrics,3,297-318.

LIST OF PAPERS

Fearn,T. (1975) <3.6;C> 88
A Bayesian approach to growth curves.
Biometrika,62,89-100.

Feder,P.I. (1975) <2.3,2.7,2.8;A> 89
On asymptotic distribution theory in segmented regression problems - identified case.
Ann.Statist.,3,49-83.

Feder,P.I. (1975) <2.1;A> 90
The log likelihood ratio in segmented regression.
Ann.Statist.,3,84-97.

Feder,P.I., Sylvester,D.L. (1968) <2.3;A> 91
On the asymptotic theory of least squares estimation in segmented regression: identified case (abstract).
Ann.Math.Statist.,39,1362.

Ferreira,P.E. (1975) <2.4;CS> 92
A Bayesian analysis of a switching regression model: known number of regimes.
J.Amer.Statist.Assoc.,70,370-374.

Fisher,F.M. (1970) <2.1> 93
Tests of equality between sets of coefficients in two linear regressions.
Econometrica,38,361-366.

Fisher,G. see also
182 McAleer,M., Fisher,G. (1992)

Fowlkes,E.B. see also
81 Ertel,J.E., Fowlkes,E.B. (1976)

Franzini,L., Harvey,A.C. (1970) <4.6;CT> 94
Testing for deterministic trend and seasonal components in time series models.
Biometrika,70,673-682.

Freebairn,J.W., Rausser,G.C. (1974) <3.3;E> 95
Updating parameter estimates: a least squares approach with an apolication to the inventory of beef cows.
Rev.Marketing and Agricultural Economics,42,83-99.

Freeman,J.M. (1984) <2.1,2.3;CE> 96
Two-phase regression and goodness of fit.
Comm.Statist.,Theory and Methods,13,1321-1334.

Frierson,D. see also
34 Bhattacharya,P.K., Frierson,D. (1981)

Froehlich,B.R. (1973) <3.2;CS> 97
Some estimators for a random coefficient regression model.
J.Amer.Statist.Assoc.,68,329-335.

LIST OF PAPERS

Fuller,W.A. see also
99 Gallant,A.R., Fuller,W.A. (1973)

Gallant,A.R. (1977) <2.3,2.7;VA> 98
Testing a nonlinear regression specification: a nonregular case.
J.Amer.Statist.Assoc.,72,523-530.

Gallant,A.R., Fuller,W.A. (1973) <2.3,2.7;VE> 99
Fitting segmented polynomial regression models whose join points have to be estimated.
J.Amer.Statist.Assoc.,68,144-147.

Garbade,K. (1977) <2.1,2.3,2.6;CSE> 100
Two methods for examining the stability of regression coefficients.
J.Amer.Statist.Assoc.,72,54-63.

Gardner,L.A. (1969) <1.1;V> 101
On detecting changes in the mean of normal variates.
Ann.Math.Statist.,40,116-126.

Gentle,J.E. see also
263 Talwar,P.P., Gentle,J.E. (1981)

Ghazal,G.A. see also
191 Mikhail,W.M., Ghazal,G.A. (1979)

Giaccotto,C. see also
5 Ali,M.M., Giaccotto,C. (1982)

Goldfeld,S.M., Quandt,R.E. (1972) 102
Non-linear Methods in Econometrics.
Amsterdam:North-Holland.

Goldfeld,S.M., Quandt,R.E. (1973) <2.1,2.3,2.5> 103
A Markov model for switching regressions.
J.Econometrics,1,3-15.

Goldfeld,S.M., Quandt,R.E. (1973) <2.1,2.3,2.5> 104
The estimation of structural shifts by switching regressions.
Ann.Econ.Soc.Measurement,2,475-485.

Goldfeld,S.M., Quandt,R.E. (1976) 105
Studies in Nonlinear Estimation.
Cambridge/Mass.:Ballinger Publ.Co.

Goldsmith,P.L. see also
306 Woodward,R.H., Goldsmith,P.L. (1964)

Griffiths,D.A., Miller,A.J. (1973) <2.3,2.5> 106
Hyperbolic regression - a model based on two-phase piecewise linear regression with a smooth transition between regimes.
Comm.Statist.,2,501-569.

Griffiths,W.E. (1972) <3.2;C> 107
Estimation of actual response coefficients in the Hildreth-Houck random coefficient model.
J.Amer.Statist.Assoc.,67,333-335.

LIST OF PAPERS

Gutnery,S.B. (1974) <2.8;V> 108
Partition regression.
J.Amer.Statist.Assoc.,69,945-947.

Guthrie,D. see also
53 Burnett,T.D., Guthrie,D. (1970)

Guttman,I., see also
75 Draper,N.R., Guttman,I., Lipow,P. (1977)

Hackl,P. see also
24 Bauer,P., Hackl,P. (1978)

Hackl,P. see also
25 Bauer,P., Hackl,P. (1980)

Hackl,P. see also
26 Bauer,P., Hackl,P. (1985)

Hackl,P. (1978) <2.1> 109
Moving sums of residuals: a tool for testing constancy of regression relationships over time.
In: Janssen,J.M.L.,e.a.(Eds.),Models and Decision Making in National Economies. Amsterdam:North-Holland,219-225.

Hackl,P. (1980) <2.1;CST> 110
Testing the constancy of regression relationships over time.
Goettingen:Vandenhoeck und Ruprecht.

Hanssens,D.M. see also
172 Liu,L.-M., Hanssens,D.M. (1981)

Harrison,M.J. see also
183 McCabe,B.P.M., Harrison,M.J. (1980)

Harvey,A.C. see also
94 Franzini,L., Harvey,A.C. (1970)

Harvey,A.C. (1984) 111
A unified view of statistical forecasting procedures (w.disc.).
J.Forecasting,3,245-283.

Hatanaka,M. (1980) <3.3;A> 112
A note on the application of the Kalman filter to regression models with some parameters varying over time and others unvarying.
Australian J.Statistics,22,298-306.

Havenner,A., Swamy,P.A.V.B. (1981) 113
A random coefficient approach to seasonal adjustment of economic time series.
J.Econometrics,15,177-209.

Hawkins,D.M. (1976) <2.3;VE> 114
Point estimation of the parameters of piecewise regression models.
Appl.Statist.,25,51-57.

LIST OF PAPERS

Hawkins,D.M. (1977) <1.1;A> 115
Testing a sequence of observations for a shift in location.
J.Amer.Statist.Assoc.,72,180-186.

Hawkins,D.M. (1984) <4.2;A> 116
Sequential procedures for detecting deviations in the parameters of the autoregressive model from specified targets.
Comm.Statist.,Sequential Analysis,3,121-154.

Heckman,J.J. (1978) <2.3;M> 117
Dummy endogenous variables in a simultaneous equations system.
Econometrica,46,931-959.

Hegninian,S.M. see also
107 Lee,A.F.S., Hegninian,S.M. (1977)

Hendry,D.F., Richard,J.-F. (1982) 118
On the formulation of empirical models in dynamic econometrics.
J.Econometrics,20,9-33.

Herzberg,A.M., Hickie,J.S. (1981) <1.1;ME> 119
An investigation of Andrews' plots to show time variation of model parameters.
J.Time Series Analysis,2,233-262.

Hickie,J.S. see also
119 Herzberg,A.M., Hickie,J.S. (1981)

Hildreth,C. see also
72 Dent,W.T., Hildreth,C. (1977)

Hildreth,C., Houck,J.P. (1968) <3.2;A> 120
Some estimators for a linear model with random coefficients.
J.Amer.Statist.Assoc.,63,584-595.

Hines,W.G.S. (1976) <1.2,1.1> 121
A simple monitor of a system with sudden parameter changes.
IEEE Trans.Inform.Theory,IT-22,210-216.

Hinich,M., Farley,J.U. (1966) <1.3;3> 122
Theory and application of an estimation model for time series with nonstationary means.
Manag.Science,12,648-658.

Hinich,M.J. see also
85 Farley,J.U., Hinich,M.J. (1970)

Hinich,M.J. see also
86 Farley,J.U., Hinich,M.J. (1970)

Hinich,M.J., see also
87 Farley,J.U., Hinich,M.J., McGuire,T.W. (1975)

Hinkley,D.V. (1969) <2.1;A> 123
Inference about the intersection in two-phase regression.
Biometrika,56,495-504.

LIST OF PAPERS

Hinkley,D.V. (1970) <1.1> 124
Inference about the change-point in a sequence of random variables.
Biometrika,57,1-17.

Hinkley,D.V. (1971) <2.1,2.3> 125
Inference in two-phase regression.
J.Amer.Statist.Assoc.,66,736-743.

Hinkley,D.V. (1971) <1.1,1.2> 126
Inference about the change-point from cumulative sum tests.
Biometrika,58,509-523.

Hinkley,D.V. (1972) <1.1;AT> 127
Time-ordered classification.
Biometrika,59,509-523.

Hinkley,D.V., Chapman,P., Ranger,G. (1980) <0.1> 128
Change-point problem.
Tecnn.Report Nr.362, Univ.Minnesota, School of Statistics.

Hinkley,D.V., Hinkley,E.A. (1970) <1.1,1.3;AT> 129
Inference about the change-point in a sequence of binomial variables.
Biometrika,57,477-488.

Hinkley,E.A. see also
129 Hinkley,D.V., Hinkley,E.A. (1970)

Holbert,D. (1982) <2.4> 130
A Bayesian analysis of a switching linear model.
J.Econometrics,19,77-87.

Holbert,D., Broemeling,L.D. (1977) <1.5,2.4> 131
Bayesian inference related to shifting sequences and two-phase regression.
Comm.Statist.,A6,265-275.

Horn,R.A., see also
132 Horn,S.D., Horn,R.A., Duncan,D.B. (1975)

Horn,S.D. see also
78 Duncan,D.B., Horn,S.D. (1972)

Horn,S.D., Horn,R.A., Duncan,D.B. (1975) <3.2;CV> 132
Estimating heteroscedastic variances in linear models.
J.Amer.Statist.Assoc.,70,380-385.

Houck,J.P. see also
120 Hildreth,C., Houck,J.P. (1968)

Hsiao,C. (1974) <3.2;AC> 133
Statistical inference for a model with both random cross-sectional and time effects.
Intern.Econ.Rev.,15,12-30.

LIST OF PAPERS

Hsiao,C. (1975) <3.2;AC> 134
Some estimation methods for a random coefficient model.
Econometrica,43,305-325.

Hsieh,H.K. (1984) <1.3;NATC> 135
Nonparametric tests for scale shift at an unknown time point.
Comm.Statist.,Theory and Methods,13,1335-1355.

Hsu,D.A. see also
300 Wichern,D.W., Miller,R.B., Hsu,D.A. (1976)

Hsu,D.A. (1977) <1.3,1.2;TSC> 136
Tests for variance shift at an unknown time point.
Appl.Statist.,26,279-284.

Hsu,D.A. (1979) <1.3;TE> 137
Detecting shifts of parameter in gamma sequences with applications to stock prices and air traffic flow analysis.
J.Amer.Statist.Assoc.,74,31-40.

Hsu,D.A. (1982) <2.4,1.5;E> 138
A Bayesian robust detection of shift in the risk structure of stock-market returns.
J.Amer.Statist.Assoc.,77,29-39.

Hsu,D.A. (1982) <2.4;RE> 139
Robust inferences for structural shift in regression models.
J.Econometrics,19,89-107.

Hudson,D.J. (1966) <2.3;V> 140
Fitting segmented curves whose join points have to be estimated.
J.Amer.Statist.Assoc.,61,1097-1129.

Inselmann,E.H. (1968) <2.1> 141
Test for several regression equations (abstract).
Ann.Math.Statist.,39,1362.

Irvine,J.M. (1982) <2.1;CSR> 142
Testing for changes in regime in regression models..
ASA,Proc.Business Econ.Statist.Section,317-322.

Johnson,K.H. (1974) <3.1,3.2;CS> 143
On estimating models with random coefficients.
ASA,Proc.1974 Annual Meeting,420-425.

Johnson,L.W. (1977) <0.1> 144
Stochastic parameter regression: an annotated bibliography.
Intern.Statist.Rev.,45,257-272.

Johnson,L.W. (1978) <3.4;S> 145
Some simulation results for the linear expenditure system with random marginal budget shares.
J.Statist.Comput.Simulation,7,225-236.

LIST OF PAPERS

Johnson,L.W. (1980) <0.1> 146
Stochastic parameter regression: an additional annotated bibliography.
Intern.Statist.Rev.,48,95-102.

Johnson,R.A. see also
14 Bagshaw,M., Johnson,R.A. (1975)

Johnson,R.A. see also
15 Bagshaw,M., Johnson,R.A. (1975)

Johnson,R.A. see also
16 Bagshaw,M., Johnson,R.A. (1977)

Johnson,R.A. see also
36 Bhattacharyya,G.K., Johnson,R.A. (1968)

Johnson,R.A., Bagshaw,M. (1974) <1.1,1.2,4.1;AS> 147
The effect of serial correlation on the performance of CUSUM tests.
Technometrics,16,1,103-112.

Kahl,D.R., Ledolter,J. (1983) <3.9> 148
A recursive Kalman filter forecasting approach.
Manag.Science,29,1325-1333.

Kalman,R.E. (1960) <3.3,4.4;M> 149
A new approach to linear filtering and prediction problems.
J.Basic Engeneering,82,35-45.

Kalman,R.E., Bucy,R.S. (1961) <3.3,4.4;M> 150
New results in linear filtering and prediction theory.
J.Basic Engeneering,83,95-108.

Kaminskas,V.A., Sipenite,D.A. (1975) 151
Detection of a parameter change of an autoregression progress.
TAN Citov,4,143-148.

Kander,Z., Zacks,S. (1966) <1.1;BT> 152
Test procedures for possible changes in parameters of statistical distributions occurring at unknown time points.
Ann.Math.Statist.,37,1196-1210.

Kastenbaum,M.A. (1959) <2.3> 153
A confidence interval on the abscisse of the point of intersection of two fitted linear regressions.
Biometrics,15,323-324.

Kenett,R., Pollak,M. (1983) <1.2;CT> 154
On sequential detection of a shift in the probability of a rare event.
J.Amer.Statist.Assoc.,78,389-395.

Kiefer,N.M. (1978) <2.3,2.7,2.5,3.4;AVC> 155
Discrete parameter variation: efficient estimation of a switching regression model.
Econometrica,46,427-434.

LIST OF PAPERS

Kiefer,N.M. (1980) <3.2> 156
Estimation of fixed effect models for time series of cross-sections with arbitrary intertemporal covariance.
J.Econometrics,14,195-202.

Kligiene,N. (1973) 157
On the estimation of the change-point in the auto-regressive sequence.
Proceedings of the 2nd Seminar on Experimental Simulating and Solving of Probability Problems. Liblice-Prague,82-93.

Kuh,E. see also
30 Belsley,D.A., Kuh,E. (1973)

Kuh,E. (1974) 158
An essay on aggregation theory and practice.
In: Sellekaerts,W.(Ed.),Econometrics and Economic Theory: Essays in Honour of Jan Tinbergen. London:Macmillan,57-99.

Kumar,K.D., Nicklin,E.H., Paulson,A.S. (1979) <1.4;CS> 159
Comment on 'Estimating mixtures of normal distributions and switching regressions'.
J.Amer.Statist.Assoc.,74,52-55.

Land,M., Broemeling,L.D. (1983) <2.4,2.5,2.9,3.9;B> 160
Bayesian forecasting with changing linear models.
Comm.Statist.,Theory and Methods,12,1421-1430.

Laumas,G.S. (1977) <3.5;E> 161
Liquidity functions for the United States manufactoring corporations.
Southern Economic Journal,44,271-276.

Laumas,G.S. (1978) <3.5;E> 162
A test of the stability of the demand for money.
Scott.J.Polit.Economy,25,239-251.

Laumas,G.S., Mehra,Y.P. (1977) <3.5;E> 163
The stability of the demand for money functions 1900-1974.
J.Finance,32,911-916.

LaMotte,R.L., McWhorter,A. (1978) 164
An exact test for the presence of random walk coefficients in a linear regression.
J.Amer.Statist.Assoc.,73,816-820.

LaPorte,A.M. see also
40 Bowman,H.W., LaPorte,A.M. (1972)

Ledolter,J. see also
148 Kani,D.R., Ledolter,J. (1983)

Ledolter,J. (1981) <4.3;S> 165
Recursive estimation and adaptive forecasting in ARIMA models with time varying coefficients.
In: Findley,D.F.(ed.),Applied Time Series Analysis II. London: Academic Press,449-471.

LIST OF PAPERS

Ledolter,J., Box,G.E.P., Tiao,G.C. (1976) 166
Topics in time series analysis for various aspects of parameter changes in ARIMA model.
Techn.Report No.449, Dept.Statistics, Univ.Wisconsin, Madison.

Lee,A.F.S., Heghinian,S.M. (1977) <1.5> 167
A shift of the mean level in a sequence of independent normal random variables - a Bayesian approach.
Technometrics,19,503-506.

Leon,R.P. (1980) 168
Analyzing shifts in time series.
In: Bogocci,e.a.(Eds.),Proceedings of the American Marketing Assoc. of Educators' Conference,375-379.

Lerman,P.M. (1980) <2.3,2.7;E> 169
Fitting segmented regression models by grid search.
Appl.Statist.,29,77-84.

Lipow,P. see also
75 Draper,N.R., Guttman,I., Lipow,P. (1977)

Little,J.D.C. (1966) <3.3;DSRS> 170
A model of adaptive control of promotional spending.
Operations Research,14,1075-1097.

Liu,L.-M. (1981) <3.6;E> 171
Estimation of random coefficient regression models.
J.Statist.Computation and Simulation,13,27-39.

Liu,L.-M., Hanssens,D.M. (1981) <3.6;CE> 172
A Bayesian approach to time-varying cross-sectional regression models.
J.Econometrics,15,341-356.

Lombard,F. (1981) <2.1,2.2;N> 173
An invariance principle for sequential nonparametric test statistics under contiguous alternatives.
South African Statist.J.,15,129-152.

Lombard,F. (1983) <2.1,2.2;N> 174
Asymptotic distributions of rank statistics in the change-point problem.
South African Statist.J.,17,254-268.

Longini,R.L. see also
44 Bretschneider,S.I., Carbone,R., Longini,R.L. (1979)

Longini,R.L. see also
45 Bretschneider,S.I., Carbone,R., Longini,R.L. (1982)

Longini,R.L. see also
54 Carbone,R., Longini,R.L. (1977)

LIST OF PAPERS

MacNeill,I.B. (1974) <1.3;AT> 175
Tests for change of parameter at unknown times and distributions of some related functionals on Brownian motion.
Ann.Statist.,2,950-962.

MacNeill,I.B. (1978) <2.1;A> 176
Properties of sequences of partial sums of polynomial regression residuals with appl.to tests for change of regr.at unkn.times (*)
Ann.Statist.,6,422-433.

Maddala,G.S., Nelson,F.D. (1975) 177
Switching regression models with exogenous and endogenous switching.
ASA,Proc.Business Econ.Statist.Section,423-426.

Maddala,G.S., Trost,R.P. (1981) <2.3;MC> 178
Alternative formulations of the Nerlove-Press models.
J.Econometrics,16,35-49.

Mahajan,L.S. see also
1d0 Mahajan,Y.L., Mahajan,L.S. (1977)

Mahajan,Y.L. (1977) 179
Estimation of the monetarist model using varying parameter framework and its implication.
ASA,Proc.1977 Annual Meeting,595-599.

Mahajan,Y.L., Mahajan,L.S. (1977) <3.8;C> 180
Efficiency of varying parameter estimator in a reduciple simultaneous equation system.
ASA,Proc.1977 Annual Meeting,349-353.

Maronna,R., Yohai,V.J. (1978) <2.1;ATS> 181
A bivariate test for the detection of a systematic change in mean.
J.Amer.Statist.Assoc.,73,640-645.

McAleer,M., Fisher,G. (1982) <2.1;AE> 182
Testing separate regression models subject to specification error.
J.Econometrics,19,31-76.

McCabe,B.P.M., Harrison,M.J. (1980) <2.1;CS> 183
Testing the constancy of regression relationships over time using least squares residuals.
Appl.Statist.29,142-148.

McGee,V.E., Carleton,W.T. (1970) <2.3;VES> 184
Piecewise regression.
J.Amer.Statist.Assoc.,65,1109-1124.

McGilchrist,C.A., Woodyer,K.D. (1975) <1.1,1.2;N> 185
Note on a distribution-free CUSUM technique.
Technometrics,17,321-325.

McGuire,T.W. see also
87 Farley,J.U., Hinich,M.J., McGuire,T.W. (1975)

LIST OF PAPERS

LIST OF PAPERS

Mizon,G.E. see also
7 Anderson,G.J., Mizon,G.E. (1983)

Moen,D.H., Broemeling,L.D. (1984) <2.4;ME> 193
Testing for a change in the regression matrix of a multivariate linear model.
Comm.Statist.,Theory and Methods,13,901-914.

Murthy,G.V.S.N. (1976) <3.2> 194
On the estimation of generalised functional form with random coefficients.
Sankhya,C,38,37-43.

Mustafi,C.K. (1968) <1.1,1.4;A> 195
Inference problems about parameters which are subjected to changes over time.
Ann.Math.Statist.,39,840-854.

Nadeau,S., see also
23 Baudin,M., Nadeau,S., Westlund,A. (1984)

Nadler,J., Robbins,N.B. (1971) <1.1,1.2> 196
Some characteristics of Page's two-sided procedure for detecting a change in location parameter.
Ann.Math.Statist.,42,538-551.

Nagar,A.L., see also
264 Singh,B., Nagar,A.L., Choudhry,N.K., Raj,B. (1976)

Nantell,T.J. see also
310 Wright,R.L., Dielman,T., Nantell,T.J. (1977)

Narasimham,G.V.L., see also
186 McWhorter,A., Narasimham,G.V.L., Simonds,R.R. (1977)

Narasimham,G.V.L., see also
189 Mehta,J.S., Narasimham,G.V.L., Swamy,P.A.V.B. (1978)

Nash,J.C., Price,K. (1980) 197
Fitting two straight lines.
Proc.Computer Science and Statistics 12th Annual Symp.on the Interface, Waterloo.

Nelder,J.A. (1968) <3.4;CE> 198
Regression, model-building and invariance.
J.Roy.Statist.Soc.,Ser.A,131,305-315.

Nelson,F.D. see also
177 Maddala,G.S., Nelson,F.D. (1975)

Nelson,I.A. see also
8 Anderson,R.L., Nelson,I.A. (1975)

Nicholls,D.F. see also
222 Quinn,B.G., Nicholls,D.F. (1982)

LIST OF PAPERS

LIST OF PAPERS

Park,S.H. (1978) <2.3,2.8;V> 210
Experimental designs for fitting segmented polynomial regression models.
Technometrics,20,151-154.

Parson,L.J., Schultz,R.L. (1976) <3.5;E> 211
Marketing Models and Econometric Research.
Amsterdam:North-Holland,155-164.

Paulson,A.S. see also
159 Kumar,K.D., Nicklin,E.H., Paulson,A.S. (1979)

Pettitt,A.N. (1979) <1.1;NC> 212
A non-parametric approach to the change-point problem.
Appl.Statist.,28,126-135.

Pettitt,A.N. (1980) <1.3,1.4;ACS> 213
A simple cumulative sum type statistic for the change-point problem with zero-one observations.
Biometrika,67,79-84.

Picard,D. see also
73 Desnayes,J., Picard,D. (1980)

Ploberger,W. (1983) <2.1;AC> 214
Testing the constancy of parameters in linear models.
Techn.Report, Techn.Univ.,Vienna, Dept.Econometrics.

Poirier,D.J. (1973) <2.3> 215
Piecewise regression using cubic splines.
J.Amer.Statist.Assoc.,68,515-524.

Poirier,D.J. (1976) <0.1,2.3,2.8;B> 216
The Econometrics of Structural Change.
Amsterdam:North-Holland.

Poirier,D.J., Ruud,P.A. (1981) <2.5> 217
On the appropriateness of endogenous switching.
J.Econometrics,16,249-256.

Pollak,M. see also
154 Kemett,R., Pollak,M. (1983)

Prescott,E.G. see also
64 Cooley,T.F., Prescott,E.G. (1973)

Prescott,E.G. see also
65 Cooley,T.F., Prescott,E.G. (1973)

Prescott,E.G. see also
66 Cooley,T.F., Prescott,E.G. (1976)

Price,K. see also
197 Nash,J.C., Price,K. (1980)

LIST OF PAPERS

Quandt,R.E. see also
102 Goldfeld,S.M., Quandt,R.E. (1972)

Quandt,R.E. see also
103 Goldfeld,S.M., Quandt,R.E. (1973)

Quandt,R.E. see also
104 Goldfeld,S.M., Quandt,R.E. (1973)

Quandt,R.E. see also
105 Goldfeld,S.M., Quandt,R.E. (1976)

Quandt,R.E. (1958) <2.1,2.3> 218
The estimation of the parameters of a linear regression system obeying two separate regimes.
J.Amer.Statist.Assoc.,53,873-880.

Quandt,R.E. (1960) <2.1,2.3> 219
Tests of the hypothesis that a linear system obeys two separate regimes.
J.Amer.Statist.Assoc.,55,324-330.

Quandt,R.E. (1972) <2.1,2.3,2.5> 220
A new approach to estimating switching regressions.
J.Amer.Statist.Assoc.,67,306-310.

Quandt,R.E., Ramsay,J.B. (1978) <1.4,2.3> 221
Estimating mixtures of normal distributions and switching regressions (invited paper, with comments).
J.Amer.Statist.Assoc.,73,730-752.

Quinn,B.G., Nicholls,D.F. (1982) <4.3;A> 222
Testing for the randomness of autoregressive coefficients.
J.Time Series Anal.,3,123-135.

Raj,B. see also
264 Singh,B., Nagar,A.L., Choudhry,N.K., Raj,B. (1976)

Raj,B. (1975) <3.3;CS> 223
Linear regression with random coefficients: the finite sample and convergence properties.
J.Amer.Statist.Assoc.,70,127-137.

Raj,B., Srivastava,V.K., Upadhyaya,S. (1980) <3.2> 224
The efficiency of estimating a random coefficient model.
J.Econometrics,12,285-299.

Raj,B., Ullah,A. (1981) <3.2> 225
Econometrics, a varying coefficients approach.
London:Croom Helm.

Ramirez,M.M. (1984) <2.1;E> 226
A modification to some proposed tests in relation to the problem of switching regression models.
Comm.Statist.,Theory and Methods,13,901-914.

LIST OF PAPERS

LIST OF PAPERS

Rosenberg,B. (1973) <3.6;CV> 235
The analysis of a cross-section of time series by stochastically convergent parameter regression.
Ann.Econ.Soc.Measurement,2,399-428.

Rosenberg,B. (1977) <3.3> 236
Estimation error covariance in regression with sequentially varying parameters.
Ann.Econ.Soc.Measurement,6,457-462.

Rosenberg,B., see also
67 Cooley,T.F., Rosenberg,B., Wall,K.D. (1977)

Roth,R. see also
28 Bellman,R., Roth,R. (1969)

Royston,J.P., Abrams,R.M. (1980) <1.1,1.2;E> 237
An objective method for detecting the shift in basal body temperature in women.
Biometrics,36,217-224.

Rubin,H. (1950) <3.4> 238
Note on random coefficients.
In: Koopmans,T.C.(Ed.),Statistical Inference in Dynamic Economic Models. New York:Wiley,419-21.

Ruud,P.A. see also
217 Poirier,D.J., Ruud,P.A. (1981)

Salazar,D. (1982) <4.5,2.4,2.5;E> 239
Structural changes in time series models.
J.Econometrics,19,147-163.

Salazar,D., Broemeling,L.D., Chi,A. (1981) <2.4,3.6;cR> 240
Parameter changes in a regression model with autocorrelated errors.
Comm.Statist.,A10,1751-1758.

Salmon,M., Wallis,K.F. (1982) 241
Model validation and forecast comparison: theoretical and practical considerations.
In: Chow,G.C.,Corsi,P.(Eds),Evaluating the Reliability of Macro-Economic Models. London:Wiley.

Sanderson,A.C. see also
250 Sagen,J., Sanderson,A.C. (1980)

Sant,D.T. (1977) <3.2;A> 242
Generalized least squares applied to time varying parameters models.
Ann.Econ.Soc.Measurement,6,301-314.

Sarris,A.H. (1973) <3.3> 243
A Bayesian approach to estimation of time-varying regression coefficients.
Ann.Econ.Soc.Measurement,2,501-523.

LIST OF PAPERS

LIST OF PAPERS

Sen,P.K. (1980) <2.1;NA> 255
Asymptotic theory of some tests for a possible change in the regression slope occurring at an unknown time point.
Z.Wahrschein.verw.Gebiete,52,203-218.

Sen,P.K. (1982) <2.1;NA> 256
Asymptotic theory of some tests for constancy of regression relationships over time.
Math.Operationsforsch.Statist.,13,21-31.

Sen,P.K. (1983) 257
Some recursive residual rank tests for change-points.
In: Rizvi,M.H.(Ed.),Recent Advances in Statistics: Papers in Honor of Herman Chernoff's Sixtieth Birthday. New York:Acad.Press,371-391.

Sen,P.K. (1983) <1.1,1.2;A> 258
Tests for change-points based on recursive U-statistics.
Comm.Statist.,Sequential Analysis,1,263-284,(1982-83).

Sen,P.K. (1984) <2.1,2.2;NA> 259
Nonparametric procedures for some miscellaneous problems.
In: Krishnaian,P.R.,Sen,P.K.(Eds.),Handbook of Statistics,Vol.4.
Amsterdam:North-Holland,699-739.

Shaban,S.A. (1980) <0.1> 260
Change point problem and two-phase regression: an annotated bibliography.
Intern.Statist.Rev.,48,83-94.

Sheflin,N. see also
292 Tsurumi,H., Sheflin,N. (1982)

Shiba,T. see also
293 Tsurumi,H., Shiba,T. (1982)

Shiryaev,A.N. (1963) <1.2,1.1> 261
On optimum methods in quickest detection problems.
Theor.Prob.Appl.,8,22-46.

Shiryaev,A.N. (1965) 262
Some exact formulas in a "disorder" problem.
Theor.Prob.Appl.,10,348-354.

Simonds,R.R. see also
186 McWhorter,A., Narasimham,G.V.L., Simonds,R.R. (1977)

Simos,E.O. (1977) <3.5;E> 263
The demand for money specification based on the stability criterion: empirical evidence for the Italian economy.
Riv.Intern.Szienze Economiche e Commerciali,24,943-951.

Singh,B., Nagar,A.L., Choudhry,N.K., Raj,B. (1976) <3.2,3.4;CE> 264
On the estimation of structural change: a generalization of the random coefficients regression models.
Intern.Econ.Rev.,17,340-361.

LIST OF PAPERS

Singh,B., Ullah,A. (1974) <3.2;AC> 265
Estimation of seemingly unrelated regressions with random coefficients.
J.Amer.Statist.Assoc.,69,191-195.

Singpurwalla,N.D. (1974) <2.3> 266
Estimation of the join point in a heteroscedastic regression model arising in accelerated life tests.
Comm.Statist.,3,853-863.

Sipenite,D.A. see also
151 Kaminskas,V.A., Sipenite,D.A. (1975)

Smith,A.F.M. see also
38 Booth,N.B., Smith,A.F.M. (1982)

Smith,A.F.M. (1975) <1.5> 267
A Bayesian approach to inference about a change-point in a sequence of random variables.
Biometrika,62,407-416.

Smith,A.F.M., Cook,D.G. (1980) <2.4,3.6;E> 268
Straight lines with a change-point: a Bayesian analysis of some renal transplant data.
Appl.Statist.,29,180-189.

Smith,P.L. (1982) <2.4,3.6;E> 269
Hypothesis testing in b-spline regression.
Comm.Statist.,Theory and Methods,11,143-157.

Spivey,W.A., see also
187 McWhorter,A., Spivey,W.A., Wrobleski,W.J. (1976)

Sprent,P. (1961) <2.1> 270
Some hypotheses concerning two-phase regression lines.
Biometrics,17,634-645.

Srivastava,M.S. see also
251 Sen,A., Srivastava,M.S. (1973)

Srivastava,M.S. see also
252 Sen,A., Srivastava,M.S. (1975)

Srivastava,M.S. see also
253 Sen,A., Srivastava,M.S. (1975)

Srivastava,T.N. (1967) 271
A problem in life testing with changing failure rate.
Defence Sci.J.,17,163-168.

Srivastava,T.N. (1975) <1.6;A> 272
Life tests with periodic change in failure rate - grouped observations.
J.Amer.Statist.Assoc.,70,394-397.

LIST OF PAPERS

Srivastava,V.K., see also
224 Raj,B., Srivastava,V.K., Upadhyaya,S. (1980)

Srivastava,V.K., Mishra,G.D., Chaturvedi,A. (1981) <3.2;V> 273
Estimation of linear regression model with random coefficients ensuring almost non-negativity of variance estimators.
Biometr.J.,23,3-8.

Stenlund,K. see also
299 Westlund,A., Brannas,K., Eklof,J.A., Stenlund,K. (1981)

Sunder,S. (1975) <3.5;E> 274
Stock price and risk related to accounting changes in inventory valuation.
Account.Rev.,50,305-315.

Sunder,S. (1980) 275
Stationarity of market risk: random coefficients tests for individual stocks.
J.Finance,35,883-896.

Swamy,P.A.V.B. see also
113 Havenner,A., Swamy,P.A.V.B. (1981)

Swamy,P.A.V.B. see also
189 Mehta,J.S., Narasimham,G.V.L., Swamy,P.A.V.B. (1978)

Swamy,P.A.V.B. (1970) <3.2;ACE> 276
Efficient inference in a random coefficient regression model.
Econometrica,38,311-323.

Swamy,P.A.V.B. (1971) <3.2;ACE> 277
Statistical inference in random coefficient regression models.
Berlin:Springer.

Swamy,P.A.V.B. (1973) <3.4,3.8;C> 278
Criteria, constraints and multicollinearity in random coefficient regression models.
Ann.Econ.Soc.Measurement,2,429-450.

Swamy,P.A.V.B., Mehta,J.S. (1975) <2.3,2.4,3.6;CM> 279
Bayesian and non-bayesian analysis of switching regressions and of random coefficient regression models.
J.Amer.Statist.Assoc.,70,593-602.

Swamy,P.A.V.B., Mehta,J.S. (1977) <3.2;A> 280
Estimation of linear models with time and cross-sectionally varying coefficients.
J.Amer.Statist.Assoc,72,890-898.

Swamy,P.A.V.B., Tinsley,P.A. (1980) <3.9;E> 281
Linear prediction and estimation methods for regression models with stationary stochastic coefficients.
J.Econometrics,12,103-142.

LIST OF PAPERS

Sylvester,D.L. see also
91 Feder,P.I., Sylvester,D.L. (1968)

Talwar,P.P. (1983) <1.1;TCR> 282
Detecting a shift in location. Some robust tests.
J.Econometrics,23,353-367.

Talwar,P.P., Gentle,J.E. (1981) <1.3;CR> 283
Detecting a scale shift in a random sequence at an unknown time point.
Appl.Statist.,30,301-304.

Tanaka,K. (1983) <2.1,2.6;A> 284
Non-normality of the Lagrange multiplier statistics for testing the constancy of regression coefficients.
Econometrica,51,1577-1582.

Tiao,G.C. see also
41 Box,G.E.P., Tiao,G.C. (1965)

Tiao,G.C. see also
42 Box,G.E.P., Tiao,G.C. (1975)

Tiao,G.C. see also
166 Ledolter,J., Box,G.E.P., Tiao,G.C. (1975)

Tinsley,P.A. see also
281 Swamy,P.A.V.B., Tinsley,P.A. (1980)

Tishler,A., Zang,I. (1979) 285
A switching regression method using inequality conditions.
J.Econometrics,11,259-274.

Toyoda,T. (1974) <2.1;T> 286
Use of the Chow test under heteroscedasticity.
Econometrica,42,601-609.

Trost,R.P. see also
178 Maddala,G.S., Trost,R.P. (1981)

Tsurumi,H. (1977) 287
A Bayesian test of a parameter shift with an application.
J.Econometrics,6,371-80.

Tsurumi,H. (1978) <2.4;ME> 288
A Bayesian test of a parameter shift in a simultaneous equation with an application to a macro savings function.
Econ.Stud.Quart.,24,216-230.

Tsurumi,H. (1980) <2.4,2.5;M> 289
A Bayesian estimation of structural shifts by gradual switching regressions with an application to the US gasoline market.
In: Zellner,A.(ed.),Bayesian Analysis in Econometrics and Statistics - Essays in Honour of H.Jeffreys. Amsterdam:North-Holland,213-240.

LIST OF PAPERS

Tsurumi,H. (1982) <2.4;MC> 290
A Bayesian and maximum likelihood analysis of a gradual switching regression in a simultaneous equation framework.
J.Econometrics,19,165-182.

Tsurumi,H. (1983) <2.4,2.3,2.5;CSR> 291
A Bayesian and maximum likelihood analysis of a gradual switching regression model with sampling experiments.
Econ.Stud.Quarterly,34,237-246.

Tsurumi,H., Sheflin,N. (1982) <2.4;E> 292
Bayesian tests of a parameter shift under heteroscedasticity: weighted-t vs. double-t approaches.
Comm.Statist.,Theory and Methods,13,1003-1013.

Tsurumi,H., Shiba,T. (1982) <3.6;CS> 293
A Bayesian analysis of a random coefficient model in a simple Keynesian model.
J.Econometrics,18,239-249.

Unlin,S. see also
43 Brannas,K., Unlin,S. (1984)

Ullah,A. see also
225 Raj,B., Ullah,A. (1981)

Ullah,A. see also
265 Singh,B., Ullah,A. (1974)

Upadhyaya,S. see also
224 Raj,B., Srivastava,V.K., Upadhyaya,S. (1980)

Van_Dobben_de_Bruyn,C.S. (1968) <1.1,1.2;VT> 294
Cumulative Sum Tests: Theory and Practice.
London:Griffin.

Wall,K.D. see also
67 Cooley,T.F., Rosenberg,B., Wall,K.D. (1977)

Wallis,K.F. see also
241 Salmon,M., Wallis,K.F. (1982)

Watts,D.G. see also
13 Bacon,D.W., Watts,D.G. (1971)

Watts,D.G., Bacon,D.W. (1974) <2.3,2.5> 295
Using an hyperbola as a transition model to fit two-regime straight-line data.
Technometrics,16,369-373.

Wei,W.W.S. see also
3 Abraham,B., Wei,W.W.S. (1979)

Westlund,A. see also
23 Baudin,A., Nadeau,S., Westlund,A. (1984)

LIST OF PAPERS

Westlund,A. (1983) <3.9;R> 296
A note on partial structural variability and prediction bias effects in id-systems.
Proc.44th ISI Meeting (Madrid), 329-332.

Westlund,A., Brannas,K. (1979) <3.3> 297
On the recursive estimation of stochastic and time-varying parameters in econometric systems.
In: Iracki,e.a.(Eds.),Optimization Techniques. Berlin:Springer,414-422.

Westlund,A., Brannas,K. (1982) <3.3;RS> 298
Robustness properties of a Kalman filter estimator in interdependent systems with time-varying parameters.
In: Charatsis,(Ed.),Selected Papers on Contemporary Econometric Problems. Amsterdam:North-Holland,49-73.

Westlund,A., Brannas,K., Eklof,J.A., Stenlund,K. (1981) <3.3;CERS> 299
Econometrics and Stochastic Control in Macro-Economic Planning.
Stocknolm:Almqvist & Wiksell.

Wichern,D.W., Miller,R.B., Hsu,D.A. (1976) <4.1;SF> 300
Changes of variance in first-order autoregressive time series models - with an application.
Appl.Statist.,25,248-256.

Wilton,D.A. (1975) <2.3,2.5> 301
Structural shift with an inter-structural transition function.
Canad.J.Economics,8,423-432.

Wimmer,G. (1980) <3.8;CE> 302
Estimation of random regression parameters.
Biometr.J.,22,131-139.

Wittink,D.R. see also
20 Bass,F.M., Wittink,D.R. (1975)

Wittink,D.R. (1977) <3.1;E> 303
Exploring territorial differences in the relationship between marketing variables.
J.Market.Research,14,145-155.

Wold,S. (1974) <2.8> 304
Spline functions in data analysis.
Technometrics,16,1-11.

Wolfe,D.A., Schechtman,E. (1984) <1.1;NCS> 305
Nonparametric statistical procedures for the changepoint problem.
J.Stat.Planning and Inference,9,389-396.

Woodward,R.H., Goldsmith,P.L. (1964) <1.1,1.2> 306
Cumulative Sum Techniques.
Monogr.3, ICI Ser.on Math.& Statist.Techniques f.Industry.
Edinburgh:Oliver and Boyd.

LIST OF PAPERS

Chapter III: LIST OF AUTHORS BY SUBJECT MATTER CODE

SUBJECT-MATTER CODE = 0.1	
Chapman,P.	1
Eubank,R.L.	1
Hinkley,D.V.	1
Johnson,L.W.	2
Poirier,D.J.	1
Ranger,G.	1
Shaban,S.A.	1

SUBJECT-MATTER CODE = 1.1	
Abrams,R.M.	1
Ali,M.M.	1
Bagshaw,M.	3
Bauer,P.	2
Bhattacharya,P.K.	1
Bhattacharyya,G.K.	2
Chernoff,H.	1
Darkhovshk,B.S.	1
Frierson,D.	1
Gardner,L.A.	1
Giaccotto,C.	1
Goldsmith,P.L.	1
Hackl,P.	2
Hawkins,D.M.	1
Herzberg,A.M.	1
Hickie,J.S.	1
Hines,W.G.S.	1
Hinkley,D.V.	4
Hinkley,E.A.	1
Johnson,R.A.	4
Kander,Z.	1
McGilchrist,C.A.	1
Mustafi,C.K.	1
Nadler,J.	1
Pettitt,A.N.	1
Robbins,N.B.	1
Royston,J.P.	1
Sanderson,A.C.	1
Schechtman,E.	2
Segen,J.	1
Sen,A.	3
Sen,P.K.	2
Shiryaev,A.N.	1
Srivastava,M.S.	3
Talwar,P.P.	1
Van_Dobben_de_Bruyn,C.S.	1
Wolfe,D.A.	1
Woodward,R.H.	1
Woodyer,K.D.	1
Worsley,K.J.	2
Zacks,S.	2

SUBJECT-MATTER CODE = 1.2	
Abrams,R.M.	1
Aroian,L.A.	1
Bagshaw,M.	3
Barnard,G.A.	1
Bauer,P.	2
Bhattacharyya,G.K.	1
Goldsmith,P.L.	1
Hackl,P.	2
Hines,W.G.S.	1
Hinkley,D.V.	1
Hsu,D.A.	1
Johnson,R.A.	3
Kenett,R.	1
McGilchrist,C.A.	1
Nadler,J.	1
Page,E.S.	3
Pollak,M.	1
Robbins,N.B.	1
Robison,D.E.	1
Royston,J.P.	1
Sanderson,A.C.	1
Segen,J.	1
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Shiryaev,A.N.	1
Van_Dobben_de_Bruyn,C.S.	1
Woodward,R.H.	1
Woodyer,K.D.	1

SUBJECT-MATTER CODE = 1.3	
Bhattacharyya,G.K.	1
Farley,J.U.	1
Gentle,J.E.	1
Hinich,M.	1
Hinkley,D.V.	1
Hinkley,E.A.	1
Hsieh,H.K.	1
Hsu,D.A.	2
MacNeill,I.B.	1
Pettitt,A.N.	1
Sanderson,A.C.	1
Segen,J.	1
Sen,P.K.	1
Talwar,P.P.	1

SUBJECT-MATTER CODE = 1.4	
Bhattacharya,P.K.	2
Brockwell,P.J.	1
Chernoff,H.	1
Cobb,G.W.	1
Kumar,K.D.	1
Mustafi,C.K.	1
Nicklin,E.H.	1
Paulson,A.S.	1
Pettitt,A.N.	1
Quandt,R.E.	1
Ramsay,J.B.	1
Schechtman,E.	1
Schmidt,P.	1
Zacks,S.	1

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Broemeling,L.D.	4
Diaz,J.	1
Farley,J.U.	1
Heghinian,S.M.	1
Hinich,M.J.	1
Holbert,D.	1
Hsu,D.A.	1
Lee,A.F.S.	1
Menzefricke,U.	1
Smith,A.F.M.	1

SUBJECT-MATTER CODE = 1.6	
Srivastava,T.N.	1

SUBJECT-MATTER CODE = 2.1	
Bauer,P.	1
Beckman,R.J.	1
Brown,R.L.	2
Chow,G.C.	2
Cook,R.J.	1
Desnayes,J.	1
Dufour,J.-M.	2
Durbin,J.	2
El-Shaarawi,A.H.	1
Esterby,S.R.	1
Evans,J.M.	1
Faith,R.	1
Farley,J.U.	2
Feder,P.I.	1
Fisher,F.M.	1
Fisher,G.	1
Freeman,J.M.	1
Garbade,K.	1
Goldfeld,S.M.	2
Hackl,P.	3
Harrison,M.J.	1
Hinich,M.J.	2
Hinkley,D.V.	2
Inselmann,E.H.	1
Irvine,J.M.	1
Lombard,F.	2
MacNeill,I.B.	1
Maronna,R.	1
McAleer,M.	1
McCabe,B.P.M.	1
McGuire,T.W.	1
Picard,D.	1
Plooberger,W.	1
Quandt,R.E.	5
Ramirez,M.M.	1
Rea,J.D.	1
Schneeberger,H.	1
Schweder,T.	1
Sen,P.K.	3
Sprent,P.	1
Tanaka,K.	1
Toyoda,T.	1
Yohai,V.J.	1

SUBJECT-MATTER CODE = 2.2	
Brown,R.L.	2
Durbin,J.	2
Evans,J.M.	1
Lombard,F.	2
Sen,P.K.	1

SUBJECT-MATTER CODE = 2.3	
Bacon,D.W.	1
Bellman,R.	1
Bookstein,F.L.	1
Brannas,K.	1
Brown,R.L.	1
Carleton,W.T.	1
Chow,G.C.	1
Curnow,R.N.	1
Durbin,J.	1
El-Shaarawi,A.H.	1
Esterby,S.R.	1
Evans,J.M.	1
Faith,R.	1
Feder,P.I.	2
Freeman,J.M.	1
Fuller,W.A.	1
Gallant,A.R.	2
Garbade,K.	1
Goldfeld,S.M.	2
Griffiths,D.A.	1
Hawkins,D.M.	1
Heckman,J.J.	1
Hinkley,D.V.	1
Hudson,D.J.	1
Kastenbaum,M.A.	1
Kiefer,N.M.	1
Lerman,P.M.	1
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McGee,V.E.	1
Mehta,J.S.	1
Miller,A.J.	1
Park,S.H.	1
Poirier,D.J.	1
Quandt,R.E.	6
Ramsay,J.B.	1
Rao,P.S.E.S.	1
Robison,D.E.	1
Roth,R.	1
Schmidt,P.	1
Schulze,U.	1
Singpurwalla,N.D.	1
Swamy,P.A.V.B.	1
Sylvester,D.L.	1
Trost,R.P.	1
Tsurumi,H.	1
Uhlin,S.	1
Watts,D.G.	1
Wilton,D.A.	1
Worsley,K.J.	1

SUBJECT-MATTER CODE = 2.4	
Bacon,D.W.	1
Blight,B.J.N.	1
Booth,N.B.	1
Broemeling,L.D.	6
Carter,R.L.	1
Chi,A.	1
Chin_Choy,J.H.	2
Cook,D.G.	1
El-Sayyad,G.M.	1
Ferreira,P.E.	1
Holbert,D.	2
Hsu,D.A.	2
Land,M.	1
Mehta,J.S.	1
Moen,D.H.	1
Ohtani,K.	1
Salazar,D.	2
Sheflin,N.	1
Smith,A.F.M.	2
Smith,P.L.	1
Swamy,P.A.V.B.	1
Tsurumi,H.	5
Watts,D.G.	1

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Goldfeld,S.M.	2
Griffiths,D.A.	1
Kiefer,N.M.	1
Land,M.	1
Miller,A.J.	1
Ohtani,K.	1
Poirier,D.J.	1
Quandt,R.E.	3
Ruud,P.A.	1
Salazar,D.	1
Tsurumi,H.	2
Watts,D.G.	2
Wilton,D.A.	1

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Cooley,T.F.	1
Cooper,J.P.	1
Garbade,K.	1
Prescott,E.G.	1
Tanaka,K.	1

SUBJECT-MATTER CODE = 2.7	
Feder,P.I.	1
Fuller,W.A.	1
Gallant,A.R.	2
Kiefer,N.M.	1
Lerman,P.M.	1

SUBJECT-MATTER CODE = 2.8	
Cox,M.G.	1
Curnow,R.N.	1
Draper,N.R.	1
Ertel,J.E.	1
Eubank,R.L.	1
Feder,P.I.	1
Fowlkes,E.B.	1
Gutnery,S.B.	1
Guttman,I.	1
Lipow,P.	1
Park,S.H.	1
Poirier,D.J.	2
Wold,S.	1

SUBJECT-MATTER CODE = 2.9	
Broemeling,L.D.	1
Land,M.	1

SUBJECT-MATTER CODE = 3.1	
Akkina,K.R.	1
Johnson,K.H.	1
Rao,C.R.	1
Wittink,D.R.	1

SUBJECT-MATTER CODE = 3.2	
Arora,S.S.	1
Bass,F.M.	1
Borjas,G.J.	1
Chaturvedi,A.	1
Choudhry,N.K.	1
Cooley,T.F.	1
Davis,P.S.	1
Dielman,T.	1
Duncan,D.B.	1
Froehlich,B.R.	1
Griffiths,W.E.	1
Hildreth,C.	1
Horn,R.A.	1
Horn,S.D.	1
Houck,J.P.	1
Hsiao,C.	2
Johnson,K.H.	1
Kiefer,N.M.	1
Mehta,J.S.	1
Mishra,G.D.	1
Murthy,G.V.S.N.	1
Nagar,A.L.	1
Nantell,T.J.	1
Parnizgari,A.M.	1
Raj,B.	3
Rao,U.L.G.	1
Sant,D.T.	1
Singh,B.	2
Srivastava,V.K.	2
Swamy,P.A.V.B.	3
Ullah,A.	2
Upadhyaya,S.	1
Wittink,D.R.	1
Wright,R.L.	1

SUBJECT-MATTER CODE = 3.3	
Athans,M.	1
Baudin,A.	1
Belsley,D.A.	2
Brannas,K.	3
Bucy,K.S.	1
Cooley,T.F.	1
Duncan,D.B.	1
Eklof,J.A.	1
Enns,P.G.	1
Freebairn,J.W.	1
Hatanaka,M.	1
Horn,S.D.	1
Kalman,R.E.	2
Kuh,E.	1
Little,J.D.C.	1
McWhorter,A.	2
Nadeau,S.	1
Narasimham,G.V.L.	1
Otter,P.W.	1
Rausser,G.C.	1
Rosenberg,B.	2
Sarris,A.H.	1
Simonds,R.R.	1
Spivey,W.A.	1
Stenlund,K.	1
Wall,K.D.	1
Westlund,A.	4
Wrobleski,W.J.	2

SUBJECT-MATTER CODE = 3.4	
Choudhry,N.K.	1
Dent,W.T.	1
Hildreth,C.	1
Johnson,L.W.	1
Kiefer,N.M.	1
Mehra,R.K.	1
Nagar,A.L.	1
Nelder,J.A.	1
Norberg,R.	1
Pagan,A.R.	1
Raj,B.	1
Rosenberg,B.	2
Rubin,H.	1
Singh,B.	1
Swamy,P.A.V.B.	1

SUBJECT-MATTER CODE = 3.5	
Cooley,T.F.	4
DeCanio,S.J.	1
Laumas,G.S.	3
Mehra,Y.P.	1
Parson,L.J.	1
Prescott,E.G.	2
Schultz,R.L.	1
Simos,E.O.	1
Sunder,S.	1

SUBJECT-MATTER CODE = 3.6	
Bowman,H.W.	1
Broemeling,L.D.	1
Chi,A.	1
Cook,D.G.	1
Fearn,T.	1
Hanssens,D.M.	1
LaPorte,A.M.	1
Liu,L.-M.	2
Mehta,J.S.	1
Rosenberg,B.	1
Salazar,D.	1
Shiba,T.	1
Smith,A.F.M.	1
Smith,P.L.	1
Swamy,P.A.V.B.	1
Tsurumi,H.	1

SUBJECT-MATTER CODE = 3.7	
Baudin,A.	1
Bretschneider,S.I.	2
Carbone,R.	3
Longini,R.L.	3
Nadeau,S.	1
Westlund,A.	1

SUBJECT-MATTER CODE = 3.8	
Abraham,B.	1
Bennett,R.J.	1
Burnett,T.D.	1
Cooper,J.P.	1
Ghazal,G.A.	1
Guthrie,D.	1
Mahajan,L.S.	1
Mahajan,Y.L.	1
Miknail,W.M.	1
Minder,C.E.	1
Raj,B.	1
Rosenberg,B.	1
Swamy,P.A.V.B.	1
Wimmer,G.	1

SUBJECT-MATTER CODE = 3.9	
Broemeling,L.D.	2
Kahl,D.R.	1
Land,M.	1
Ledolter,J.	1
Swamy,P.A.V.B.	1
Tinsley,P.A.	1
Westlund,A.	1

SUBJECT-MATTER CODE = 4.1	
Bagshaw,M.	2
Hsu,D.A.	1
Johnson,R.A.	2
Miller,R.B.	1
Sanderson,A.C.	1
Segen,J.	1
Wichern,D.W.	1

SUBJECT-MATTER CODE = 4.2	
Basseville,M.	1
Benveniste,A.	1
Hawkins,D.M.	1
Sanderson,A.C.	1
Segen,J.	1

SUBJECT-MATTER CODE = 4.3	
Anderson,T.W.	1
Bagshaw,M.	1
Johnson,R.A.	1
Ledolter,J.	1
Nicholls,D.F.	1
Quinn,B.G.	1

SUBJECT-MATTER CODE = 4.4	
Bucy,R.S.	1
Kalman,R.E.	2

SUBJECT-MATTER CODE = 4.5	
Abraham,B.	1
Booth,N.B.	1
Salazar,D.	1
Smith,A.F.M.	1
Wei,W.W.S.	1

SUBJECT-MATTER CODE = 4.6	
Balmer,D.W.	1
Franzini,L.	1
Harvey,A.C.	1

SUBJECT-MATTER CODE = 4.8	
Abraham,B.	1
Box,G.E.P.	2
Tiao,G.C.	2

Appendix: THE SUBJECT-MATTER CODES

A.1 Introduction

The entries in the List of Papers (Chapter II) are annotated according to their subject-matter. The corresponding codes consist of two digits which are separated by a period. The first digit indicates the following areas of statistical methodology:

0. General
1. Analysis of Constancy in a Sequence of Random Variables Ordered by Time
2. Analysis of Constancy in Regression Models
3. Estimation of Regression Models with Time-Varying Parameters
4. Analysis of Constancy in Time Series Models

Each entry is annotated by up to four codes. In addition, the following code letters are used to qualify the subject-matter in more detail:

A Asymptotic Properties
B Bayesian Methods
C Comparison of Procedures
E Examples, Numerical Illustrations
M Multivariate Procedures
N Non-Parametric Methods
P Parametric Methods
R Robustness
S (Monte Carlo) Simulation Results
T Tables, Charts
U Univariate Procedures
V Computational Methods
X Non-Bayesian Methods

References annotated to concern analysis of constancy in

sequences of random variables (1.x), in regression models (2.x), and in time series models (4.x) concentrate on methods to detect non-constancies in the respective models. The remaining references (3.x) discuss the analysis of regression models with time varying parameters. The short descriptions of the several subject-matter codes given in the next section are not intended to be complete.

A.2 Annotated List of the Subject-Matter Codes

0. General

0.1 Bibliography, survey.

1. Analysis of Constancy in a Sequence of Random Variables

1.1 Test for a change in the expectation. The change can be sudden or can continue over a certain period of time; the variance can be known or unknown.

1.2 Sequential test procedures for non-constancy.

1.3 Test for a change of parameters other than the mean or for a change of the whole distribution.

1.4 Estimation concerning the change-point; estimation of the distribution parameters; sample theoretic approach.

1.5 Bayesian inference concerning the change-point and/or the distribution parameters.

1.6 Estimation procedures concerning other parameters than the expectation in the presence of non-constancy.

2. Analysis of Constancy in Regression Models

2.1 Test procedures for non-constancy of regression coefficients of linear regression models. The disturbance variance can be constant or can change also in time.

2.2 Sequential test procedures for the detection of non-constancy.

2.3 Inference concerning the linear regression model in the presence of non-constancy; sample theoretic approach. Methods for estimating the unknown change-point, distributional properties of such an estimate, and inference on the regression model parameters may be treated.

2.4 Bayesian inference in linear regression models in the presence of non-constancy.

2.5 Special switching mechanisms.

2.6 Regression models with time-varying parameters. The mechanism of variation is assumed to be in action during the whole time of observation and may be deterministic or stochastic.

2.7 Inference concerning non-constancy of non-linear regression models.

2.8 Methods of inference for models based on spline functions.

2.9 Forecasting under non-constancy.

3. Estimation of Regression Models with Time-Varying Parameters

3.1 Ordinary least-squares estimation.

3.2 Generalized least-squares estimation (including the Hildreth-Houck and Swamy procedures).

3.3 Filtering and smoothing procedures.

3.4 Maximum likelihood estimation.

3.5 The varying parameter (VPR) procedure.

3.6 Bayesian estimation.

3.7 Adaptive estimation (AEP) procedures.

3.8 Other procedures.

3.9 Forecasting procedures in the presence of non-constant parameters.

4. Analysis of Constancy in Time Series Models

4.1 Test procedures for non-constancy of the mean and/or variance in ARIMA models.

4.2 Sequential test procedures for the detection of non-constancy of an ARIMA model.

4.3 Test procedures for non-constancy of parameters different from mean and variance in ARIMA models.

4.4 Estimation of parameters of an ARIMA model in the presence of non-constancy; sample theoretic approach.

4.5 Bayesian inference concerning the parameters of an ARIMA model in the presence of non-constancy.

4.6 Inference for models different from ARIMA models.

4.7 Forecasting under non-constancy.

4.8 Inference concerning time dependence of (partially) known structure. Test and parameter estimation procedures; the non-constancy is assumed to have a known onset and/or form (cf. intervention analysis).

A.3 Number of Papers for Each Subject-Matter Code

Code	Number	Code	Number	Code	Number	Code	Number
1.1	60	2.1	60	3.1	4	4.1	9
1.2	35	2.2	8	3.2	42	4.2	5
1.3	15	2.3	57	3.3	38	4.3	6
1.4	15	2.4	37	3.4	16	4.4	3
1.5	13	2.5	21	3.5	15	4.5	5
1.6	1	2.6	6	3.6	17	4.6	3
		2.7	6	3.7	11	4.7	-
		2.8	14	3.8	14	4.8	5
		2.9	2	3.9	8		