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Thomas A. Knetsch

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To My Parents

Preface

I have written the dissertation while I was a member of the Ph.D.-Program "Applied Microeconomics" jointly organized by the Economic Departments of the Humboldt-Universität zu Berlin and the Freie Universität Berlin. During this period, I obtained financial assistance of the *Deutsche Forschungsgemeinschaft* which is gratefully acknowledged.
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Hofheim am Taunus, March 2002 Thomas Axel Knetsch.

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List of Abbreviations

ADF	augmented Dickey/Fuller
AIC	Akaike information criterion
AR	autoregressive
ARIMA	autoregressive integrated moving-average
ARMA	autoregressive moving-average
B&S	Bruno and Sachs [1985] (in tables)
C&D	Calmfors and Driffill [1988] (in tables)
DF	Dickey/Fuller
e.g.	for example
et al.	and others
etc.	and so on
GLS	general least squares
HQ	Hannan/Quinn (criterion)
i.e.	that is
KPSS	Kwiatkowski/Phillips/Shin/Schmidt
LM	Lagrange multiplier
LR	likelihood ratio
L&S	Lütkepohl and Saikkonen [2000] (in tables)
MA	moving average
OECD	Organization for Economic Co-operation and Development
OLS	ordinary least squares

p.	page
pp.	pages
PP	Phillips/Perron
SC	Schwarz criterion
SVAR	structural vector autoregressive
UK	United Kingdom (in figures and tables)
U.S.	United States of America
USA	United States of America (in figures and tables)
VAR	vector autoregressive
VECM	vector error correction model

List of Symbols

General notational conventions

Within each chapter, a symbol generally has only one meaning. In order to remain in accordance with the usual notation in the corresponding fields, the meaning of symbols changes from one chapter to another. For instance, the Greek letter Π denotes profits in Chapter 3 but the cointegrating matrix in Chapter 4. However, there are some exceptions: The variables W_t, A_t, L_t, and S_t (in logs, w_t, a_t, l_t, and s_t, respectively) indicate real wage, labor productivity, employment, and labor's share throughout the entire study.

In the empirical parts (*i.e.* Chapters 2 and 4 as well as Section 1.1.3), lower case letters generally refer to vectors and scalars, whereas matrices are denoted by upper case letters. Parameter vectors and matrices are mostly denoted by Greek letters.

General mathematical symbols

lim	limit
ln	natural logarithm (in text abbreviated by log)
e	exponential function
$\sqrt{}$	square-root
π	pi
max	maximum
inf	infimum
L	lag operator: $L^k x_t \equiv x_{t-k}$
Δ	difference operator: $\Delta^d x_t \equiv x_t - x_{t-d}$
$\sum$	sum
$\prod$	product

$\int$	integral
d	derivative
∂	partial derivative
$\times$	times
$\lvert \cdot \rvert$	absolute value

Matrix operators and special matrices

$\mathrm{rk}(\cdot)$	rank
$\mathrm{sp}(\cdot)$	space
$\mathrm{tr}(\cdot)$	trace
$\lvert \cdot \rvert$	determinant
$'$	transposed
$\perp$	orthogonal complement
I_K	$(K \times K)$ identity matrix

Statistical symbols

$E(\cdot)$	expectation
$\mathrm{Var}(\cdot)$	variance
$\mathrm{Cov}(\cdot)$	covariance
$D(\cdot)$	density
$L(\cdot)$	likelihood
$iid.$	identical and independently distributed
$N(\mu, \sigma^2)$	Gaussian distributed with mean μ and variance σ^2
$\chi^2(k)$	chi-square distributed with k degrees of freedom
$\mathrm{I}(d)$	integrated of order d
$\mathrm{CI}(d, b)$	cointegrated of order d, b
$\sim$	distributed

Other symbols

&	and
$\rightarrow$	approaches
$\forall$	for all
$\subseteq$	subset
$\in$	element
$\mid$	conditional
$\mathbb{R}^m$	m-dimensional Eucledian space