Appendix

Forecasting GDP at the regional level with many predictors

Robert Lehmann[†]
Ifo Institute – Leibniz-Institute
for Economic Research
at the University of Munich e.V.
Branch Dresden
Einsteinstr. 3
01069 Dresden, Germany
Phone: +49(0)351/26476-21
lehmann@ifo.de

Klaus Wohlrabe
Ifo Institute – Leibniz-Institute
for Economic Research
at the University of Munich e.V.
Poschingerstr. 5
81679 Munich, Germany
Phone: +49(0)89/9224-1229
wohlrabe@ifo.de

 ${\bf Table\ 1: Indicators,\ Acronyms\ and\ Transformations}$

Acronym	Indicator	Multi	Lag	Transformation
Target Variables				
GDPBW	GDP - Baden-Württemberg		2	1
GDPSAX	GDP - Free State of Saxony		3	1
GDPEG	GDP - Eastern Germany		3	1
Macroeconomic Va	ariables			
IPTOT	industrial production (IP): total (incl. construction)	X	1.5	1
IPCON	IP construction: total	X X	1.5	1 1
IPENY IPMQU	IP energy supply: total IP manufacturing: mining and quarrying	X	1.5 1.5	1
IPMAN	IP manufacturing: total	x	1.5	1
IPCAP	IP manufacturing: capital goods	\mathbf{x}	1.5	1
IPCONDUR	IP manufacturing: consumer durables	X	1.5	1
IPCONNDUR	IP manufacturing: consumer non-durables	X	1.5	1
IPINT IPCONG	IP manufacturing: intermediate goods IP manufacturing: consumer goods	X X	$1.5 \\ 1.5$	1 1
IPCHEM	IP manufacturing: consumer goods IP manufacturing: chemicals	X	1.5	1
IPMET	IP manufacturing: basic metals	x	1.5	1
IPMECH	IP manufacturing: mechanical engineering	x	1.5	1
IPMOT	IP manufacturing: motor vehicles, trailers	x	1.5	1
IPEGS	IP manufacturing: energy, gas etc. supply	X	1.5	1
IPVEM TOCON	IP manufacturing: motor vehicles, trailers etc. turnover (TO): construction	X X	1.5 1.5	1 1
TOMQD	TO: mining and quarrying, domestic	Λ.	1.5	1
TOMQF	TO: mining and quarrying, foreign		1.5	1
TOMAND	TO: manufacturing total, domestic		1.5	1
TOMANF	TO: manufacturing total, foreign		1.5	1
TOCAPD	TO: capital goods, domestic		1.5	1
TOCAPF TOCONDURD	TO: capital goods, foreign TO: consumer durables, domestic		$\frac{1.5}{1.5}$	1 1
TOCONDURF	TO: consumer durables, foreign		1.5	1
TOCONNDURD	TO: consumer non-durables, domestic		1.5	1
TOCONNDURF	TO: consumer non-durables, foreign		1.5	1
TOINTD	TO: intermediate goods, domestic		1.5	1
TOINTF TOCONGD	TO: intermediate goods, foreign TO: consumer goods, domestic		$\frac{1.5}{1.5}$	1 1
TOCONGE	TO: consumer goods, domestic TO: consumer goods, foreign		1.5	1
TOCEOD	TO: computer, electronic and optical products, domestic		1.5	1
TOCEOF	TO: computer, electronic and optical products, foreign		1.5	1
TOCHEMD	TO: chemicals, domestic		1.5	1
TOCHEMF	TO: chemicals, foreign		1.5	1
TOMECHD TOMECHF	TO: mechanical engineering, domestic TO: mechanical engineering, foreign		$\frac{1.5}{1.5}$	1 1
TOVEMD	TO: motor vehicles, trailers etc., domestic		1.5	1
TOVEMF	TO: motor vehicles, trailers etc., foreign		1.5	1
TOEGSD	TO: energy, gas etc. supply, domestic		1.5	1
TOEGSF	TO: energy, gas etc. supply, foreign		1.5	1
NOCON NOMANTOT	new orders (NO): construction NO: manufacturing total	X X	$1.5 \\ 1.5$	1 1
NOMANTOTO	NO: manufacturing total NO: manufacturing total, domestic	X	1.5	1
NOMANTOTF	NO: manufacturing total, foreign	x	1.5	1
NOMANCAP	NO: capital goods	x	1.5	1
NOMANCAPD	NO: capital goods, domestic	X	1.5	1
NOMANCAPE	NO: capital goods, foreign	X X	1.5	1 1
NOMANCONG NOMANCONGD	NO: consumer goods NO: consumer goods, domestic	X	1.5 1.5	1
NOMANCONGE	NO: consumer goods, domestic	X	1.5	1
NOMANINT	NO: intermediate goods	x	1.5	1
NOMANINTD	NO: intermediate goods, domestic	X	1.5	1
NOMANINTF	NO: intermediate goods, foreign	X	1.5	1
NOCHEMD NOCHEMF	NO: chemicals, domestic NO: chemicals, foreign	X X	1.5 1.5	1 1
NOMECHD	NO: mechanical engineering, domestic	X	1.5	1
NOMECHF	NO: mechanical engineering, domester	x	1.5	1
NOVEMD	NO: motor vehicles, trailers etc., domestic	X	1.5	1
NOVEMF	NO: motor vehicles, trailers etc., foreign	X	1.5	1
NOCEOD	NO: computer, electronic and optical products, domestic	X	1.5	1
NOCEOF CONEMPL	NO: computer, electronic and optical products, foreign construction: total employment	X	1.5 1.5	1 1
CONEMPL	construction: total employment construction: permits issued, total		1.5	1
CONHOPE	construction: housing permits issued for building		2	1
CONNREPE	construction: non-residential permits		2	1
COLLINE				
CONBPGTOT CONBPGHO	construction: building permits granted, total construction: building permits granted, new homes		$\frac{2}{2}$	1 1

 ${\bf Table\ 1: Indicators,\ Acronyms\ and\ Transformations-continued}$

Acronym	Indicator	Multi	Lag	Transformation
CONBPGNRE	construction: building permits granted, non-residentials		2	1
CONHW	construction: hours worked		2	1
WTEXMV	wholesale trade (WT): total (excl. motor vehicles)		1.5	1
WTCLFW	WT: clothing and footwear WT: chemicals		$\frac{1.5}{1.5}$	1 1
WTCHEM				
WTCONMA WTSLGF	WT: construction machinery WT: solid, liquid, gaseous fuels etc.		$\frac{1.5}{1.5}$	1 1
WTEMPL	WT: total employment		1.5	1
RSEXC	retail sales (RS): total (excl. cars)		1.5	1
NRTOT	new registrations (NR): all vehicles	x	0.5	1
NRCARS	NR: cars	X	0.5	1
NRHT	NR: heavy trucks	x	0	1
EXVOL	exports: volume index, basis 2005	X	1.5	1
IMVOL	imports: volume index, basis 2005	X	1.5	1
UNPTOT	unemployed persons (UNP): total, % of civilian labor		0	2
EMPLRCTOT	employed persons (EMPL): residence concept, total		1	1
EMPLWPCTOT	EMPL: work-place concept, total		1	1
WDAYS	working days: total		0	1
VACTOT	vacancies: total		0	1
MANHW	manufacturing: hours worked (excl. construction)		1.5	1
TREUCD	tax revenues (TR): EU customs duties		1.5	1
TRITTOT	TR: income taxes, total		1.5	1
TRVAT	TR: value added tax		1.5	1
TRVATIM	TR: value added tax on imports		1.5	1
TRVATTOT	TR: value added tax, total		1.5	1
TRWIT	TR: wage income tax		1.5	1
Finance	~		-	
MMRDTD	money market rate (MMR): day-to-day, monthly average		0	2
MMRTM	MMR: three-month, monthly average		0	2
DREUROREPO	discount rate - short term euro repo rate		0	2
GOVBY	long term government bond yield, 9-10 years		0	2
YFTBOPB	yields on fully taxed bonds outstanding (YFTBO): public bonds		0	2
YFTBOCB	YFTBO: corporate bonds		0	2
YLFBOMS	yields on listed fed. bonds outstand. mat. (YLFBOM): 3-5 years		0	2
YLFBOML	yields on listed fed. bonds outstand. mat. (YLFBOM): 5-8 years		0	2
TSPI	term spread (TS): 10 years, policy inst		0	0
TSDAY	TS: 10 years, 1Day		0	0
TSMTH	TS: 10 years, 3Month		0	0
SPRDAYPR	1Day - policy rates		0	0
SPRCTB	corporate - treasury bond		0	0
GPC23CPI	german price competition: 23 industrialized countries, basis: cpi		0	1
DAXSPI	DAX share price index		0	1
NEER	nominal effective exchange rate		0	1
VDAXNVI	VDAX: new volatility index, price index		0	2
VDAXOVI	VDAX: old volatility index, price index		0	2
M1OD	M1, overnight deposits		1	1
M2MS	M2, money supply		1	1
M3MS	M3, money supply		1	1
EMMSM1EP	EM money supply: M1, ep		1	1
EMMSM1F	EM money supply: M1, flows		1	2
EMMSM2M1I	EM money supply: M2-M1, index		1	1
EMMSM2M1F	EM money supply: M2-M1, flows		1	2
EMMSM3M2EP	EM money supply: M3-M2, ep		1	1
EMMSM3M2F	EM money supply: M3-M2, flows		1	2
BLDNB	bank lending to domestic non-banks, short term		1.5	1
BLDEI	banl lending to enterprises and individuals, short term		1.5	1
TDDE	time deposits of domestic enterprises		1.5	1
SDDE	saving deposits of domestic enterprises		1.5	1
Prices				
CPI	consumer price index		0	1
CPIEE	consumer price index (excl. energy)		0.5	1
HWWAPITOT	HWWA index of world market prices: eurozone, total		0.5	1
HWWAPIEY	HWWA index of world market prices: eurozone, energy		0.5	1
HWWAPIEEY	HWWA index of world market prices: eurozone, excl. energy		0.5	1
OIL	oil prices, euro per barrel		0	1
OILUK	brent oil price, UK average		0	1
LGP	London gold price, per US \$		0	1
IMPI	import price index		1	1
EXPI	export price index		1	1
WTPI	wholesale trade price index, 1975=100		0.5	1
PPI	producer price index		0.5	1
Wages				
WSLTOTHOU	wage and salary level (WSL): overall economy, basis: hours		1.5	1
WSLTOTHOU	WSL: overall economy, basis: monthly		1.5	1
			1.0	

3

 ${\bf Table\ 1: Indicators,\ Acronyms\ and\ Transformations-continued}$

Acronym	Indicator	Multi	Lag	Transformation
WSLMANHOU	WSL: manufacturing, basis: hours		1.5	1
WSLMANMTH	WSL: manufacturing, basis: monthly		1.5	1
Surveys				
ZEWPS	ZEW: present economic situation	X	0	0
ZEWES IFOBCIT	ZEW: economic sentiment indicator Ifo business climate industry and trade, index	X X	0	0
IFOBEIT	Ifo: business expectations industry and trade, index	X	0	0
IFOBSIT	Ifo: assessment of business situation industry and trade, index	x	0	0
IFOBCMAN	Ifo: business climate manufacturing, index	\mathbf{x}	0	0
IFOBEMAN	Ifo: business expextations manufacturing, index	X	0	0
IFOBSMAN	Ifo: assessment of business situation manufacturing, index	X	0	0
IFOEXEMAN IFOOOHMAN	Ifo: export expectations next 3 months manufacturing, balance Ifo: orders on hand manufacturing, balance	X X	0	0
IFOFOOHMAN	Ifo: foreign orders on hand manufacturing, balance	X	0	0
IFOIOFGMAN	Ifo: inventory of finished goods manufacturing, balance	x	0	0
IFOBCCAP	Ifo: business climate capital goods, balance	X	0	0
IFOBECAP	Ifo: business expectations capital goods, balance	X	0	0
IFOBSCAP	Ifo: assessment of business situation capital goods, balance	X	0	0
IFOBCCONDUR IFOBECONDUR	Ifo: business climate consumer durables, balance Ifo: business expectations consumer durables, balance	X X	0	0
IFOBSCONDUR	Ifo: assessment of business situation consumer durables, balance	X	0	0
IFOBCCONNDUR	Ifo: business climate consumer non-durables, balance	X	0	0
IFOBECONNDUR	Ifo: business expectations consumer non-durables, balance	\mathbf{x}	0	0
IFOBSCONNDUR	Ifo: assessment of business situation consumer non-durables, balance	X	0	0
IFOBCINT	Ifo: business climate intermediate goods, balance	X	0	0
IFOBEINT	Ifo: business expectations intermediate goods, balance	X	0	0
IFOBSINT IFOBCCONG	Ifo: assessment of business situation intermediate goods, balance Ifo: business climate consumer goods, balance	X X	0	0
IFOBECONG	Ifo: business expectations consumer goods, balance	X	0	0
IFOBSCONG	Ifo: assessment of business situation consumer goods, balance	X	0	0
IFOBCCON	Ifo: business climate construction, index	X	0	0
IFOBECON	Ifo: business expectations construction, index	X	0	0
IFOBSCON	Ifo: assessment of business situation construction, index	X	0	0
IFOOOHCON IFOUNFWCON	Ifo: orders on hand construction, balacne Ifo: unfavourable weather situation	X X	0	0
IFOBCWT	Ifo business climate wholesale trade, index	X	0	0
IFOBEWT	Ifo: business expextations wholesale trade, index	x	0	0
IFOBSWT	Ifo: assessment of business situation wholesale trade, index	\mathbf{x}	0	0
IFOAOIWT	Ifo: assessment of inventories wholesale trade, balance	X	0	0
IFOEOAWT	Ifo: expect. with regard to order activity next 3 months WT, balance	X	0	0
IFOBCRS IFOBERS	Ifo business climate retail sales, index Ifo: business expextations retail sales, index	X X	0	0
IFOAOIRS	Ifo: assessment of inventories retail sales, balance	X	0	0
IFOEOARS	Ifo: expect. with regard to order activity next 3 months RS, balance	x	0	0
GFKBCE	GfK consumer survey (GfK): business cycle expectations	\mathbf{x}	0	0
GFKIE	GfK: income expectations	X	0	0
GFKWTB	GfK: willingness to buy	X	0	0
GFKPL	GfK: prices over the last 12 months	X	0	0
GFKPE GFKUE	GfK: prices over the next 12 months GfK: unemployment situation over next 12 months	X X	0	0
GFKFSL	GfK: financial situation over the last 12 months	x	0	0
GFKFSE	GfK: financial situation over the next 12 months	x	0	0
GFKESL	GfK: economic situation over the last 12 months	x	0	0
GFKESE	GfK: economic situation over the next 12 months	X	0	0
GFKMPP GEKMPE	GfK: major purchases over the next 12 months	X X	0	0
GFKMPE GFKSP	GfK: major purchases over the next 12 months GfK: savings at present	X	0	0
GFKSE	GfK: savings over the next 12 months	X	0	0
GFKCCI	GfK: consumer confidence, index	x	0	0
GFKCCC	GfK: consumer confidence climate, balance	\mathbf{x}	0	0
GFKCCIN	GfK: consumer confidence indicator	X	0	0
EUCSUE	EU consumer survey (EUCS): unemploy. expect. over next 12 months	X	0	0
EUCSFSP EUCSCCI	EUCS: statement on financial situation EUCS: consumer confidence indicator	X X	0	0
EUCSESI	EUCS: consumer confidence indicator EUCS: economic sentiment indicator	X	0	0
EUBSPTIND	EU business survey (EUBS): prod. trends recent month, industry	X	0	0
EUBSOBLIND	EUBS: assessment of order-book levels, industry	X	0	0
EUBSEXOBLIND	EUBS: assessment of export oder-books level, industry	x	0	0
EUBSSFGIND	EUBS: assessment of stocks of finished products, industry	X	0	0
EUBSPEIND	EUBS: production expectations for the month ahead, industry	X	0	0
EUBSSPEIND	EUBS: selling price expectations for the month shead, industry	X X	0	0
EUBSEMPEIND EUBSINDCI	EUBS: employment expectations for the month ahead, industry EUBS: industrial confidence indicator	X	0	0
EUBSSSCI	EUBS: service sector confidence indicator	X	0	0
	EUBS: retail trade confidence indicator	X	0	0
EUBSRTCI	ECBS. retail trade confidence indicator	Λ.	0	U

4

Table 1: Indicators, Acronyms and Transformations – continued

EUBSCONCI COMBAEB International BGBIS BGBISMAN UMCS USISMP EUCSFRESI EUCSFRESI EUCSPOESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK GOVBYUS USIPTOT	EUBS: construction confidence indicator Commerzbank EarlyBird Belgium business indicator survey, whole economy Belgium business indicator survey, manufacturing (not smoothed) University of Michigan US consumer sentiment, expectations US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom	x x	0 0.5	0 0 0 0
International BGBIS BGBISMAN UMCS USISMP EUCSFRESI EUCSPOESI EUCSCZESI EUCSUKESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK GOVBYUS	Belgium business indicator survey, whole economy Belgium business indicator survey, manufacturing (not smoothed) University of Michigan US consumer sentiment, expectations US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom	•	0 0 0 0 0	0 0 0 0
BGBIS BGBISMAN UMCS USISMP EUCSFRESI EUCSESESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK	Belgium business indicator survey, manufacturing (not smoothed) University of Michigan US consumer sentiment, expectations US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0 0 0 0	0 0 0
BGBISMAN UMCS USISMP EUCSFRESI EUCSESESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK	Belgium business indicator survey, manufacturing (not smoothed) University of Michigan US consumer sentiment, expectations US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0 0 0 0	0 0 0
UMCS USISMP EUCSFRESI EUCSESESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK	University of Michigan US consumer sentiment, expectations US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0 0 0	0 0
USISMP EUCSFRESI EUCSSESI EUCSPOESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI BPUSSPI GOVBYUK	US ISM production EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0 0 0	0
EUCSFRESI EUCSESESI EUCSPOESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK	EUCS: economic sentiment indicator, France EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0	
EUCSESESI EUCSPOESI EUCSCZESI EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK GOVBYUS	EUCS: economic sentiment indicator, Spain EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		0	0
EUCSPOESI EUCSCZESI EUCSITESI EUCSUKESI DJESI50 DJIPRI EPUSSPI GOVBYUK GOVBYUS	EUCS: economic sentiment indicator, Poland EUCS: economic sentiment indicator, Czech Republic EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom			0
EUCSITESI EUCSUKESI DJESI50 DJIPRI EPUSSPI GOVBYUK GOVBYUS	EUCS: economic sentiment indicator, Italy EUCS: economic sentiment indicator, United Kingdom		U	0
EUCSUKESI DJESI50 DJIPRI SPUSSPI GOVBYUK GOVBYUS	EUCS: economic sentiment indicator, United Kingdom		0	0
OJESI50 OJIPRI SPUSSPI GOVBYUK GOVBYUS			0	0
OJIPRI SPUSSPI GOVBYUK GOVBYUS			0	0
SPUSSPI GOVBYUK GOVBYUS	EM Dow Jones EUROSTOXX index, benchmark 50		0	1
GOVBYUK GOVBYUS	Dow Jones industrials, price index		0	1
GOVBYUS	Standard & Poor's 500 stock price index		0	1
	government bond yield long term, United Kingdom		0	2
JSIPIUI	government bond yield long term, United States		0	2
	IP: United States, total		1	1
CLIAA CLITR	OECD Composite Leading Indicator (CLI): OECD, amplitude adjusted CLI: OECD, trend restored		$1.5 \\ 1.5$	0 1
CLINORM	CLI: OECD, trend restored CLI: OECD, normalised		1.5	0
CLIASAA	CLI: Asia, amplitude adjusted		1.5	0
CLIASAA	CLI: Asia, amplitude adjusted CLI: Asia, trend restored		1.5	1
CLIASNORM	CLI: Asia, normalised		1.5	0
CLICAA	CLI: China, amplitude adjusted		1.5	0
CLICTR	CLI: China, trend restored		1.5	1
CLICNORM	CLI: China, normalised		1.5	0
CLIEUAA	CLI: Euro Area, amplitude adjusted		1.5	0
CLIEUTR	CLI: Euro Area, trend restored		1.5	1
CLIEUNORM	CLI: Euro Area, normalised		1.5	0
CLIUSAA	CLI: United States, amplitude adjusted		1.5	0
CLIUSTR	CLI: United States, trend restored		1.5	1
CLIUSNORM	CLI: United States, normalised		1.5	0
ECRTE	Euro-Coin real time estimates		0	0
Regional – Eastern	-			
FOBCITEG	Ifo business climate industry and trade Eastern Germany, balance		0	0
FOBEITEG	Ifo: business expectations industry and trade Eastern Germany, balance		0	0
FOBSITEG	Ifo: assess. of business sit. indust. and trade Eastern Germany, balance		0	0
FOBCMANEG	Ifo: business climate manufacturing Eastern Germany, balance		0	0
FOBEMANEG FOBSMANEG	Ifo: business expectations manufacturing Eastern Germany, balance Ifo: assessment of business sit. manufacturing Eastern Germany, balance		0	0
FOBCCONEG	Ifo: business climate construction Eastern Germany, balance		0	0
FOBECONEG	Ifo: business expectations construction Eastern Germany, balance		0	0
FOBSCONEG	Ifo: assessment of business sit. construction Eastern Germany, balance		0	0
FOEMPECONEG	Ifo: employ. expect. next 3 months constr. Eastern Germany, balance		0	0
FOBCWTEG	Ifo business climate wholesale trade Eastern Germany, balance		0	0
FOBEWTEG	Ifo: business expectations wholesale trade Eastern Germany, balance		0	0
FOBSWTEG	Ifo: assessment of business situation WT Eastern Germany, balance		0	0
FOEMPEWTEG	Ifo: employ. expect. over next 3 months WT Eastern Germany, balance		0	0
FOBCRSEG	Ifo business climate retail sales Eastern Germany, balance		0	0
FOBERSEG	Ifo: business expectations retail sales Eastern Germany, balance		0	0
FOBSRSEG	Ifo: assessment of business situation RS Eastern Germany, balance		0	0
FOEMPERSEG	Ifo: employ. expect. over next 3 months RS Eastern Germany, balance		0	0
HCNOEG	housing construction (HC): new orders Eastern Germany		2.5	1
HCWHEG	HC: working hours Eastern Germany		2.5	1
HCTOEG	HC: turnover Eastern Germany		2.5	1
CNOEG	industry construction (IC): new orders Eastern Germany		2.5	1
CWHEG	IC: working hours Eastern Germany		2.5	1
CTOEG	IC: turnover Eastern Germany		2.5	1
PCNOEG	public construction (PC): new orders Eastern Germany		$\frac{2.5}{2.5}$	1 1
PCWHEG PCTOEG	PC: working hours Eastern Germany PC: turnover Eastern Germany		$\frac{2.5}{2.5}$	1
CONNOEG	construction: new orders Eastern Germany		2.5	1
CONTOEG	construction: new orders Eastern Germany construction: turnover Eastern Germany		2.5	1
CONFIRMEG	construction: firms Eastern Germany		2.5	1
CONEMPEG	construction: minis Eastern Germany construction: employed people Eastern Germany		2.5	1
CONFEEEG	construction: employed people Eastern Germany		2.5	1
FOCUCONEG	Ifo: capacity utilization construction, Eastern Germany		0	2
	consumer price index, Eastern Germany		1	1
CPIEG	IWH Industry Survey (IWH): business sit. manuf., Eastern Germany		0	0
CPIEG IWHSITMANEG	, , , , , , , , , , , , , , , , , , , ,			
	IWH: business outlook manufacturing, Eastern Germany		0	0
WHSITMANEG	IWH: business outlook manufacturing, Eastern Germany IWH: business situation construction, Eastern Germany			0

5

 ${\bf Table\ 1: Indicators,\ Acronyms\ and\ Transformations-continued}$

	: Indicators, Acronyms and Transformati			
Acronym Regional – Free Sta	Indicator	Multi	Lag	Transformation
_	-		0	Ď.
IFOBCITSAX IFOBEITSAX	Ifo business climate industry and trade Saxony, balance		0	0
IFOBSITSAX	Ifo: business expectations industry and trade Saxony, balance Ifo: assessment of business sit. indus. and trade Saxony, balance		0	0
IFOBCMANSAX	Ifo: business climate manufacturing Saxony, balance		0	0
IFOBEMANSAX	Ifo: business expectations manufacturing Saxony, balance		0	0
IFOBSMANSAX	Ifo: assessment of business sit. manufacturing Saxony, balance		0	0
IFOBCCONSAX	Ifo: business climate construction Saxony, balance		0	0
IFOBECONSAX	Ifo: business expectations construction Saxony, balance		0	0
IFOBSCONSAX	Ifo: assessment of business situation construction Saxony, balance		0	0
IFOEMPECONSAX	Ifo: employment expect. over next 3 months constr. Saxony, balance		0	0
IFOBCWTSAX	Ifo business climate wholesale trade Saxony, balance		0	0
IFOBEWTSAX	Ifo: business expectations wholesale trade Saxony, balance		0	0
IFOBSWTSAX IFOEMPEWTSAX	Ifo: assessment of business situation wholesale trade Saxony, balance Ifo: employment expect. over next 3 months WT Saxony, balance		0	0
IFOBCRSSAX	Ifo business climate retail sales Saxony, balance		0	0
IFOBERSSAX	Ifo: business expect. retail sales Saxony, balance		0	0
IFOBSRSSAX	Ifo: assessment of business situation retail sales Saxony, balance		0	0
IFOEMPERSSAX	Ifo: employment expect. over next 3 months RS Saxony, balance		0	0
NOMANSAXTOT	NO: manufacturing Saxony, total		2.5	1
HCNOSAX	housing construction (HC): new orders Saxony		2.5	1
HCWHSAX	HC: working hours Saxony		2.5	1
HCTOSAX	HC: turnover Saxony		2.5	1
ICNOSAX	industry construction (IC): new orders Saxony		2.5	1
ICWHSAX	IC: working hours Saxony		2.5	1
ICTOSAX	IC: turnover Saxony		2.5	1
PCNOSAX	public construction (PC): new orders Saxony		2.5	1
PCWHSAX	PC: working hours Saxony		2.5	1
PCTOSAX	PC: turnover Saxony		2.5	1
CONNOSAX	construction: new orders Saxony		2.5	1
CONFIDMENT	construction: working hours Saxony		$\frac{2.5}{2.5}$	1 1
CONFIRMSAX CONEMPSAX	construction: firms Saxony construction: employed people Saxony		2.5	1
CONFEESAX	construction: fees Saxony		2.5	1
IFOCUCONSAX	Ifo: capacity utilization construction, Saxony		0	2
IFOOOHCONSAX	Ifo: orders on hand construction, Saxony		0	0
CPISAX	consumer price index, Saxony		2	1
EXVALUESAX	exports: value, Saxony		2.5	1
IMVALUESAX	imports: value, Saxony		2.5	1
Regional - Baden-V	Vürttemberg			
IFOBCITBW	Ifo business climate industry and trade BW, balance		0	0
IFOBEITBW	Ifo: business expect. industry and trade BW, balance		0	0
IFOBSITBW	Ifo: assess. of busin. sit. indust. and trade BW, balance		0	0
IFOBCMANBW	Ifo: business climate manufacturing BW, balance		0	0
IFOBEMANBW	Ifo: business expect. manufacturing BW, balance		0	0
IFOBSMANBW	Ifo: assessment of busin. sit. manufacturing BW, balance		0	0
IFOBCCONBW	Ifo: business climate construction BW, balance		0	0
IFOBECONBW	Ifo: business expectations construction BW, balance		0	0
IFOBSCONBW	Ifo: assessment of business sit. construction BW, balance		0	0
IFOEMPECONBW	Ifo: employ. expect. next 3 months constr. BW, balance		0	0
IFOBCWTBW	Ifo business climate wholesale trade BW, balance		0	0
IFOBEWTBW	Ifo: business expectations wholesale trade BW, balance		0	0
IFOBSWTBW	Ifo: assessment of business situation WT BW, balance		0	0
IFOEMPEWTBW IFOBCRSBW	Ifo: employ. expect. over next 3 months WT BW, balance Ifo business climate retail sales BW, balance		0	0
IFOBERSBW	Ifo: business expectations retail sales BW, balance		0	0
IFOBERSBW IFOBSRSBW	Ifo: assessment of business situation RS BW, balance		0	0
IFOEMPERSBW	Ifo: employ. expect. over next 3 months RS BW, balance		0	0
NOMANBWTOTD	NO: manufacturing Baden-Württemberg, domestic		2.5	1
NOMANBWTOTF	NO: manufacturing Baden-Württemberg, foreign		2.5	1
IPMANBWTOT	IP: manufacturing Baden-Württemberg, total		2.5	1
HCNOBW	housing construction (HC): new orders Baden-Württemberg		2.5	1
HCWHBW	HC: working hours Baden-Württemberg		2.5	1
HCTOBW	HC: turnover Baden-Württemberg		2.5	1
ICNOBW	industry construction (IC): new orders Baden-Württemberg		2.5	1
ICWHBW	IC: working hours Baden-Württemberg		2.5	1
ICTOBW	IC: turnover Baden-Württemberg		2.5	1
PCNOBW	public construction (PC): new orders Baden-Württemberg		2.5	1
PCWHBW	PC: working hours Baden-Württemberg		2.5	1
PCTOBW	PC: turnover Baden-Württemberg		2.5	1
	construction: new orders Baden-Württemberg		$^{2.5}$	1
CONNOBW	_		~ -	_
CONNOBW CONWHBW	construction: working hours Baden-Württemberg		2.5	1
CONNOBW CONWHBW CONFIRMBW	construction: working hours Baden-Württemberg construction: firms Baden-Württemberg		2.5	1
CONNOBW CONWHBW	construction: working hours Baden-Württemberg			

 ${\bf Table\ 1: Indicators,\ Acronyms\ and\ Transformations-continued}$

Acronym	Indicator	Multi	Lag	Transformation
IFOCUCONBW	Ifo: capacity utilization construction, Baden-Württemberg		0	2
CPIBW	consumer price index, Baden-Württemberg		1	1
KIBW	business cycle indicator of Baden-Württemberg		2.5	1

Note: 0 = three-month-average in levels; 1 = three-month-average and qoq growth rate; 2 = three-month-average and first difference. \mathbf{X} indicates that the particular indicator is used for multi-indicator models.