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1998-1986

5.3 1986 2.6 . 4.8

4.2 .1988

1.1998 3.5 1994

6.7 10.6

4.0 4.5 6.1

2.1997-1991 3.8

5.2 () .

72.9 5.4

2005-2000 72.0

11.1 5.3

3.1997-1992

) (1998) .44-25 14-0

(2000) .(2000

)		(166-161	2000	.
		9.0	0.9	
		11.0	(World Bank, 1996)	1985
) 1996		29.0
15)				.(1998
	75	1985	73	(
65	1987	46		1995
	59	1986	47	1991
	74	1988	60	1993
				⁵ .
				1997
		Girfis (2000)	Korshid (2000)	.
		5.5	5.2	6.2
)				.1995-1985
				National Labor Force (
	8.1			.1997-1991
	7.5		7.8	
1.6		3.4		5.1
		Sirageldin & Korshid (1996)	Korshid (2000)	⁶ .
				.2
	10.50	-	-	
	3.22		4.4	1997

6

7. 4.3 7.28 4.7

.1997-1991

(1)

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(1997-1991)

12.9	4.9	2.4	4.1	3.7	3.4	
8.9	5.1	3.0	5.1	4.5	4.9	
14.2	4.9	1.7	3.6	3.0	3.2	

.1997-1991

1991

9.48

⁸.1997

1.02

3.1

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4.1

4.7

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7.05

2.43) 74
 .(75 26
 95 1997
 73 91 93
 63 68

800
 78 25 1997

55 69

1997

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(2)

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1997-1991

14.1	4.8	2.4	4.2	4.0	3.4		
13.1	3.1	3.0	4.7	5.2	4.7		
14.4	4.9	1.9	3.9	3.3	3.3		
7.6	5.0	1.7	3.7	1.4	3.1		
6.1	6.1	2.9	6.3	2.8	5.3		
12.2	4.2	-0.7	-6.7	-7.2	1.7		

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11

Cobb-Douglas

Pooled Cross Section Time Series

¹². Estimation Method

:

$$TE_{jt} = \alpha_{0j} + \beta_j EC_{jt} + \gamma_j IR_{jt} + \delta_j GDP_{jt} + e_{jt} \quad (1)$$

$$e_{jt} = \delta_j \Delta IR_{jt} + \gamma_j \Delta EC_{jt} + \beta_j \Delta TE_{jt} + \alpha_j \Delta GDP_{jt} \quad (1)$$

$$(-EC_{jt} - IR_{jt} - TE_{jt} - GDP_{jt}) \quad (1)$$

$$(1) \quad \Delta TE_{jt} = \alpha_j \Delta EC_{jt} + \gamma_j \Delta IR_{jt} + \delta_j \Delta GDP_{jt} + e_{jt} \quad (1)$$

$$(1)$$

$$(1)$$

:

$$\Delta TE_{jt} = \alpha_j \Delta EC_{jt} + \gamma_j \Delta IR_{jt} + \delta_j \Delta GDP_{jt} + e_{jt} \quad (2)$$

— —
(Growth Rates)

:

$$\Delta \ln TE_{jt} = \alpha_{0j} + \beta_j \Delta \ln EC_{jt} + \gamma_j \Delta \ln IR_{jt} + \delta_j \Delta \ln GDP_j + e_{jt} \quad (3)$$

(1998-1991)

¹⁴. (Seemingly Unrelated Regression (SUR

()

:

$$\Delta \ln PTE_{jt} = \alpha_{0j} + \beta_j \Delta \ln PEC_{jt} + \gamma_j \Delta \ln LIR_{jt} + \delta_j \Delta \ln GDP_{jt} + \eta_j \Delta \ln GEC_{jt} + e_{jt} \quad (4)$$

	PEC		PTE
GEC		GDP	LIR
	.	e	

(4)

(GEC)

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Pooled Cross Section Time

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—

. Seemingly Unrelated Regression

Series

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:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6$$

:

$$H_1 : \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6$$

15 F

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16 .

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(3)

 $\Delta \ln PTE$:

Seemingly Unrelated Regression (SUR) :

D-W	R^2						
		$\Delta \ln GEC$	$\Delta \ln GDP$	$\Delta \ln LIR$	$\Delta \ln PEC$		
1.80	0.70	-0.12 (-7.29)	0.13 (5.35)				
				-0.27 (-1.65)	-0.81 (-5.67)	0.07 (7.71)	
				-0.10 (-1.82)	-0.02 (-0.17)	0.05 (6.25)	
				0.04 (2.24)	-0.22 (-10.82)	0.01 (1.62)	
				-0.45 (-3.00)	-0.21 (-1.35)	0.07 (6.07)	
				-0.09 (-1.36)	-0.80 (-9.13)	0.05 (5.99)	
				-0.4 (-1.80)	-0.70 (-8.02)	0.03 (1.35)	

.(t-statistics) t

:

(3)

(PEC)

(LIR)

(GEC)

(GDP)

17 .

 R^2 ¹⁸.1.80

D.W

(0.70)

(t)

(PEC)

(t-statistics)

(2000)

(1996)

(2000)

%10

%2.1

%8.0

%7.0

()

()

%8

%10

%3 %2

(LIR)

%1

(LIR)

%8

%4

.(%19)

(%11)

%3				%10
%1		%5	%1	
			.	%4

	(GDP)			
-	-	(GDP)	(GEC)	.
		(GEC)		
		.(4)	
%1.3				%10

	%10			
()	.%1.2	()
()		()

	()	
	7.60	F	.Wald-test
.%1			
.	0.07		0.01

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	R_u^2, R_R^2	$F_{(n-1, nT-n-k)} = \frac{(R_u^2 - R_R^2)/(n-1)}{(1 - R_R^2)/(nT - n - k)}$	(Greene, 1993, p.468)	
.	K	T	n	
	.Hendry/LSE Approach	General to Specific Approach		16
		.Charemza and Deadman (1997, p. 58)	Ramanathan (1998, p.12)	
7.69		PEC	F	17
	3.80 LIR	.%1		
	2.31 GDP	F	.%2	
		1.32 GEC	.%10	
			.%10	
	.GLS – Generalized Least Square		SUR	18

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.264 – 237 : (41) 2

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.(1996)

.157 -125 : 82

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