



# TENTAMEN / EXAMINATION



12307683

Fylls i av **student** / To be completed by the **student**

Skriv anonymiseringskoden på samtliga svarsblad / Write your anonymity code on each sheet		Anonymiseringskod / Anonymity code	
		N E G C 1 6 - 0 0 2 2 - Y L C ✓	
Provbenämning / Exam name			Oanmäld
Tentamen			
Kurskod / Course code	Modul / Module	Tentamensdatum / Examination date	
N E G C 1 6	1 0 0 0	2 0 2 1 - 1 1 - 0 1	
Jag har tagit del av regler som gäller vid tentamen / I have read the current rules for examinations		Antal inlämnade blad med anonymiseringskod / Number of sheets with anonymity code	
<input checked="" type="checkbox"/> Ja / Yes		0 5	

Fylls i av **skrivvakt** / To be completed by the **invigilator**

Kontroll av legitimation / Identification checked	<input checked="" type="checkbox"/> Ja / Yes	Härmed intygas att kontroller utförts / This is to certify that the checks have been carried out
Kontroll av inlämnade blad / Answer sheets checked	<input checked="" type="checkbox"/> Ja / Yes	
Inlämningstid / Time of submission	1 5 : 3 0	Tydlig sign. / Signature EL

Fylls i av **lärare** / To be completed by the **examiner**

Bedömning av uppgifter / Questions attempted										
1	2	3	4	5	6	7	8	9	10	~
2,2	2,2	2,4	2	1,6						
11	12	13	14	15	16	17	18	19	20	~
21	22	23	24	25	26	27	28	29	30	~
Totalt antal poäng / Total points					Examin. lärare / Kursansvarig signatur / Signature of the examiner					
10,4										
Betyg / Grade					Namnförtydligande / Clarification of the signature					
G					K. Staal					

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Försättsbladet ska alltid lämnas in även om ingen uppgift behandlats /  
Examination should always be submitted even if no questions are answered

Löpande sidnr Consecutive no:	1
Uppgift nr / Question no:	1
Poäng / Points awarded:	
Lärarens anteckning	
Examiner's remarks:	

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 NEGC16-0022-9LC

1

a) A utility index of women being in the labor force, which is a threshold and is standard normally distributed.

b)  $Z = 2,184$  critical value =  $\pm 1,96$

$-1,96 < 1,96 < 2,184$

"years of experience" is statistically significantly different from 0 on a 5% significance, so we conclude that years of experience has a positive significant effect on being in the labor force.

c)  $0,000 + 0,015(0) = 0$

The probability of being in the labor force with 0 years of experience is 0.

d) Years of experience has a significantly positive effect on the probability of being in the labor force, so an increase in years of experience would mean that the probability increases even more.

e) i) 1 ii) 2 iii) 10 iv) 16

0,2

✓ ✓ ✓ ✓

0,8

✓

0,8

✓

0,4

Skriv ej i detta område  
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Häftområde



Löpande sidnr Consecutive no.: 2	Ange anonymitetskod / Write your anonymity code (Vid icke anonyma tentamen ange kurskod + namn + personnummer) (For non-anonymous exams write the course code + name + civic registration number) NEGC16-0022-YLC	Uppgift nr / Question no.: 2	Poäng / Points awarded:	Lärarens anteckning Examiner's remarks:	2. a) $y_t = \alpha + \beta_0 x_t + \beta_1 x_{t-1} + \beta_2 x_{t-2} + \dots + u_t$ <p>b) Biased and inconsistency is expected</p> <p>c) Koyck has weaknesses such as infinite lags, nonlinear in the parameters and multicollinearity problems.</p> <p>d) Being asian has a positive effect on graduation as the sign in front of the estimate is positive. (+0,122)</p> <p>e) v) 18 ✓          vi) 23 ✓          vii) 25 ✓          viii) 31 ✓</p>	0,8 0,8 0,6
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 Häftområde



Löpande sidnr Consecutive no:	3
Uppgift nr / Question no:	3
Poäng / Points awarded:	
Lärens anteckning	
Examiners remarks:	

3. a) OLS

b)  $n = 100$  S.I.  $DF = -2$ , critical value =  $-3.45$   
 $-3.45 < -2$  so we do not reject

$H_0$ : nonstationarity  
 Conclusion: There is not enough evidence to conclude stationarity, and therefore we conclude nonstationarity on a 5% significance.

c) ARIMA(1,1,1)  

$$y_t = \mu + \alpha_0 y_t + \alpha_1 y_{t-1} + \beta_0 x_t + \beta_1 x_{t-1} + u_t$$
 where  $\mu$  is the constant  
 it can also be written as  

$$y_t = \mu + \alpha y_{t-1} + \beta x_{t-1} + u_t$$

d)  $y_t = c + \alpha y_{t-1} \leftrightarrow (AR(1))$  where  $c = \text{constant}$   
 for GDP and  $M1$   

$$y_t = c + \alpha GDP_{t-1} + \alpha M1_{t-1}$$

e)  $(x) 35$  ✓  $(x) 40$  ✓  $(x) 41$  ✓  $(x) 42$  ✓

0.8

0.8  
0.8

NEG(16-0022-YLC)

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Häftområde

<p>Löpande sidnr Consecutive no.: 4</p>	<p>Ange anonymtetskod / Write your anonymity code (Vid icke anonym tentamen ange kurskod + namn + personnummer) NEGC16-0022-YLC</p>	<p>Uppgift nr / Question no.: 4</p>	<p>a) Both are exactly identified as each exclude one variable, fulfilling the M-1 criteria which in this case is <math>2-1=1</math>. <math>Q^d</math> excludes <math>Q_{t-1}</math>, <math>Q^s</math> excludes <math>I_t</math>.</p> <p>b) <math>Q^d = \pi_0 + \pi_1 I_t + \pi_2 Q_{t-1} + \nu_{1t}</math>  <math>Q^s = \pi_3 + \pi_4 I_t + \pi_5 Q_{t-1} + \nu_{2t}</math></p>	<p>Poäng / Points awarded: 0.8</p>	<p>c) It is a one-way fixed effect model</p>	<p>Lärarens anteckning Examiner's remarks: 0</p>	<p>d) <math>H_0</math>: dummy trap</p>	<p>0.4</p>	<p>e) (iii) 51 ✓          (iv) 53 ✓          (v) 60 ✓          (vi) 61 ✓</p>	<p>0.4</p>	<p>0.4</p>	<p>0.4</p>
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Häftområde



Löpande sidnr Consecutive no:	5
Uppgift nr / Question no:	5
Poäng / Points awarded:	
Lärarens anteckning	
Examiners remarks:	

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a) 
$$\text{totalt} = \frac{(1+r)^{-\text{dag-mn}}}{r} / s$$
 where  $mn=1$   $s=1$   $L=0$ 

$$\text{totalt} = L / ((1+r)^{-\text{dag-mn}} / s)$$

$$\text{totalt} = \frac{1}{\text{dag-mn}} \cdot \frac{s}{r}$$

b) The second parameter "s" is not statistically significantly different from 25, because 25 lies within its confidence interval:  
 $24,075 < 25 < 25,428$

c) endogenous: Y and X  
 predetermined:  $Y_{t-1}$  and  $X_{t-1}$   
 however, there are no exogenous.

d) The value for X is still unknown, OLS can be used to estimate reduced form equations But this is not a reduced form and hence we do not use OLS

0.8

e)  $x_{viii} = 70$   $x_{ix} = 76$   $x_{x} = 77$

0

XX

0.8

0



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Häftområde