



# TENTAMEN / EXAMINATION



8164617

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 0 5 - E W L ✓	
Provbenämning / Exam name			Öanmäld
Tillämpad ekonometri			
Kurskod / Course code	Provkod / Exam code	Tentamensdatum / Examination date	
N E G C 1 6	1 0 0 0	2 0 1 8 - 1 0 - 3 1	
Jag har tagit del av regler som gäller i tentamenssalen / I have read the current exam hall rules		Antal inlämnade blad / Number of sheets	
<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 ovanstående kontroller utförts / This is to certify that the above mentioned checks have been carried out
Kontroll av inlämnade blad / Answer sheets checked	<input checked="" type="checkbox"/> Ja / Yes	
Inlämningstid / Time of submission	16 : 33	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	~	
4	3,6	3,4	3,5	4							
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							
18,5											
Betyg / Grade				Namnförtydligande / Clarification of the signature							
VG											

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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

<p>Löpande sidnr Consecutive no.: 1</p>	<p>Uppgift nr / Question no.: 1</p> <p>Poäng / Points awarded: 1</p> <p>Lärarens anteckning Examiner's remarks:</p>	<p>1 a) Since we are logging the model the error term has to be added with multiplication raised to <math>e^{(u)}</math> for it to work.</p> <p>Theoretical model: <math display="block">T_t^* = \alpha X_t^{\beta} \cdot X_t^{\gamma} \cdot e^{u_t}</math></p> <p>b) Yes it is an intrinsically linear model, since it can be transformed to a "linear in the parameter" model. If it would have been <math>tu</math>, it would be a intrinsically nonlinear model.</p> <p>c) <u>SR demand</u> = <math>1 - 0,2 \log X_t^{1/2} - 0,3 \log X_t^{1/2} + 0,9 \log T_t^{1/2} - 1</math></p> <p>d) estimated coefficient of adjustment = <math>\delta</math> where <math>1 - \delta = 0,9</math> (from <math>\log T_t^{1/2}</math>) so <math>\delta = 0,1</math></p> <p>Answer: Coefficient of adjustment = <math>0,1</math></p> <p>e) <math>!! = 1</math> <math>!! = 5</math> <math>!!! = 10</math> <math>!! = 16</math></p>
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Skriv ej i detta område  
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Häftområde



Ange anonymitetskod / Write your anonymity code  
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(For non-anonymous exams write the course code + name + civic registration number)

NEGGL6-0005-EWL



<p>Löpande sidnr / Consecutive no.: 2</p>	<p>Uppgift nr / Question no.: 2</p>	<p>Poäng / Points awarded: 2</p>	<p>Lärares anteckning / Examiner's remarks:</p>	<p>0,8 0,8 0,8 0,8 0,4</p>
<p>Änge anonymitetskod / Write your anonymity code (Vid icke anonym tentamen ange kurskod + namn + personnummer) (For non-anonymous exams write the course code + name + civic registration number)</p> <p>NEG16-0005-EWL</p>	<p>2a) Short run price elasticity = -0,2</p>	<p>long run price elasticity = <math>-\frac{0,2}{0,1} = -2</math></p>	<p>b) Short run interest elasticity = -0,3</p>	<p>Long run interest elasticity = <math>-\frac{0,3}{0,1} = -3</math></p>
<p>c) <math>\log I_t = 10 - 2 \log X_{t-1} - 3 \log X_{t-1}</math></p> <p>(omitting the logged dependant variable and divide the remaining by coefficient of adjustment to get the long run demand function for tractors in (log-log))</p>	<p>d) it's low because tractors are durable goods with a long lifespan.</p>	<p>e) <math>v = 19</math></p>	<p><math>v = 21</math></p>	<p><math>v = 28</math></p>
<p><math>v = 31</math></p>	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>

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<p>Löpande sidnr 3</p> <p>Consecutive no: 3</p>	<p>Uppgift nr / Question no: 3</p> <p>Poäng / Points awarded: 3</p> <p>Lärarens anteckning Examiner's remarks:</p>	<p>3 a) Exogenous: <math>R_t</math> and <math>P_t</math> Endogenous: <math>M_t</math> and <math>Y_t</math></p> $M_t = \pi_0 + \pi_1 R_t + \pi_2 P_t + \pi_3 Y_t + \pi_4 P_t + \pi_5 R_t$ $Y_t = \pi_3 + \pi_4 P_t + \pi_5 R_t$
<p>Löpande sidnr 3</p> <p>Consecutive no: 3</p>	<p>Uppgift nr / Question no: 3</p> <p>Poäng / Points awarded: 3</p> <p>Lärarens anteckning Examiner's remarks:</p>	<p>c) It is exactly identified since both equation lacks one predetermined variable, if we add 1 predetermined variable to one equation, the other gets identified. Also there are the same amount of predetermined coefficient in the structural equations as there are in the reduced form.</p> <p>d) Full information method takes all the "problems" (except word) into account when calculated, single equation method is limited to the equation being calculated, disregarding all other equations and the effect of these "problems". So Advantage is that it is using all information given from all equations.</p> <p>Disadvantage: There can be a problem with causality and what is effecting what.</p>
<p>Löpande sidnr 3</p> <p>Consecutive no: 3</p>	<p>Uppgift nr / Question no: 3</p> <p>Poäng / Points awarded: 3</p> <p>Lärarens anteckning Examiner's remarks:</p>	<p>e) <math>X = 35</math> <math>X = 39</math> <math>X = 41</math> <math>X = 46</math></p>

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Häftområde



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NEG16-0005-EWL



<p>Löpande sidnr 4</p> <p>Consecutive no: 4</p>	<p>Uppgift nr / Question no: 4</p> <p>Poäng / Points awarded: 4</p> <p>Lärorens anteckning Examiner's remarks: 8</p>	<p>Änge anonymitetskod / Write your anonymity code (Mid icke anonym tentamen ange kurskod + namn + personnummer) (For non-anonymous exams write the course code + name + civic registration number)</p> <p>NEGC-0005-EWL 1b</p>
<p>4 a) This is a Fixed effect model using dummie variables.</p> <p>and CCM and REM do not have dummie variables.</p> <p>This is a Fixed Effect Least Square Dummy Variable model.</p>		<p>b) First take the Regression Outcome from the FEM model and then do the regression using Pooled OLS (CCM) with the same date and compare Outcome.</p>
<p>0,8</p>	<p>c) Base category: Women, who are married with their spouses present, aged 22-54, with 0-4 years of schooling, with unemployment rate (1966) % under 2,5 and unemployment change (1965-1966) % under 3,5 with Relative employment opportunities % under 62 and Fallow, \$ less than 1500 and negative</p>	<p>d) There is a positive relation between women who never been married and participation in the labour force. Never been married increases the log of the odds for a woman to be in the labor force (positively) looking at t-test statistics which is large (t=22) compared to critical value of 1,96 at 5% significance level. We can say that this is highly statistically significant.</p>
<p>0,8</p>	<p>e) <math>X_{111} = 51</math> <math>X_{1V} = 55</math> <math>X_{1V} = 59</math> <math>X_{1V} = 63</math></p>	<p>0,6</p>

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<p>Löpande sidnr Consecutive no.: 5</p>	<p>Uppgift nr / Question no.: 5</p> <p>Poäng / Points awarded:</p> <p>Lärarens anteckning Examiner's remarks:</p>	<p>5a) Dickey-Fuller test:  <math>H_0</math>: Nonstationarity, there is a unit root  <math>H_1</math>: Stationarity</p> <p><math>n=100</math> (years)  <math>t_{obs} = -2</math>                  (following a t(n)-distribution)                  Critical value: <math>-3.415</math> (<math>t_{\alpha}^*</math> there is a constant and a trend)                  Conclusion: Since <math>121 &lt;  3.415 </math> we wont reject <math>H_0</math> in favor of <math>H_1</math></p> <p><math>t_{obs} &lt; t_{crit}</math></p> <p>Answer: At a 5% significance level we can say that the time series is nonstationary, there is a unit root. (do not reject <math>H_0</math>)</p> <p>b) <math>Y_t = \beta_0 + \beta_1 X_t + \beta_2 Y_{t-1} + \beta_3 X_{t-1} + \epsilon_t</math></p> <p>c) Yes looking at the AC correlogram we can say that this is a pure white noise since it reveals around its mean value with none of the lags sticking outside its confidence interval given by <math>\pm 2\sigma</math> (maybe one or 2)</p> <p>d) No It appears that the mean is not equal to zero, a stationary time series has zero mean and a constant <math>\sigma^2</math> since the mean criteria is violated this is a nonstationary time series.</p>
		<p>e) <math>X_{VI} = 66</math>  <math>X_{V} = 76</math>  <math>X_{IV} = 76</math>  <math>X_{III} = 76</math>  <math>X_{II} = 76</math>  <math>X_I = 76</math>  <math>X = 77</math></p>

0,8

0,8

0,8

0,8

0,8