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Econometrics analysis of cost function of sheep, goats, and cows in midregion of Jordan

Khaled M.⁽¹⁾ Samman A.⁽²⁾ and Abd Alftah A.⁽³⁾

ABSTRACT

This research aimed to determine the economic scales of production and different product values, and the difference between the true sizes and its parallel economic areas in the midregion of Jordan. The econometrics analysis was used for the cost functions of sheep, goats, and cows production in midregion of Jordan. The data were analyzed by linear regression using suitable economic models.

Total production functions of sheep were determined, and the average productivity was derived to determine the economic scales in order to minimize the average productivity cost of sheep, goats and cows. For the sheep, the product value was about JD 16649.59 for 419 sheep, with average cost of one JD is 0.522 JD. Marginal cost function was derived from the total production cost function, with the equality marginal cost function to parallel price in order to reach the scale of maximize profit. The production value was 18251.49 JD for 460 sheep and average JD cost of 0.56. The present productivity scale was 157sheep which was 262 sheep lower than the productivity scales for economic efficiency and 303 sheep lower than that for maximize profit.

For the goats, the product value was about JD 487.42 for 85 goats, with average cost of one JD of 0.53 JD. The production value was JD 6173.68 for 120 goats and average JD cost of 0.52. The present productivity scale was 35 goats that was 50goats lower than the productivity scales for economic efficiency and 85 goats lower than that for maximize profit.

For the cows, the product value was about JD 4688.09 for 11 cows, with average cost of one JD of 0.93 JD. The production value was JD 3967.49 with 9 cows and average cost of JD 0.96. The present productivity scale was 7cows that was 4 cows lower than the productivity scales for economic efficiency and 2 cows lower than that for maximize profit.

Key words: Cost function, Marginal cost, Productivity cost, Maximize profit, Curve cost, Analysis of econometrics, Regression, region.

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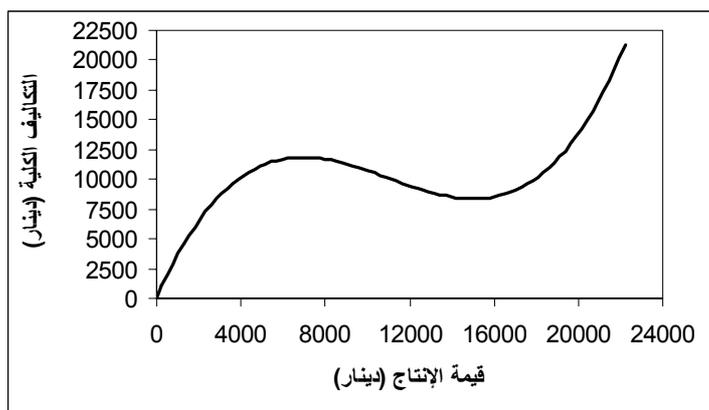
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F	R ²		
87.17	0.89	$3 \cdot 0.0000000129825261 + 2 \cdot 0.000428 - 4.049176 =$ (4.54) (5.30 -) (8.86)	1
		$2 \cdot 0.0000000129825261 + 0.000428 - 4.049176 =$	2
		$2 \cdot 0.0000000389475783 + 0.000856 - 4.049176 =$	3
	0.86	$39.082 + 274.231 =$ (13.84)	4

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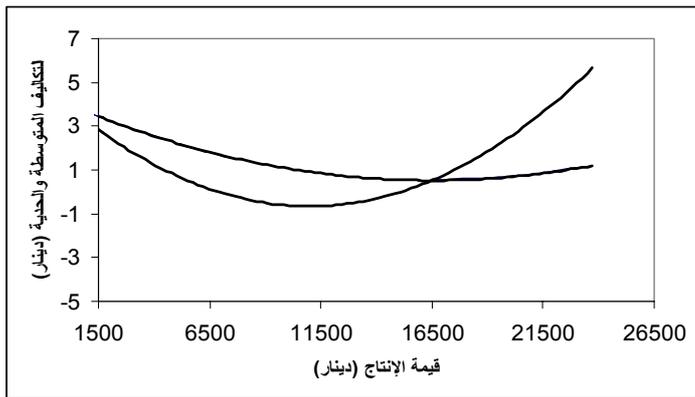
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117.95	2	58.976	3789.57	
19.94	0.5	39.887	2562.99	
2.27	2	1.135	72.97	
1.40		100	6425.53	

$$117.95 = 2 * 58.976 = \quad - 58.976 = 6425.53 / 3789.57 =$$



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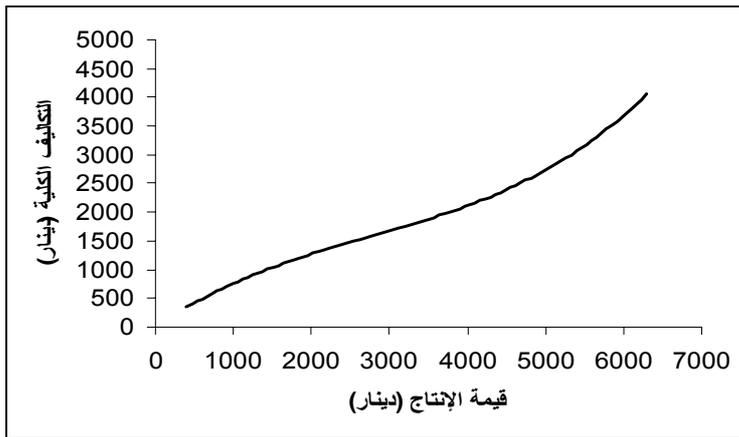
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F	R ²		
138.6	0.89	3 0.0000000240230267 + 2 0.000198 - 0.934848 = (2.03) (2.16 -) (6.21)	1
		2 0.0000000240230267 + 0.000198 - 0.934848 =	2
		2 0.0000000720690801 + 0.000396 - 0.934848 =	3
	0.89	48.78 + 341.12 = (14.39)	4

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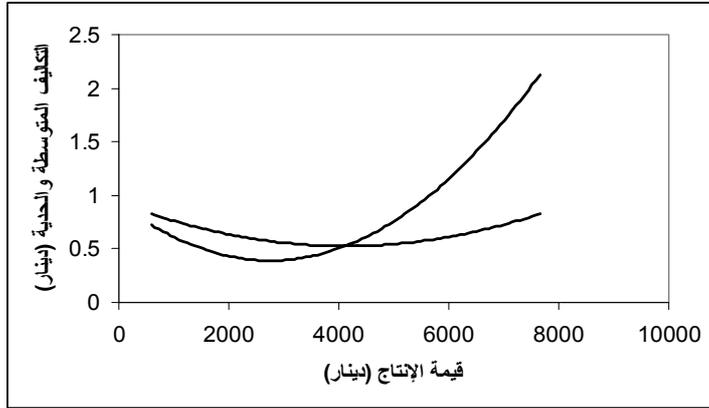
35

50

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	/	%		
107.29	2	53.64	1085.18	
16.11	0.35	46.01	930.82	
0.00086	1.02	0.33	6.89	
1.234		100	2022.89	



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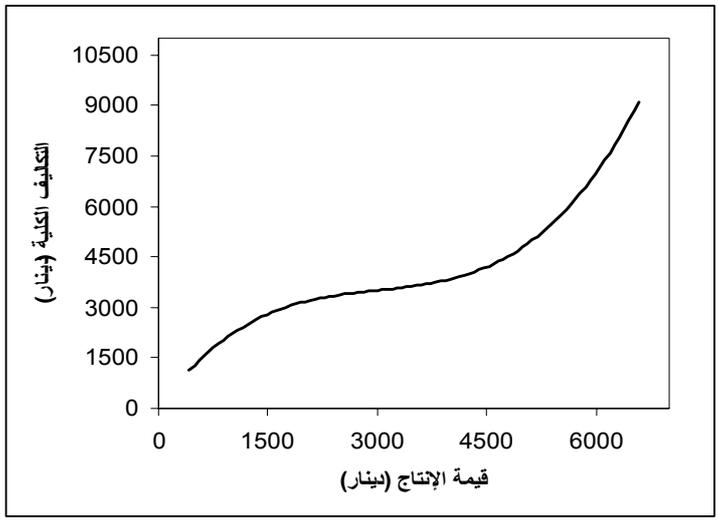
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4688.09 (6) (5) (2)
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 9 3967.49
 0.96
 (5)

F	R ²		
90.36	0.93	3 0.000000103964838 + 2 0.000936 - 3.043020 = (2.58) (4.06 -) (2.51)	1
		2 0.000000103964838 + 0.000936 - 3.043020 =	2
		2 0.000000311894514 + 0.001872 - 3.043020 =	3
	0.70	339.269 + 956.138 = (7.13)	4

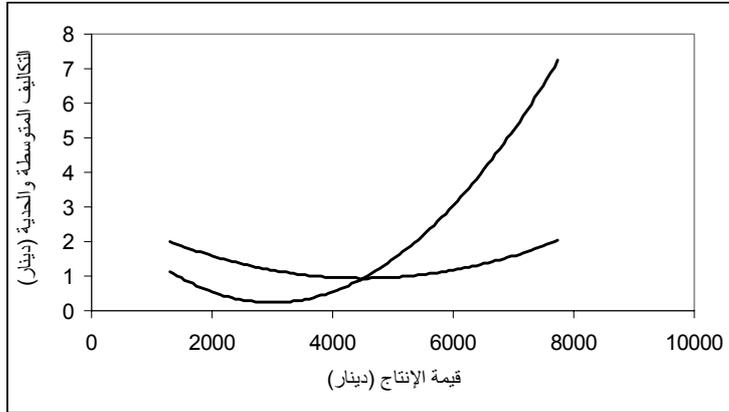
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	/	%		
33.05	1.5	22.03	717.08	
19.5	0.25	77.97	2537.58	
0.525		100	3254.66	



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Received	2005/08/08	
Accepted for Publ.	2005/10/27	

