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.(Federation of Palestine Chamber of Commerce, 1997)

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.2009/9/12 2008/10/9

(1   35%

(2   87%   2005

ATP   (3

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Micro   (4   .

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:   :

Min Q / (rk + wL)			
$W^* = (V/L) - (K/L)\, d\,(V/L) / d(K/L)$			
$Q = A\, L^{B0} . K^{B1}$		.	
$ATP = Q / (B0\, L + B1\, K)$	ATP	.	
Q/L , Q/K		.	
$Q / L = a\, W^{b}\, e$		(/) .	

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0.56   0.43

%10

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Bane hani and Shamia

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1973

(1999)

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UNCTAD

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(2008) 5

24 − 10 .

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%4

1991 − 1996
20.95   23.8   (   )   .

190-164
78-52
.(Community Benchmarks, 1997)

Pack

%72   %50   %65
%311
White   %51

.(White, 1991)
Chuta and Lied Holm   .(World bank, 1998)

0.85
Normal Goods

.(Rogaly, 1994)

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2.8   5   1984

1974 − 1979   %6   .(World bank, 1998)

(1986   ) %13

%82   100%
40.1
38.7   50.2
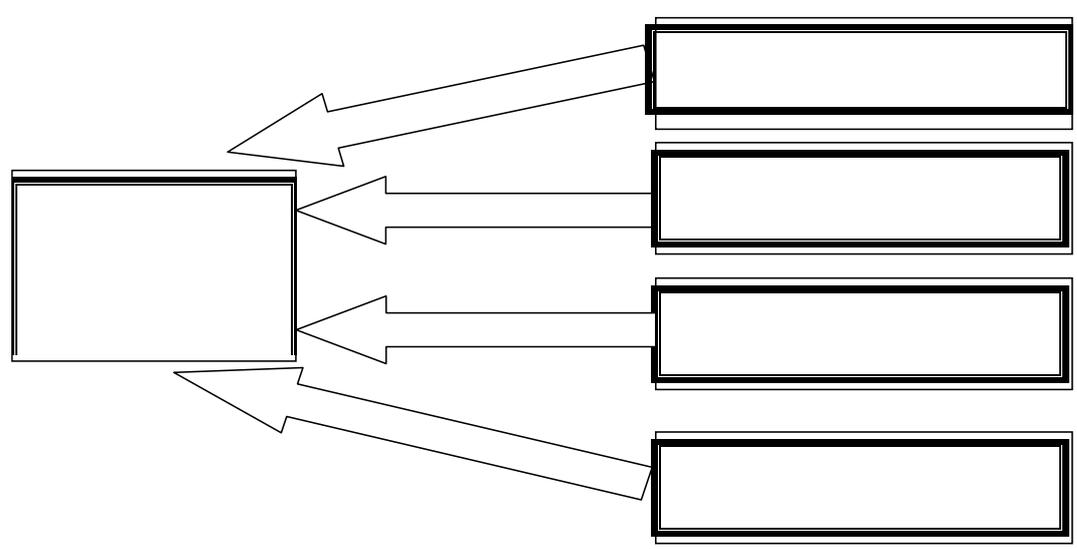.   57.7
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Levicki

.(Abdel Latif, 1995)

%20   .

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%41   :

(Levicki, 1984)   .

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Secondary Datm

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2006-1996

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:   ‑2   .(1999   )

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(: .

SPSS ( )

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r F t

. .D-W – R^{-2}

Ho1: :

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Ho2: 1

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Ho3: 3.6

. .(2006)

Ho4:

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2 :

Ho1:

( )

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:(1999)

Minimum (r K + w L) / Q ---------------- (1) [1]

3.5 :

.(2006)

_____

[1] r :

:K . :W .

:Q . :L .

. .

(1)

2006   1

2006	*	1	1	2	1%	
14.5	1869.027	14	14000	154.5	7.66	
8.1	79433.6	310	730030	157	7.66	
7.2	31773.5	106	203150	167	7.66	
3.6	2982032.6	4679	9832460	176	7.66	
9.4	19936.3	92	176550	157	7.66	
5.4	3115045	5201	10956190	257	7.66	

1 :   : 2006   . 2 :   2006.

*   : (/   ) *

.

(2)

2006   1

2006	*	1	1	*	1%	
5.1	1037310	1846	3648865	228	7.66	
4.3	501522.2	738	1768290	228	7.66	
5.1	395610.7	702	1393635	228	7.66	
4.95	258548.7	443	909100	228	7.66	
3.5	52955.8	63	189000	228	7.66	
4.9	311504.5	525	1097000	228	7.66	
3.55	71646	86	250410	228	7.66	
4.8	158867.3	265	555100	228	7.66	
5.03	118371.7	206	411265	228	7.66	
4.8	80991.2	136	279450	228	7.66	
4.2	84106.2	122	295825	228	7.66	
4.6	43610.6	69	158250	228	7.66	

:   2006 *   .

3   :   ( ).

3.7

65%

)   2006   50%

2.77　　　　　　　　　　　　　　t　　　　　　　　　　　　.(World bank, 1998)

（　　　　　　　　）　　　3.304

.2.571

c　　　　　　Roskamp　　　　　　2008

:(1991　　　　　)

$$W^* = (V/L) - (K/L)\, d\,(V/L) / d(K/L) \quad ------- (2)\ [2]$$

t　　　　d (V/L)/d(K/L)　　　　　　　　W^*

.　　2.571　　t*　　Roskamp

5

.[3]

$$W^* = (V/L) - m\,(K/L) \quad ------------------(3)\ [4]$$

2　　　　　　　　　　4

OLS

（　　　　　　　　　　　　　　　） c

) 3　　　　　　　　　　　　　m

b　　　　　　　　　　（1

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Distortions

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W* :　　　2

K　　L　　　　　　　　　　V

.

$(K/L)^c\ V/L = A\,W^b$　　　　　　　　3

b　　　A

c　　　　　　　　　　　W

.

(K/L)　　　　4

.

:

$$d\,(V/L) / d\,(K/L) = c\,(V/L) / (K/L)$$

$$Minimum\ (r^*\,K + w^*\,L) / Q \quad -------------------(4)\ [5]$$

m　　　d(V/L) / d\,(K/L)

:　　　(3)

$$W^* = (V/L) - m\,(K/L) \quad -------------------------- (3)$$

3　　　　　　　　4

4　　　　　c

L　　(3　　　　　) m

5　　　　　　　　　　　　　　　　K

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w*　r*　　5

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(2   )

2006   Q

6

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(3)

					2006 1	
2006	*	1	1	*	**%1**	
3.6	218053.2	364	565084	169	7.66	
3.7	685309.9	1196	1855620	169	7.66	
3.6	1650973.8	2657	5702240	172.2	7.66	
3.9	93451.4	154	770960	166.5	7.66	
6.4	218053,2	364	750856	307	7.66	
6.55	249203.6	416	1231430	428	7.66	
30	8749.8	50	80000	428	7.66	

2006   : 1

.(/   )   * .   *

(4)

3		**m**	**c**	**b**	**A**	
r= 0.361 R^{-2} = 0.130	0.0277728	0.09753	-7.022	18.14	
F= 2.224 t*= 2.571			(2.091)	(-1.624)	(2.77)	
r= 0.944 R^{-2} = 0.818 F=	-0.19105	-0.672	-5.281	16.764	
12.217 t*= 2.571			(-3.134)	(-2.137)	(3.304)	
r= 0.814 R^{-2} = 0.437	0.1276598	0.449	0.893	0.667	
F=2.943 t*= 2.571			(2.409)	(1.410)	(1.137)	
r= 0.855 R^{-2} = 0.553	0.0804665	0.283	-5.8	3.33	
F=4.090 t*= 2.571			(1.659)	(-1.752)	(1.131)	
r= 0.854 R^{-2} = 0.548	0.1634921	0.575	-928	2.947	
F= 4.037 t*= 2.571			(2.841)	(-1.685)	(1.026)	

t   .(5%)   SPSS   *

.   **t***   .

.

(5)

2006

/ %			
60.2	256.6	154.5	
14	1119.4	157	
42.7	390.7	167	
41.1	428	176	
67.7	231.8	157	

.

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OLS

:

$(B1+ B0)$.

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$(B1+ B0)$.

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$(B1+ B0)$.

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5

Auto Correlation

B1 7

t

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(6)

2006

2006 Farrell	
23.6	
53.1	
16.1	
8.3	
13.5	

:

:Ho2

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Cobb- Douglas

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$$Q = A L^{B0}. K^{B1} \text{----------------------------}(5)^{6}$$

_____

B1 B0   A : 6

.   K L

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(7)

5

	B1	**B0**	
R= 0.992 R^{-2} = 0.972 F= 89.254 D-w=1.769	0.651 (3.154)	0.342 (2.275)	
R= 0.813 R^{-2} = 0.436 F=2.931 D-w=`2.087	−0.728 (-2.421)	1.265 (1.915)	
R= 0.926 R^{-2} = 0.763 F= 9.042 D-w=0.913	0.867 (3.614)	-0.212 (-1.605)	
R= 0.957 R^{-2} = 0.859 F= 16.197 D-w=2.656	0.610 (4.707)	-0.115 (-0.790)	
R= 0.887 R^{-2} = 0.644 F=5.514 D-w=1.865	0.701 (0.694)	0.399 (1.472)	

.(2.776) 5%   t   t

(8)

2006   6

ATP	**B*$_1$**	**B*$_0$**				
0.204	0.655	0.344	1869.027	14	14000	
-0.08	-1.356	2.356	79433.6	310	730030	
0.118	1.323	-0.323	31773.5	106	203150	
0.246	1.232	-0.232	2982032.6	4679	9832460	
0.072	1.569	0.362	19936.3	92	176550	

.   2006   :   *

:(1999   )   .

$$ATP = Q / (B0\ L + B1\ K) \ \text{------------------------}(6)\ ^{7}$$

:

B1   B0   ATP   7   :Ho3

K   L   .

(B0+ B1=1)

．

B1 B0

7

． ：

B0* = B0 / (B0 + B1) ---------------------------(7)

B1* = B1 / (B0 + B1) ---------------------------(8)

． B*₁ B*₀

6

． 6 8

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(9)

2006

Q/K	Q/L	
0.21	284.3	
0.248	669.5	
0.231	544.9	
0.24	597.5	
0.22	545.6	

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Average Partial

Productivity

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:Ho4

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(/)

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:(1999)

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(10)

11

		(S) b	g	
r= 0.923	R^{-2} = 0.754	70.8	-1.756	
F= 8.649	D-W=2.71	(3.441)	(-3.834)	
r= 0.891	R^{-2} = 0.657	10.354	-0.451	
F= 5.784	D-W= 2.216	(1.018)	(-1.951)	
r= 0.536	R^{-2} = 0.287	6.912	-0.104	
F= 3.603	D-W=3.533	(1.043)	(-1.081)	
r= 0.361	R^{-2}= 0.13	4.655	-0.102	
F= 3.225	D-W =2.204	(1.652)	(1.565)	
r= 0.65	R^{-2}= 0.4	0.796	0.224	
F= 3.007	D-W= 2.309	(1.102)	(1.113)	

* t عند 5% (2.776).

$$S = \frac{d(K/L)/(K/L)}{d(W/r)/(W/r)} \quad (9)^{[8]}$$

t

S

(s)

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Constant Returns of Scale

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$$Q/L = a\, W^{\,b}\, e \quad \text{----------------------------------} \quad (10)^{[9]}$$

:

t

$$\text{Log}\,(Q/L) = \text{Log}\,a + b\,\text{Log}\,W + g\,t + \text{Log}\,e \quad \text{-----} \quad (11)$$

b   10

(s   )

.

(g   )

.

S   a b $^{[10]}$

11

-10   r

11   :

$(K/L)_2 = S\,(K/L)_1\,((W_2 - W_1)/W_1) + 1)$ ---------------------- a

11   W   –

:

$(K/L)_2 = S\,(K/L)_1\,((r_1 - r_2)/r_1) + 1)$ --------------------------- b

[8] S :   r   W
K   L
.

[9] a :   b   e
Q   L   W   .

10%

10%

(11)

10%

12 11 .

935%

831%

	%	
%		
627.2	768.8	
831.9	935.4	
522.1	660.3	
318.9	412.05	
-28.4	-12.44	

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(12)

10%

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%	**%**	
627.2	768.8	
831.9	935	
522.1	660.3	
318.9	412.1	
-24.4	-12.4	

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B1

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(K/L)   L

b a

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2001

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2004   87 – 71   11

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1998   2005

.   .   76 – 62   35   1

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Estimating The Efficiency of Small Enterprises That are Funded From Development and Employment Fund In Jordan

Khalid A. Al-Khathlan and Iyad A. Al-Nsour*

ABSTRACT

This study aims at estimating the economic and social efficiency of the small enterprises that have been funded by the Development and Employment Fund DEF in Jordan and their productivity indicators. This study tries to evaluate the role of those small enterprises in creating job opportunities and measure both of the average total productivity and Partial productivity for the production factors using in these enterprises. Moreover, this study tries to evaluate the marginal rate of substitution and the relative changes in the prices for the production factors in funded enterprises.

This study concludes that the small services enterprises which were funded by DEF have achieved an economic efficiency exceeded what other enterprises have achieved. The results showed also that the small funded agricultural enterprises are more labor intensive while other small funded enterprises are more capital intensive.

Furthermore, while the small funded services enterprise achieved higher average total productivity, the study shows that the changes in cost of capital and cost of labor in most of small enterprises that have been funded by DEF are positively related to these changes, but the tourism small funded enterprises are excluded.

This study suggests that the DEF should focus on funding both services and handicraft sectors and stopping the fund oriented to small agricultural enterprises.

Keywords: Efficiency, Small Enterprises, Development and Employment Fund, Jordan.