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2007 - 2006

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَوَصَّيْنَا الْإِنْسَانَ بِوَالِدَيْهِ إِحْسَانًا حَمَلَتْهُ أُمُّهُ كُرْهًا وَوَضَعَتْهُ كُرْهًا وَحَمْلُهُ وَفِصَالُهُ
ثَلَاثُونَ شَهْرًا حَتَّىٰ إِذَا بَلَغَ أَشُدَّهُ وَبَلَغَ أَرْبَعِينَ سَنَةً قَالَ رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ
نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَىٰ وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَصْلِحْ لِي فِي
ذُرِّيَّتِي إِنِّي تُبْتُ إِلَيْكَ وَإِنِّي مِنَ الْمُسْلِمِينَ .

قرآن کریم (الأحقاف : 15)

الإهداء

إلى الأرواح الطاهرة التي نخلت دون مقابل :
شهداء الجزائر؛
والدي ووالدتي ؛
جدّي وجدّتي ؛
الأستاذ أحمد محمودي ؛
الأستاذ محمد الأمين كماسي .

إلى الذين كثيرا ما صبروا عليّ وحملوا عنّي ما كان يجب أن احمله عنهم:
زوجتي وأطفالي أصلحهم الله،
أختي الكريمتين ، وجميع أقاربي ؛

إلى الذين نأمل لهم كل الخير:
أطفال الجزائر .

شكر

أتوجه بالشكر إلى :

أستاذي حفظهما الله اللذين قبلا الإشراف على هذا العمل واللذين بعد الله عزَّ وجلَّ ما كان لهذا العمل أن يكون وما كنت لأكون :
الأستاذ الدكتور قاده أقاسم
الأستاذ الدكتور عبد المجيد قدي

إلى الدكتور أحمد جلايلي والدكتور أحمد موساوي على مساعدتهما في تحصيل بعض بيانات هذا البحث وعلى مساهمتهما في التدقيق اللغوي لكثير من فقراته .

إلى الذين لم يخلوا علينا بنصحهم وتوجيههم ودعمهم لهذا العمل :
الأستاذ الدكتور إبراهيم بجتي، الدكتور الشيخ الداوي، الدكتور وصاف سعدي، الدكتور قريشي محمد الجموعي الدكتور عبد الغني دادن والأساتذة : باديس بن عيشة، عبد الوهاب دادن، دويس محمد الطيب، محمد الطيب بن مير.

شكر خاص إلى الدكتور مداني بن بلغيث حيث كان نعمَ السند ونعمَ الظهير، فهو من بدأ هذا البحث تدقيقا وكتابة، إخراجا وطباعة، تفضلا منه وكرما، جعل الله جهده وعونه في ميزان حسناته .

فللكل خالص الحب والتقدير والوفاء، وليعذرني من لم اذكر اسمه سهوا مني وجازى الله عني الجميع خيرا الجزاء .

ذكر الإمام المنزي

كتب الإمام الشافعي رحمهما الله تعالى إذ قال :

قرأت كتاب الرسالة على الإمام الشافعي ثمانين مرة فما من مرة إلا وكان يقف على خطأ، فقال الشافعي :

" هيه أبا الله أن يكون كتاب صحيح غير كتابه "

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36	(1-2)	1
42	()	2
49	()	3
55	(4-2)	4
60	(5-2)	5
64	(6-2)	6
71	(7-2)	7
77	()	8
88	(1-3)	9
89	(2-3)	10
122	Déterminants Log (1-4)	11
123	Résultats du test (2-4)	12
124	Variables introduites/éliminées(a,b,c,d) (3-4)	13
124	Valeurs propres(4-4)	14
125	Lambda de Wilks (5-4)	15
126	Matrice de structure (6-4)	16
127	Predicted Group for Analysis 1: Total (6-4)	17
127	Fonction aux barycentres des groupes (7-4)	18
128	Coefficients des fonctions de classement (8-4)	19
129	Diagnostic des observations (9-4)	20
130	Résultats du classement (10-4)	21
134	Test-t d'échantillons indépendants(11-4)	22
135	Test-t d'échantillons indépendants (12-4)	23
138	Déterminants Log (13-4)	24
139	Test de Box de l'égalité des matrices de covariances (14-4)	25
139	Variables introduites/éliminées(a,b,c,d)(15-4)	26
140	Valeurs propres (16-4)	27
140	Lambda de Wilks (17-4)	28
140	Coefficients des fonctions discriminantes canoniques standardisées (18-4)	29
141	Coefficients des fonctions discriminantes canoniques (19-4)	30
141	Coefficients des fonctions de classement (20-4)	31
142	Résultats du classement (21-4)	32
142	Test de Box de l'égalité des matrices de covariances (22-4)	33
143	Résultats du test (23-4)	34
144	Variables introduites/éliminées(a,b,c,d) (24-4)	35

144	Valeurs propres (25-4)	36
145	Lambda de Wilks(26-4)	37
145	Coefficients des fonctions discriminantes canoniques standardisées (27-4)	38
145	Coefficients des fonctions discriminantes canoniques (28-4)	39
146	Coefficients des fonctions de classement (29-4)	40
146	Fonction aux barycentres des groupes (30-4)	41
147	Résultats du classement (31-4)	42
156	(1-5)	43
157	(2-5)	44
158	(3-5)	45
159	(4-5)	46
159	(5-5)	47
167	(6-5)	48

الصفحة			
36	6	(1-2)	1
37	5	(2-2)	2
38	4	(3-2)	3
39	3	(4-2)	4
40	2	(5-2)	5
40	1	(6-2)	6
41		(7-2)	7
43	6	(8-2)	8
44	5	(9-2)	9
45	4	(10-2)	10
46	3	(11-2)	11
47	2	(12-2)	12
48	1	(13-2)	13
48		(14-2)	14
50		(15-2)	15
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52		(17-2)	17
53		(18-2)	18
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73	(39-2)	39
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90	(1-3)	46
91	(2-3)	47
92	(3-3)	48
93	(4-3)	49
94	(5-3)	50
95	(6-3)	51
96	(7-3)	52
97	(8-3)	53
98	(9-3)	54
160	(1-5)	55
161	(2-5)	56
161	(3-5)	57
162	(4-5)	58
163	(5-5)	59
163	(6-5)	60
164	(7-5)	61
165	(8-5)	62
170	(9-5)	63

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كيف يمكن تقييم أداء قطاع السياحة والفندقة في الجزائر ؟ وكيف يمكن تشخيصه بمجموعة من أدوات القياس الاقتصادي والإحصاء ؟ وما هي آفاق هذا القطاع ؟

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Coob-Douglas

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Stepwise

L'analyse Factorielle Discriminante

الفصل الأول :

السياحة والفندقة وأهميتهما

في النشاط الاقتصادي

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⁵Wilter Huinwiker

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Huinwiker

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Phase statique

mobile

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Kaspar

: 8

: Wilter Huinwiker -⁵

⁶ - Wilter Huinwiker : **Le tourisme, caractéristiques principales**, AIEST, éditions Gurten, Berne, 1972.

⁷ - Claude Kaspar, **L'expansion des transports touristiques**, Revue de tourisme, Berne, 2^{ème} année N° 2, Avril-Juin 1965.

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1963

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9 - Recommandations sur les statistiques du tourisme ONU-WTO série M No 83 (1994), chapitre II, paragraphe 09.

10 - Gérard Guibilato : **Économie touristique**, Éd. Delta et SPES Suisse, 1983, P 10.

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.28 _17

: Gonzalez Liberal _18

Gonzalez Liberal : **Tourist Resort, Development of tourist potential with regard to tourist reports, type, and classification, legislation, plant and investment**, World travel, IUOTO, No 84, July-August, 1968.

¹⁹- Recommandations sur les statistiques du tourisme ONU-WTO série M No 83 (1994), chapitre II, paragraphe 11.

2-3-1

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Peak season "

3-3-1

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(Multiformes)

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(Hétérogène)

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1993

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%7.4 سنة 1975 ، اليابان %5.1 ، اسبانيا 3.4 % ، سويسرا 3.0 %

_22

.04 1999 /

23- World Tourism Organization : **Tourism Satellite Account : The conceptual framework**, Madrid, 1999.

24- S. Varvaressos : **Tourisme, Approches économiques**, 2^{ème} édition, Athènes, 2000, PP 249-250.

1976 5.0%
 2001 1991
 0.14% و 7.5%
 26
 5.4%
 1-2

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75%

100%

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- Krapf 34 -

36

35

$$\Delta Y = 1/(1-b-c) \cdot \Delta Y_t$$

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: ΔY

: b

: c

: ΔY_t

34- K. Krapf : **Le tourisme facteur de l'économie moderne, A.I.E.S.T Le tourisme moderne et son importance économique et les possibilités de sa planification**, Berne, Gurten, 1963.

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38- H. Durand et autres : **Economie et politique du tourisme**, Paris, edition LGDJ, 1994.

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$$E_{Dt/w} = (\Delta Dt / \Delta w) \cdot (w / Dt)$$

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: ΔDt

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$$E_{Dt/p} = (\Delta Dt / \Delta p) \cdot (p / Dt) :$$

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: ΔDt

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(...) .

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S.C.N.

: 41

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: 42

: Les enquêtes de terrain : 1-3

: L'offre et la demande touristique 2-3

1998 C.S.T

:

(...)

() -

: Les Modèles économiques 3-3

41- M. Soteriades : L'analyse de la consommation touristique - Les méthodes Ex post, tourisme revue, vol 59 N° 3/04 P 7

42- Loc cit PP 8-11

: 43

Les modèles input-output -

Les modèles multiplicateurs touristiques -

.Les modèles économétriques ⁴⁴ -

: Les modèles combinées : **4-3**

:

: **Le modèle intégré** -

: ⁴⁵**OEF** -

:46

: **Cohérence** -

: **La couverture** -

: **L'efficacité** -

: **Exactitude** -

:

:

⁴³- M. Soteriades, Op-cit PP 8-9

_44

Le Modèle des recettes résiduelles, conçu par **Kreutzwizer**;
 Les modèles des ratios de dépenses : T-MAP I et TRAITS II;
 Les modèles de facteur de coût TEIM : Travel Economic Impact Model;
(CGE) Le modèle du Computable General Equilibrium;
(AIDS) Almost Ideal Demand System;
(LES) Linear Expenditure System;
(TEM) Tourism Expenditure Model.

⁴⁵- Oxford Econometric Forecasting.

⁴⁶- D. Frechtling : Economic impact models (1995). In M. Soteriades, op-cit p 10.

1991

1993

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⁴⁷SICTA

1991

.48

Les Comptes Satellites du Tourisme

SCN

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47- Standard International Classification of Tourism Activities.

48- OCDE : **Manual on tourism economic account**, Paris, 1991.

Tourism Satellite Account : Recommended Methodological Framework CF. CEC, OECD, WTO , UN. 2001. 2001 _49
.06 1999/ 09-08 6 : _50

الفصل الثاني :

تقدير دوال العرض السياحي
والطلب السياحي في الجزائر

2002 1990

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(1-2)													
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
6°catégorie(sans)	153	234	237	251	337	370	371	450	477	486	507	724	729
5°catégorie(*)	55	66	68	69	69	70	70	70	70	72	72	43	47
4°catégorie(**)	63	68	72	73	73	83	85	87	87	90	93	62	58
3°catégorie(***)	87	87	89	89	90	91	91	91	104	107	110	67	69
2°catégorie(****)	17	20	22	21	29	31	33	33	34	34	34	20	20
1°catégorie(*****)	5	5	5	7	7	8	9	9	9	11	11	11	12
Check Total	380	480	493	510	605	653	659	740	781	800	827	927	935

26/08/2003 www.ons.dz :

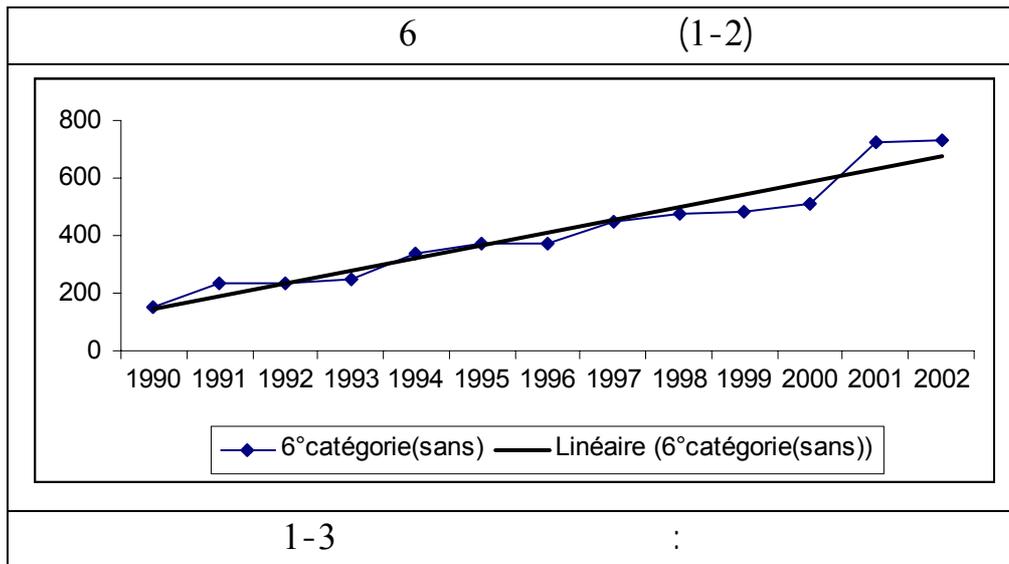
4.8 (1-2) : 6 .1.1.1
 2002 729 1990 153
 % 44 178 410
 6 1-2 % 15.1
 1-2

$$Cat6=44.236*t+100.04 ; R^2=0.9316 \dots 1-2$$

6

6

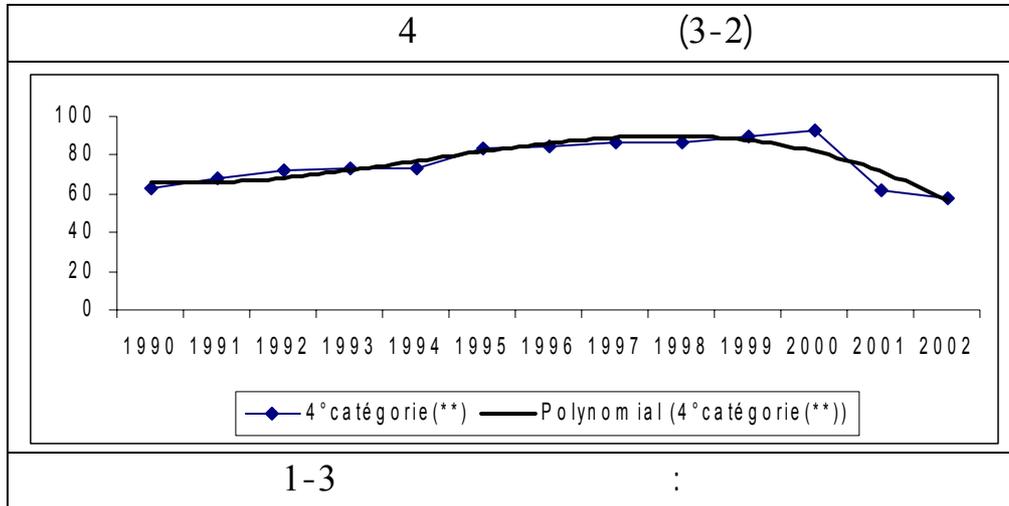
44.24



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 2002 47 1990 55

4

$$- 0.377*t^2 + 3.883*t - 4.992$$



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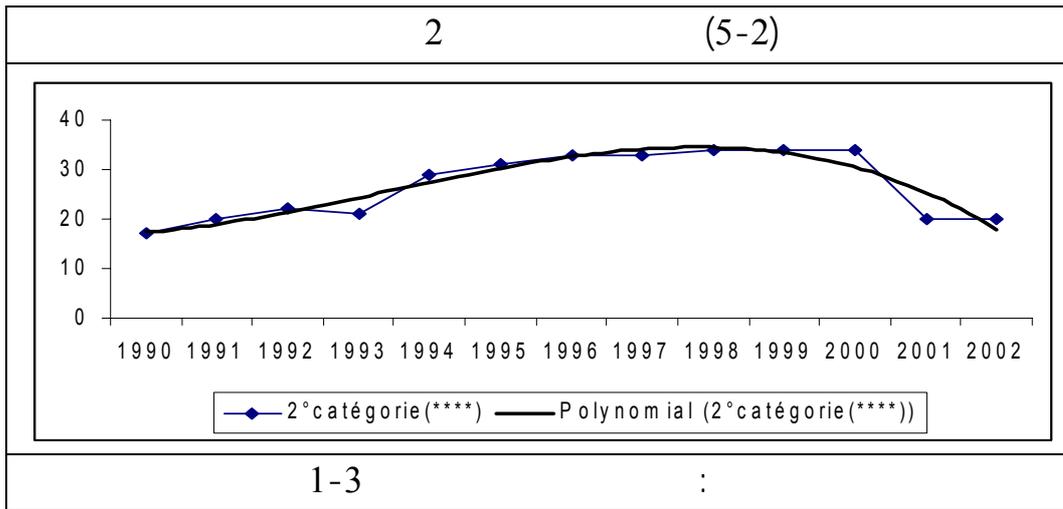
4-2

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$$Cat3 = -0.0256*t^4 + 0.5506*t^3 - 3.6657*t^2 + 9.3315*t + 80.51 ; R^2 = 0.6585 \dots 4-2$$

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$$- 0.102*t^3 + 1.652*t^2 - 7.331*t + 9.332$$



.6.1.1

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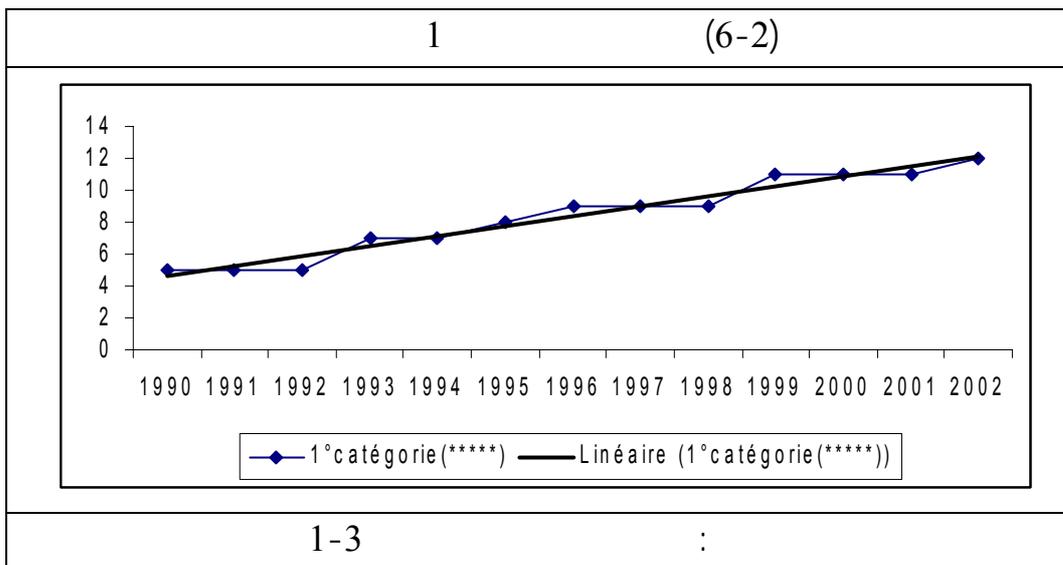
6-2 . % 8.17

$$\text{Cat1} = 0.6209 * t + 4.0385 ; R^2 = 0.9601 \dots 6-2$$

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		1°catég(5*)	2°catég(4*)	3°catég(3*)	4°catég(**)	5°catég(*)	6°catég(sans)
1990	53812	2758	3535	21715	6151	2534	17119
1991	54986	2400	6844	23630	3192	2534	16386
1992	55924	2400	6844	23908	3192	3194	16386
1993	57290	4566	4429	23947	5620	2452	16276
1994	60235	4802	4656	25176	5908	2581	17112
1995	62000	4943	4792	25914	6081	2657	17613
1996	64695	5158	5001	27040	6345	2772	18379
1997	65704	5158	5047	27204	6374	2827	19094
1998	70981	5785	5093	28968	7284	2975	20876
1999	75705	6000	5330	29206	8250	2941	23778
2000	76042	6200	5100	30330	5190	3322	27100
2001	72485	4832	3621	15808	5331	2165	40728
2002	73548	6000	2975	11717	3338	2033	47485

26/08/2003 www.ons.dz :

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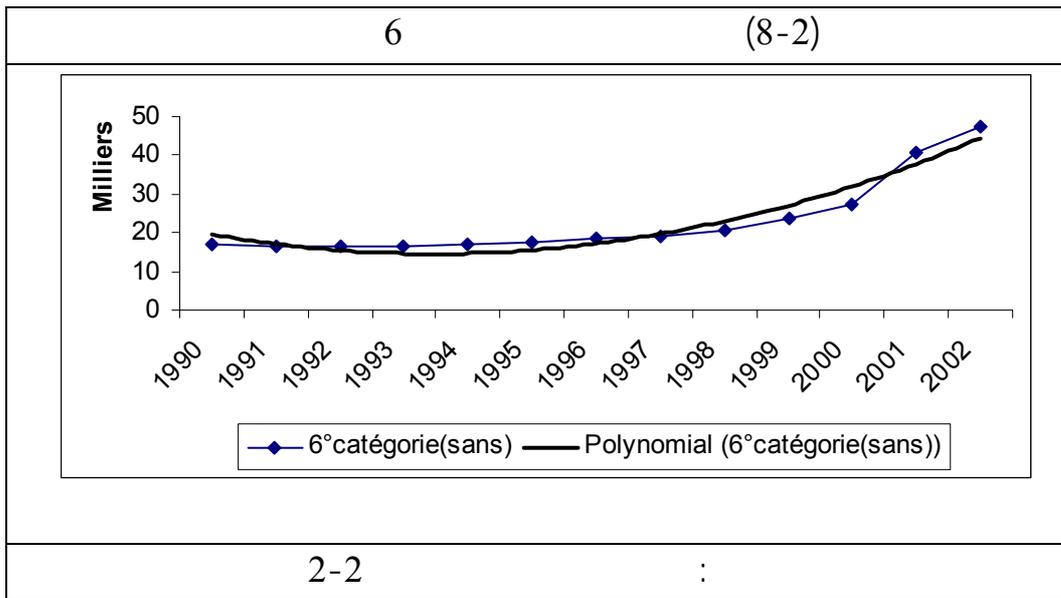
% 9.62

$$Y = 410.52*t^2 - 3668.9*t + 22768 ; R^2 = 0.9338.....8-2$$

8-2

$$821.04*t - 3668.9$$

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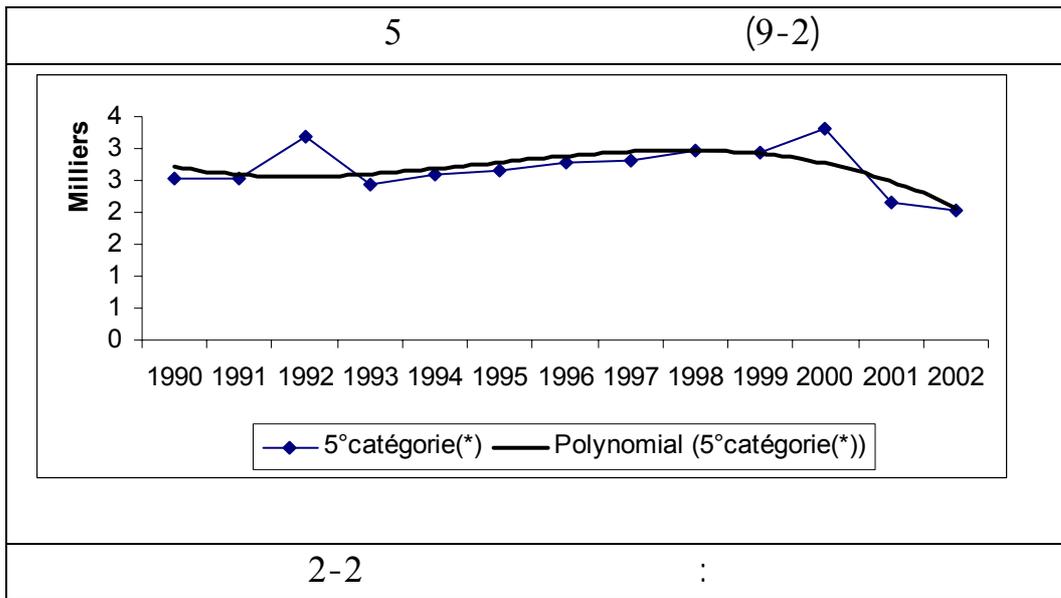
$$y = -1.1125*t^4 + 27.18*t^3 - 218.13*t^2 + 673.62*t + 2044.7 ; R^2 = 0.5873.....9-2$$

9-2

5

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$$- 4.45*t^3 + 81.54*t^2 - 436.3*t + 673.6$$



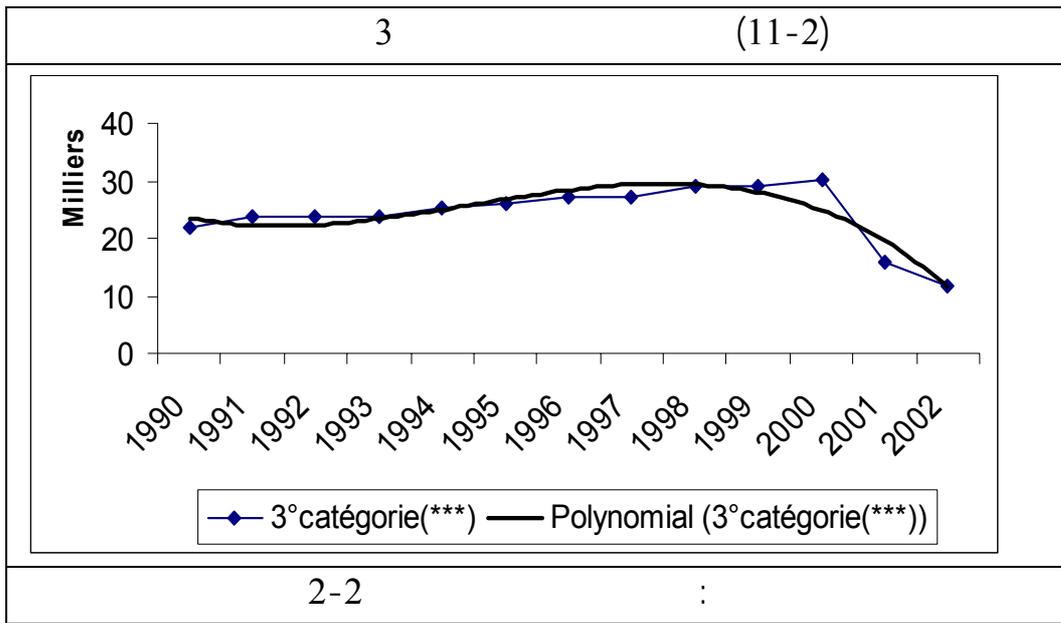
		2-2	:	4	<u>.3.2.1</u>
0.5		2002	3338	1990	6151
-	% 28	1543		5558	
					% 0.28

$$y = 2.5577*t^4 - 93.403*t^3 + 1052.9*t^2 - 3905.5*t + 8494.8 ; R^2 = 0.7271.....10-2$$

$$4 \quad 10-2$$

:

$$10.23*t^3 - 280.21*t^2 + 2105.8*t - 3905.5$$



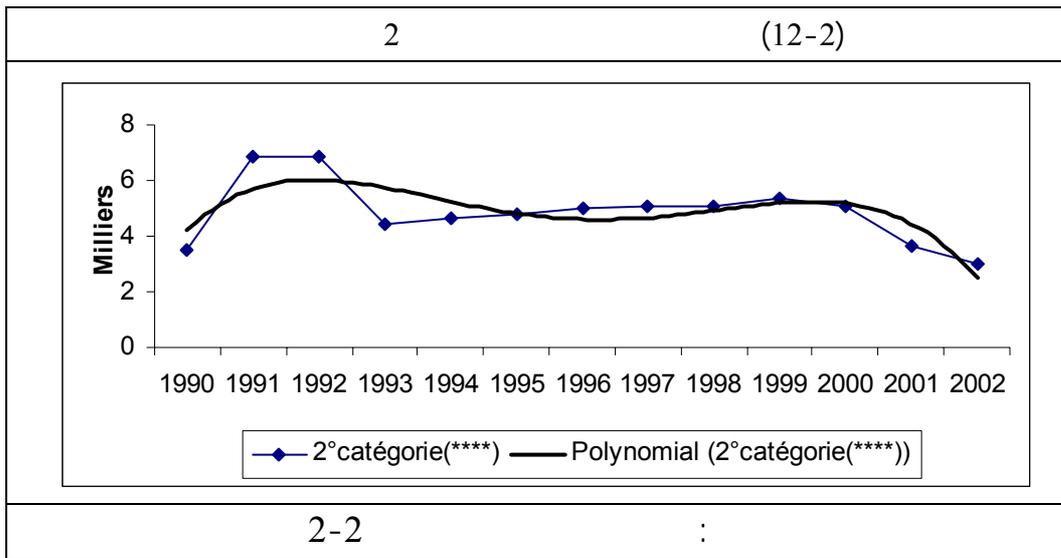
		2-2	:	<u>2</u>	<u>.5.2.1</u>
0.8		2002	2975	1990	3535
	% 23	1130		4867	% 2.17

$$y = -4.823*t^4 + 133.01*t^3 - 1236*t^2 + 4295.6*t + 1059.3 ; R^2 = 0.6174.....12-2$$

$$2 \qquad 12-2$$

:

$$- 19.29*t^3 + 399.03*t^2 - 2472*t - 4295.6$$



		2-2	:	1	.6.2.1
2.2		2002	6000	1990	2758
	% 29	1344		4692	
					% 9.25

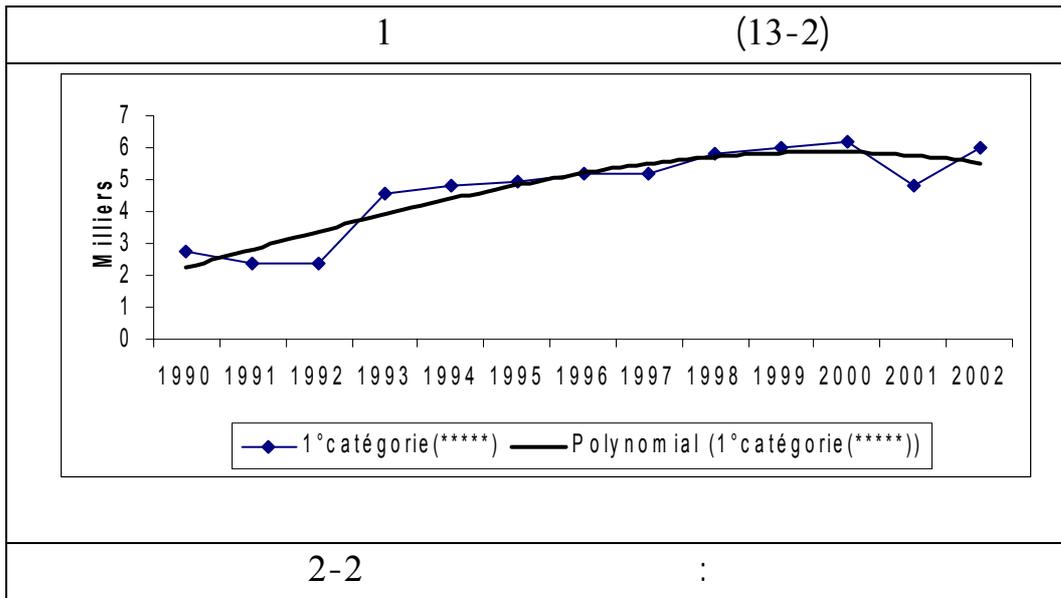
$$y = -1.8505*t^3 + 2.4989*t^2 + 576.14*t + 1680.9 ; R^2 = 0.8451.....13-2$$

13-2

1

:

$$- 5.552*t^2 + 4.998*t + 576.14$$

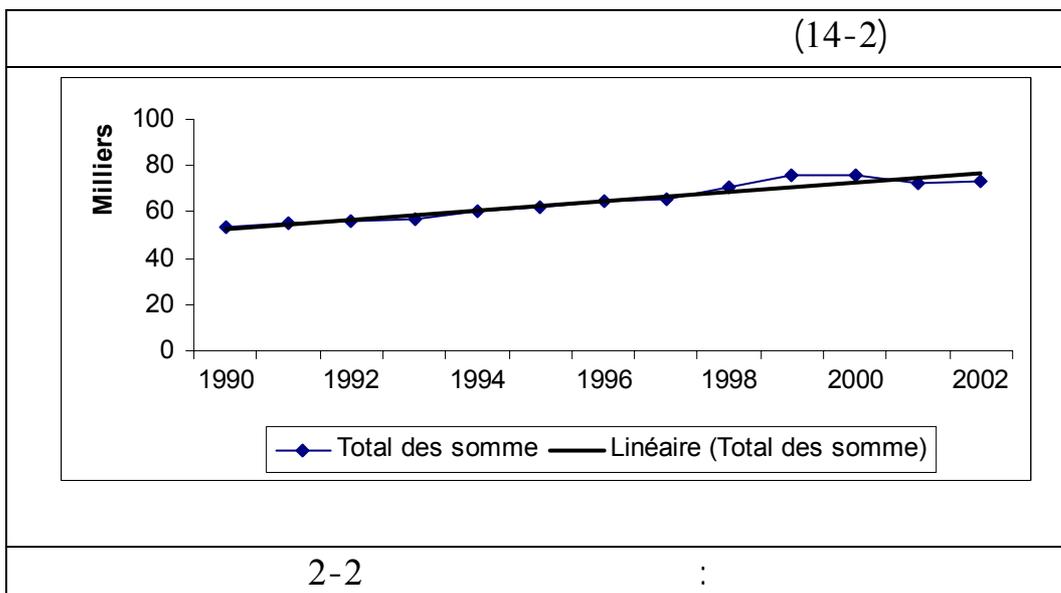


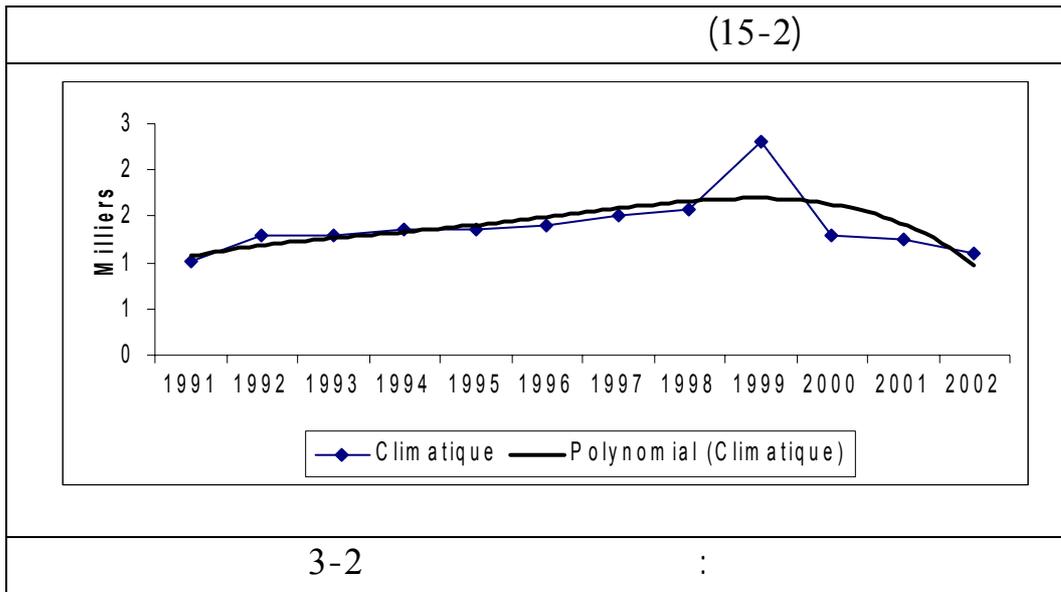
1990	53812			: <u>.7.2.1</u>
64877	1.4		2002	73548
% 2.69		% 13	8169	

$$y = 2015.5 * t + 50769 ; R^2 = 0.9233.....14-2$$

(14-2)

2015.5





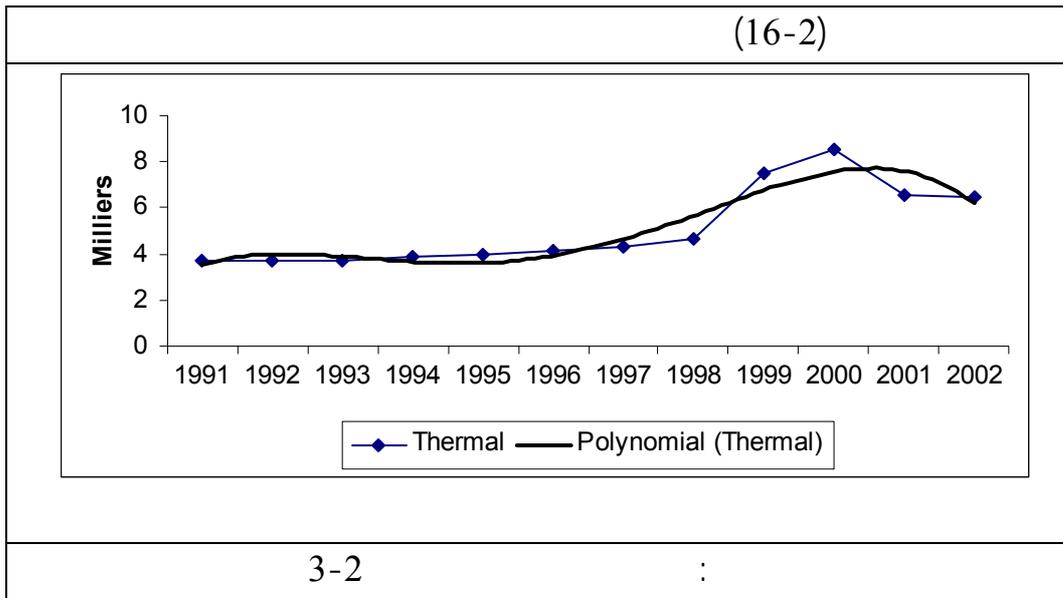
	3-2		:	<u>.2.3.1</u>
1.8	2002	6504	1991	3696
	% 33	1700		5087
				% 6.81

$$y = -5.5773*t^4 + 129.36*t^3 - 918.55*t^2 + 2388.9*t + 1944.9 ; R^2 = 0.8699.....16-2$$

16-2

:

$$- 16.73*t^3 + 388.08*t^2 - 1837.1*t + 1944.9$$



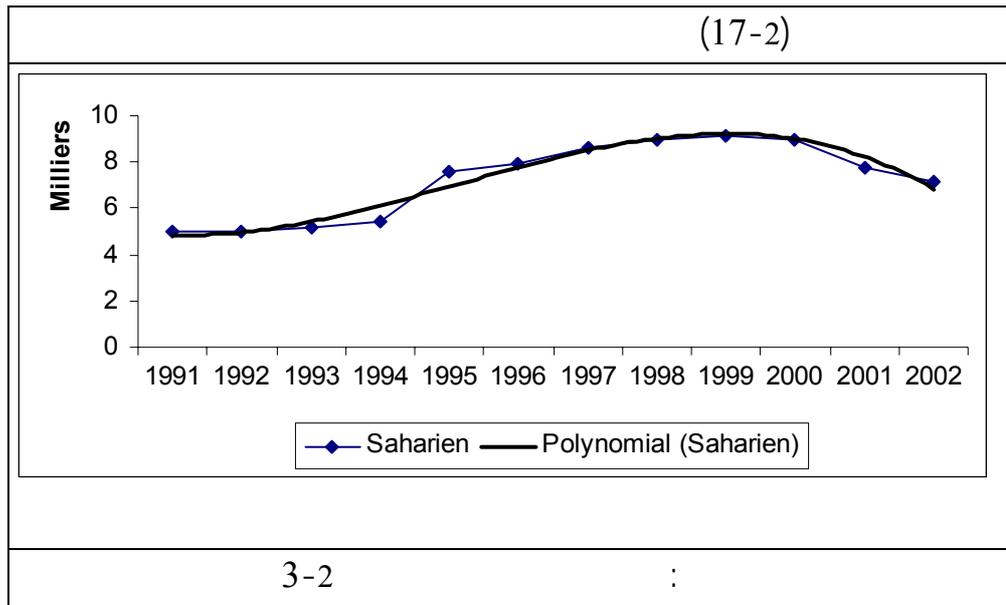
	3-2	:	.3.3.1
1.4	2002	7197	1991 5026
	% 23	1659	7242
			% 4.05

$$y = -18.401*t^3 + 282.49*t^2 - 603.98*t + 5196 ; R^2 = 0.9491.....17-2$$

17-3

:

$$- 55.2*t^2 + 564.98*t + 603.98$$



$$1.2 \quad \frac{2002}{23624} - \frac{1991}{18972} = \frac{.4.3.1}{21445}$$

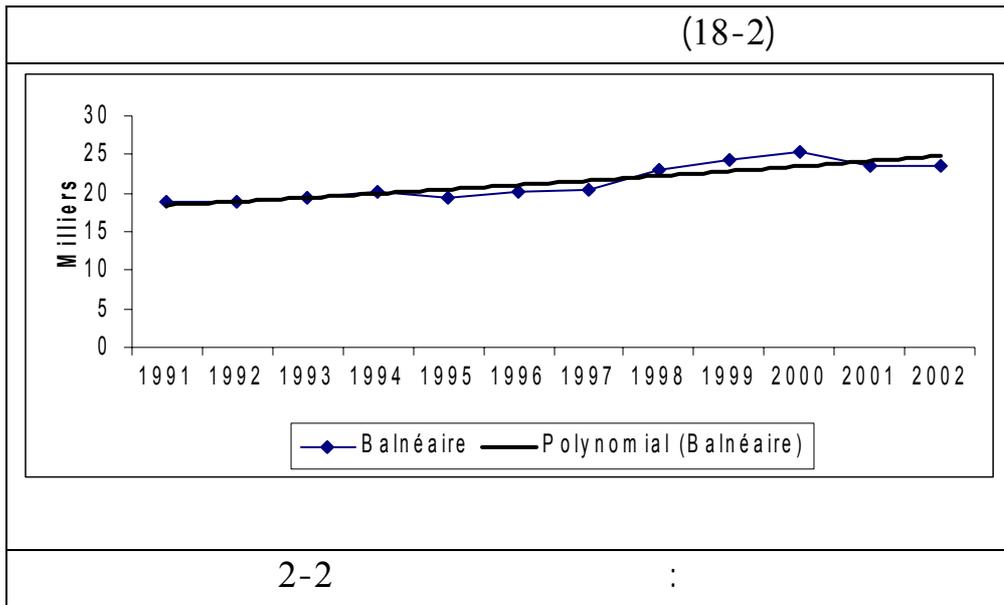
$$\% 11 \quad \frac{2340}{21445} = \% 2.1$$

$$y = 9.8671 * t^2 + 451.62 * t + 17975 ; R^2 = 0.8008.....18-2$$

18-2

:

$$19.73 * t + 451.62$$



1.3

$$y = 756.35 \cdot t + 25799 ; R^2 = 0.9701 \dots 19-2$$

.5.3.1

	2002	35126	1991	26286
% 9	2769		30716	
				% 2.7

19-2

756.35

.1.2

2002 1990

4-2

(4-2)									
			%		%		%		%
1990	3701127	658138	17.78	3042989	82.22	2871178	94.35	171811	5.65
1991	2846163	269856	9.48	2576307	90.52	2267411	88.01	308896	11.99
1992	3358851	365881	10.89	2992970	89.11	2897098	96.80	95872	3.20
1993	3643333	305730	8.39	3337603	91.61	3267285	97.89	70318	2.11
1994	3471433	101262	2.92	3370171	97.08	3335336	98.97	34835	1.03
1995	3648632	75801	2.08	3572831	97.92	3551557	99.40	21274	0.60
1996	3547425	60559	1.71	3486866	98.29	3473639	99.62	13227	0.38
1997	3488358	84818	2.43	3403540	97.57	3396141	99.78	7399	0.22
1998	3003183	132739	4.42	2870444	95.58	2858530	99.58	11914	0.42
1999	3438928	164096	4.77	3274832	95.23	3251922	99.30	22910	0.70
2000	3748135	202905	5.41	3545230	94.59	3519252	99.27	25978	0.73
2001	4028286	225652	5.60	3802634	94.40	3792972	99.75	9656	0.25
2002	4128567	253307	6.14	3890120	94.22	3819600	98.19	8100	0.21
26/08/2003 www.ons.dz :									

1990 658138 : 1.1.2

223134 % 38 2002 253307

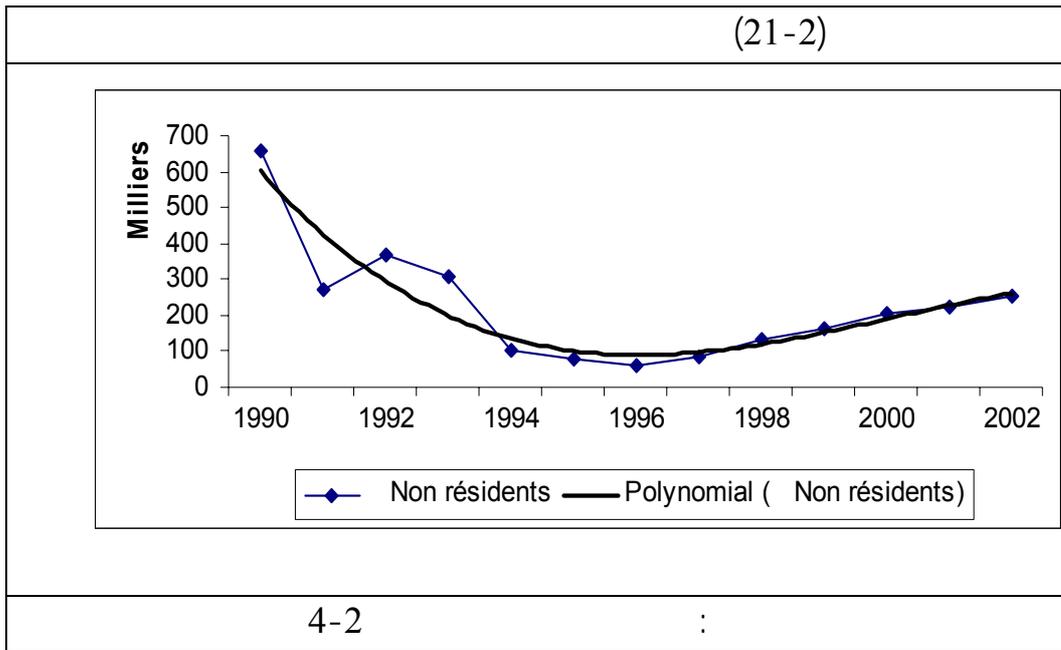
.% 6.31 % 72 161688

$$y = -757.17*t^3 + 25399*t^2 - 245428*t + 823339 ; R^2 = 0.8473.....21-2$$

21-2

:

$$- 2271.41*t^2 + 50798*t - 245428$$



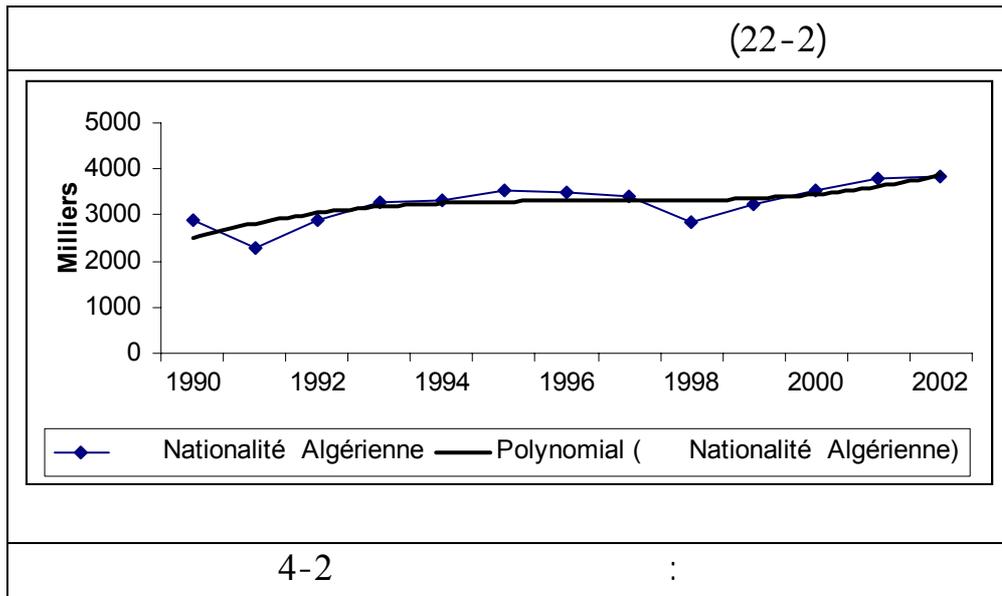
1990	2871178		:		.2.1.2
				2002	3819600
		% 133		432841	
.% 1.04		% 13			
					.% 91.71

$$y = 3141.6*t^3 - 69366*t^2 + 511273*t + 2E+06 ; R^2 = 0.6253.....22-2$$

22 -2

:

$$9424.8*t^2 - 138732*t + 511273$$



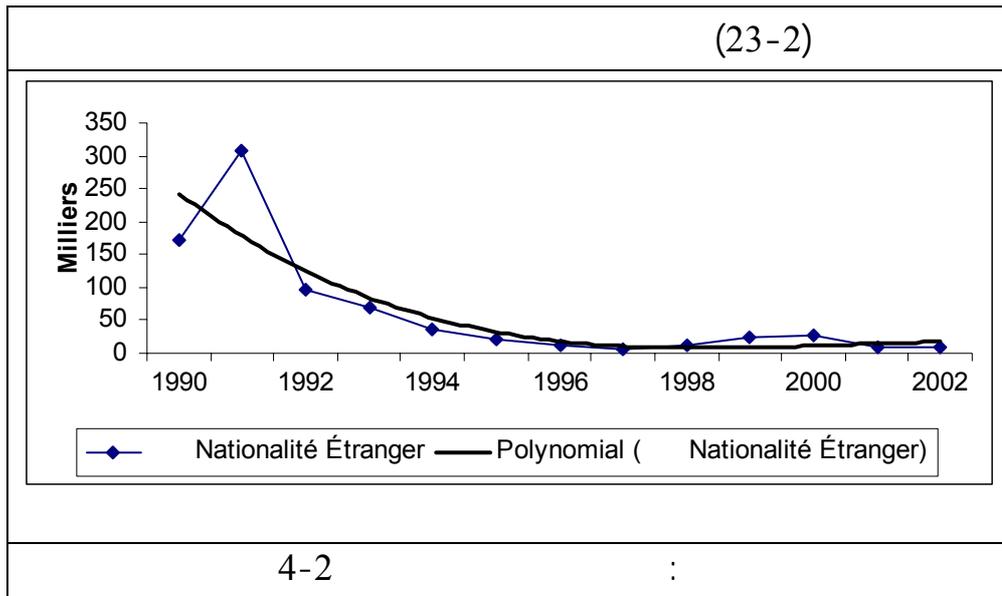
1990	171811			: <u>3.1.2</u>
	61707	% 5	2002	8100
.% 0.04		% 143		88019
			.% 1.90	

$$y = -229.09*t^3 + 7915*t^2 - 87669*t + 322681 ; R^2 = 0.7369.....23-2$$

23-2

:

$$- 687.27*t^2 + 15830*t - 87669$$



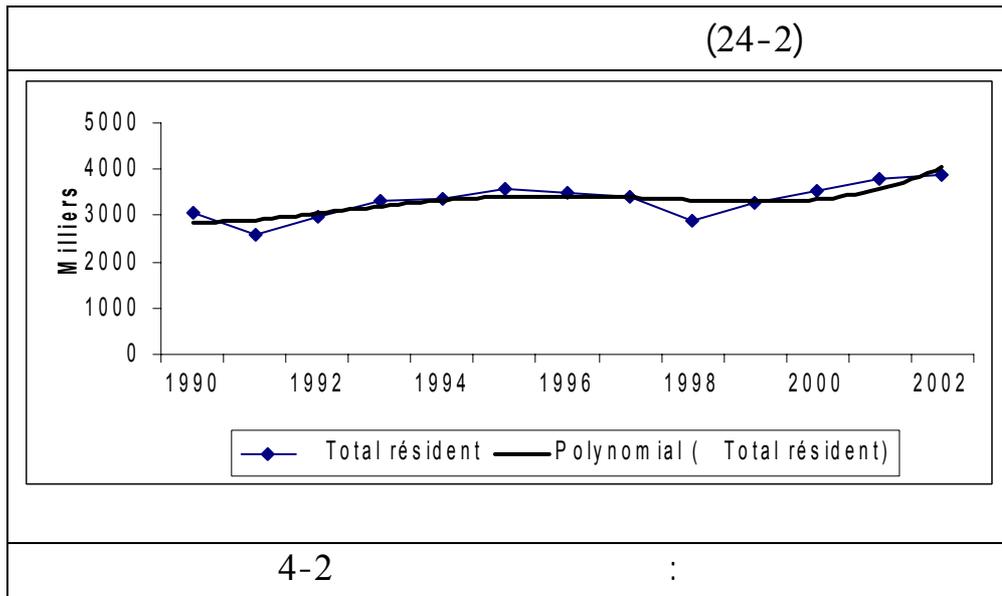
3042989		: .4.1.2
% 128	2002	3890120 1990
% 11	370942	3320503
.% 93.72		.% 1.15

$$y = 759.81*t^4 - 18162*t^3 + 131606*t^2 - 226644*t + 3E+06 ; R^2 = 0.6754.....24-2$$

24-2

:

$$2339.24*t^3 - 54486*t^2 + 263212$$



: 5.1.2

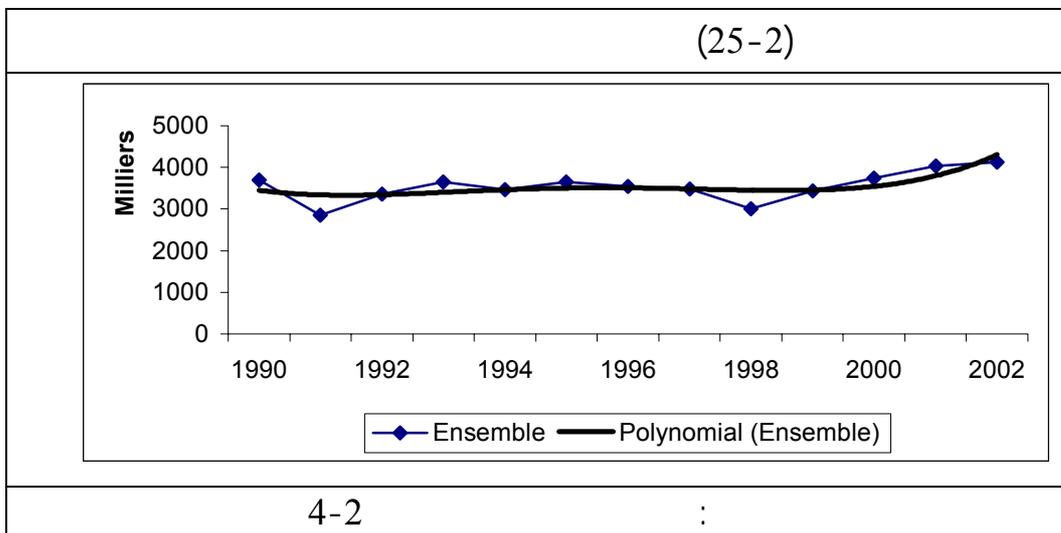
% 112	2002	4128567	1990	3701127
. % 10	353147		3542494	

$$y = 708.6*t^4 - 17533*t^3 + 144594*t^2 - 431128*t + 4E+06 ; R^2 = 0.5214.....25-2$$

25-2

:

$$2834.4*t^3 - 52599*t^2 + 189188*t - 431128$$



.2.2

5-2

% 78 1990

(5-2)							
					%Air/T	%Terre/T	%Mer/T
1990	1136918	229600	885318	22000	20	78	2
1991	1193210	280150	796050	117010	23	67	10
1992	1119548	424416	601841	93291	38	54	8
1993	1127545	255558	766656	105331	23	68	9
1994	804713	375238	356729	72746	47	44	9
1995	519576	346209	63387	109980	67	12	21
1996	604968	324868	182095	98005	54	30	16
1997	634752	343146	184119	107487	54	29	17
1998	678448	364636	190843	122969	54	28	18
1999	748537	368856	183825	195856	49	25	26
2000	865984	382346	282858	200780	44	33	23
2001	901416	402806	295105	203505	45	33	23
2002	988060	456111	209805	322144	46	21	33
26/08/2003 www.ons.dz :							

229600 : 1.2.2

65080 350303 2002 456111 1990

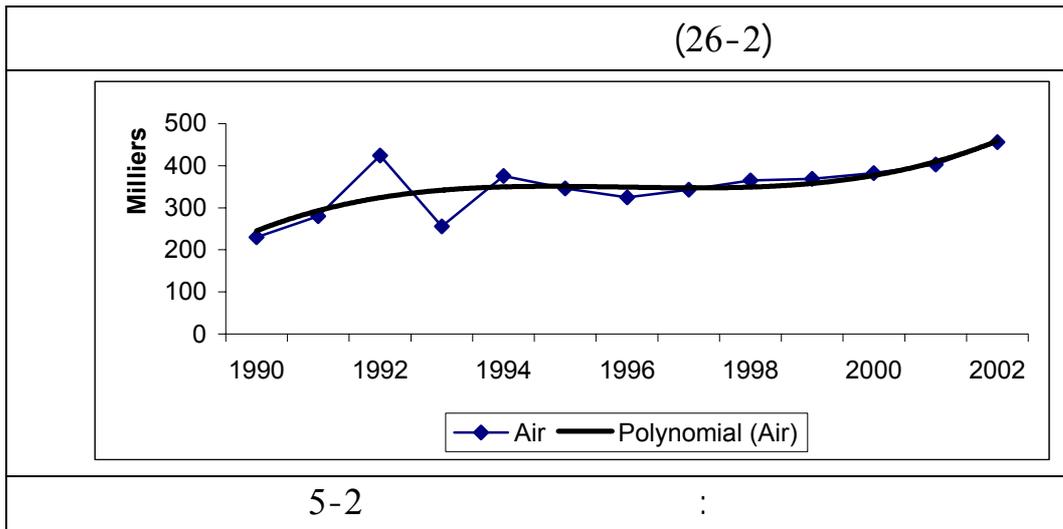
.% 43 % 199 % 19

$$y = 560.64*t^3 - 11683*t^2 + 78779*t + 177755 ; R^2 = 0.6134.....26-2$$

26-2

:

$$1681.92*t^2 - 23366*t + 78779$$



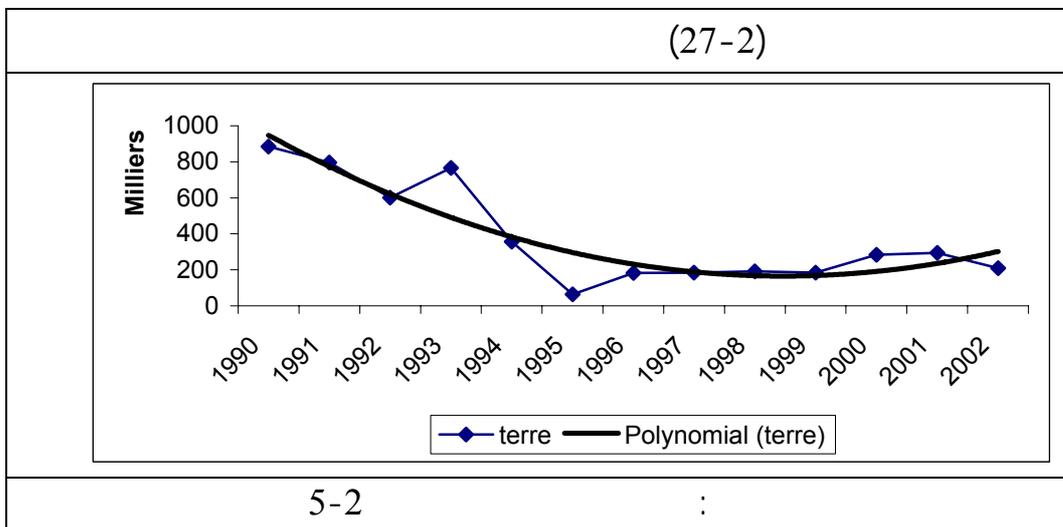
885318 : 2.2.2
 277653 384510 2002 209805 1990
 .% 40 % 24 % 72

$$y = 10924*t^2 - 206745*t + 1E+06 ; R^2 = 0.8279.....27-2$$

27-3

:

$$21848*t - 206745$$

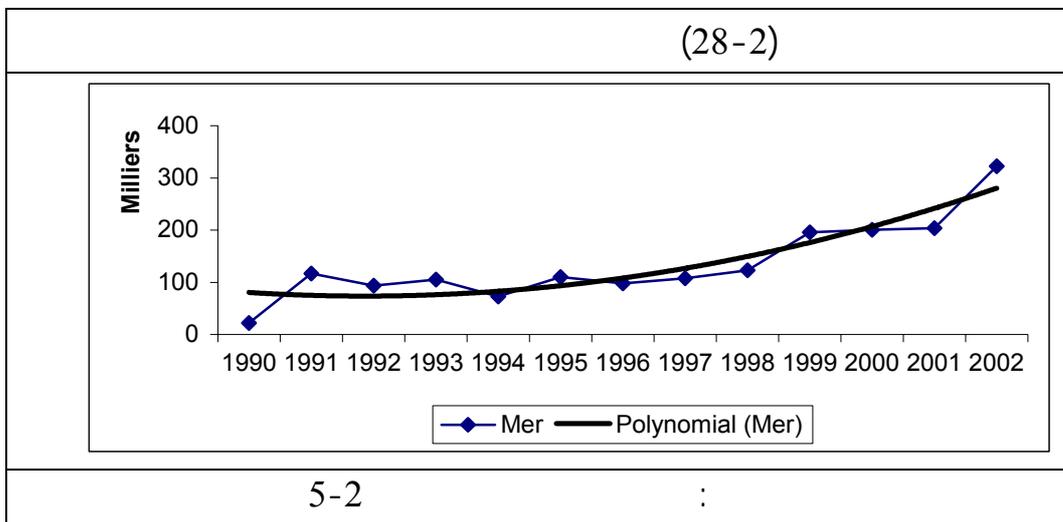


22000			:	<u>3.2.2</u>
76491	136239	2002	322144	1990
.% 17		% 1464		% 56

$$y = 2009.4*t^2 - 11467*t + 89920 ; R^2 = 0.8349.....28-2$$

28-3

$$4018.8*t - 11467$$

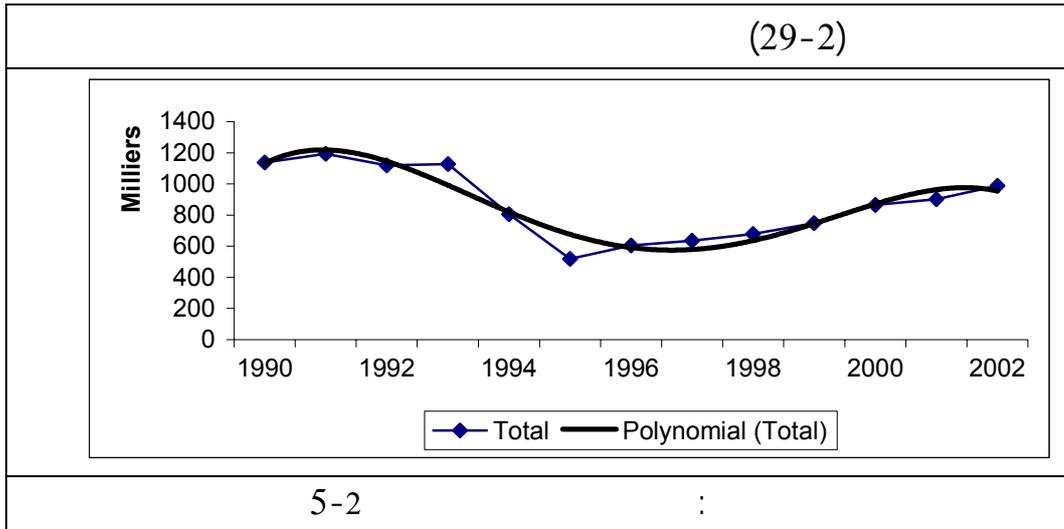


1136918			:	<u>4.2.2</u>
227912	871052	2002	988060	1990
		% 87		% 26

$$y = -675.16*t^4 + 19877*t^3 - 182081*t^2 + 503657*t + 790990 ; R^2 = 0.9122.....29-2$$

29-2

$$- 2700.64*t^3 + 50631*t^2 - 364162*t + 503657$$



:

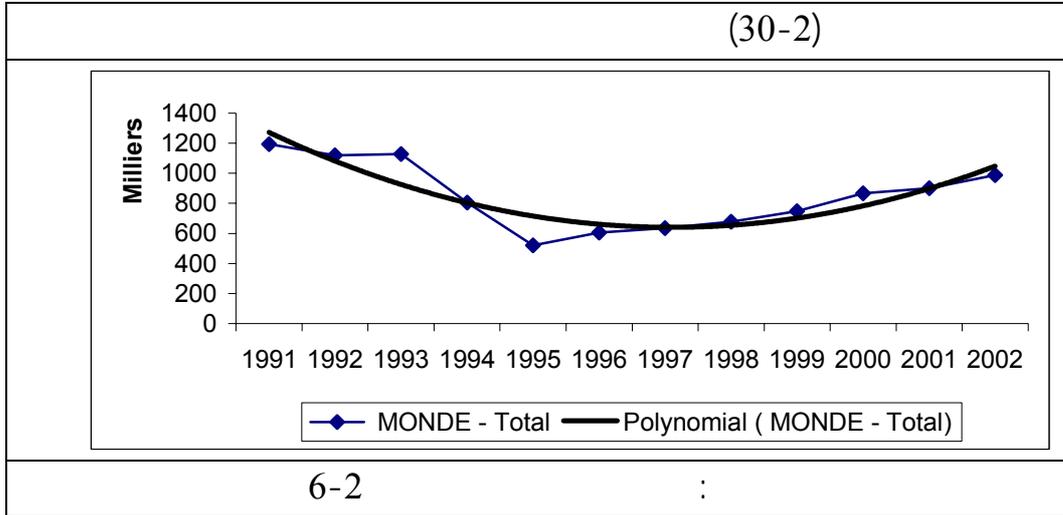
.3.2

.2002 1991

6-2

30-2

33940*t - 240983 :



31-2 6-2 : .2.3.2

158202

% 26-

1995 37831 1991

144884 2002 1996

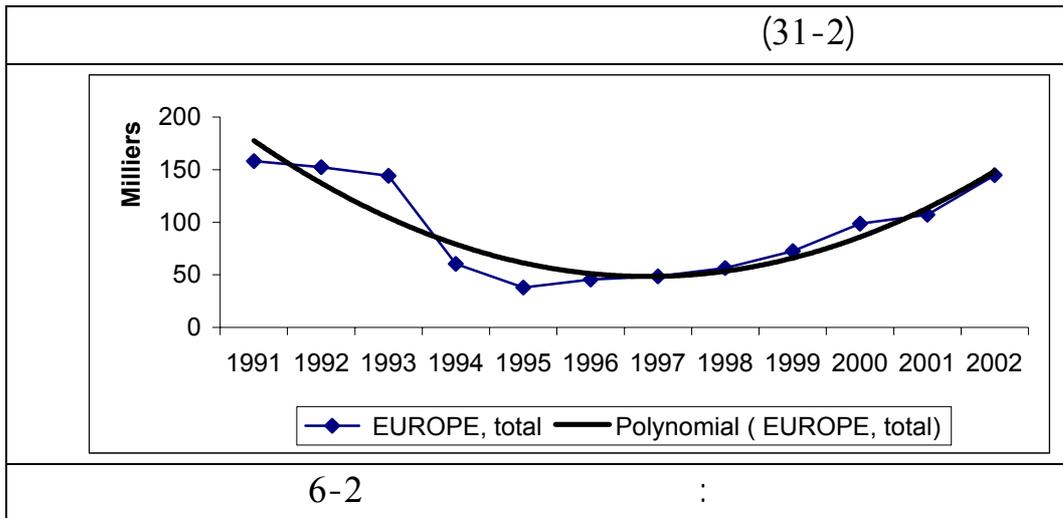
31-2

% 22

$$y = 3775.3*t^2 - 51715*t + 225554 ; R^2 = 0.8548.....31-2$$

31-2

7550.6*t - 51715 :



32-2 6-2 : .3.3.2

537867

% 27-

1996 39638 1991

75672 2002 1996

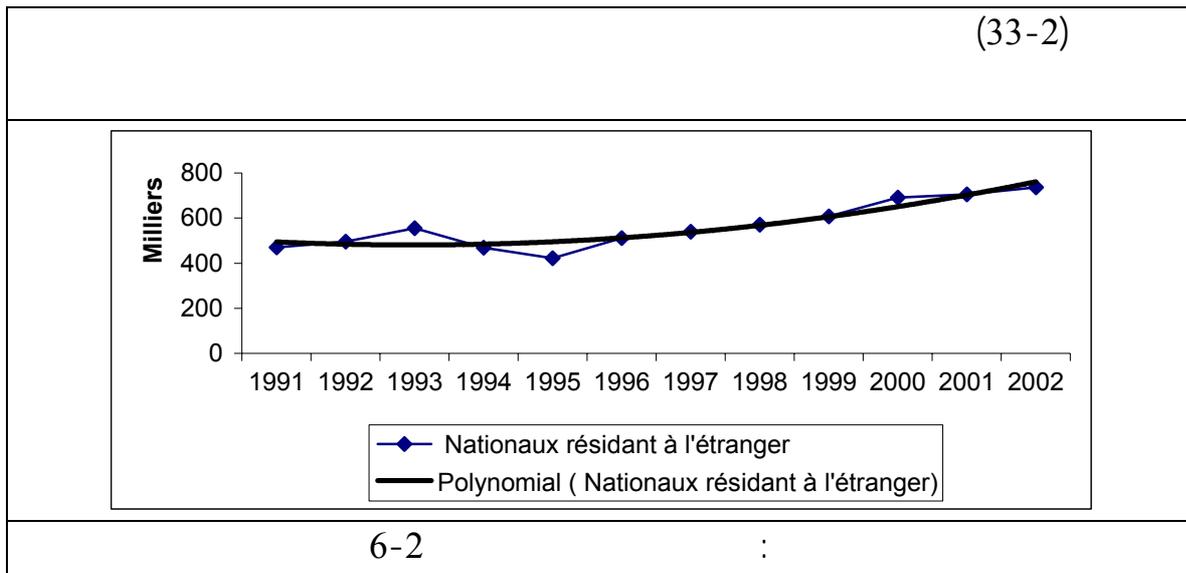
32-2

% 14

$$y = 9054.9*t^2 - 159665*t + 721710 ; R^2 = 0.9344.....32-2$$

32-2

18109.8*t - 159665 :



6-2 : 5.3.2

34-2

27212	1991	523178		
	1998		% 30-	1997
				61815
				2002
				% 19

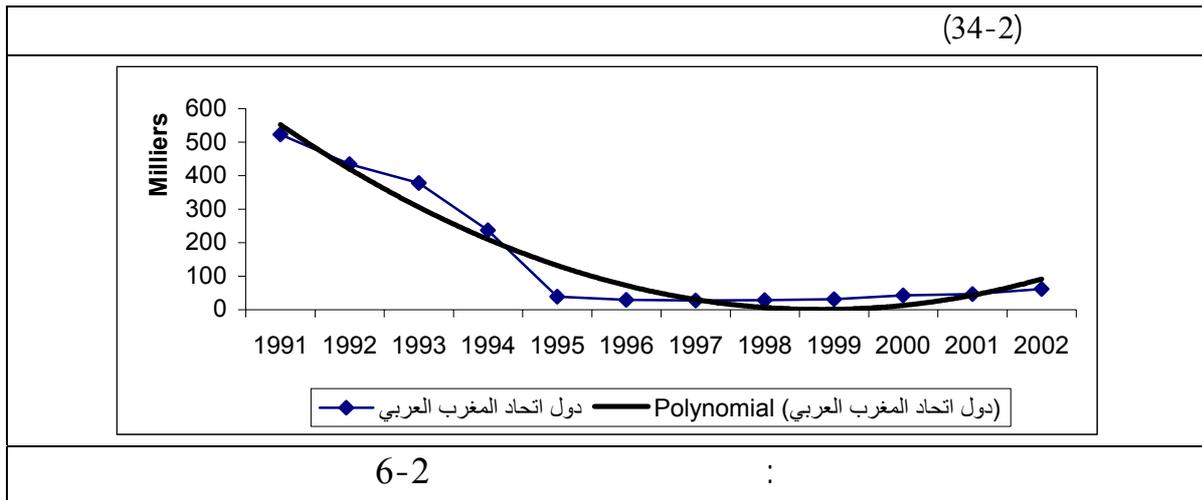
34-2

$$y = -213.88*t^3 + 13189*t^2 - 181688*t + 731520 ; R^2 = 0.9471.....34-2$$

34-2

:

$$- 641.64*t^2 + 26378*t - 181688$$



35-2 6-2 : .6.3.2

4606

% 15-

1996

1770

1991

4626

2002

1997

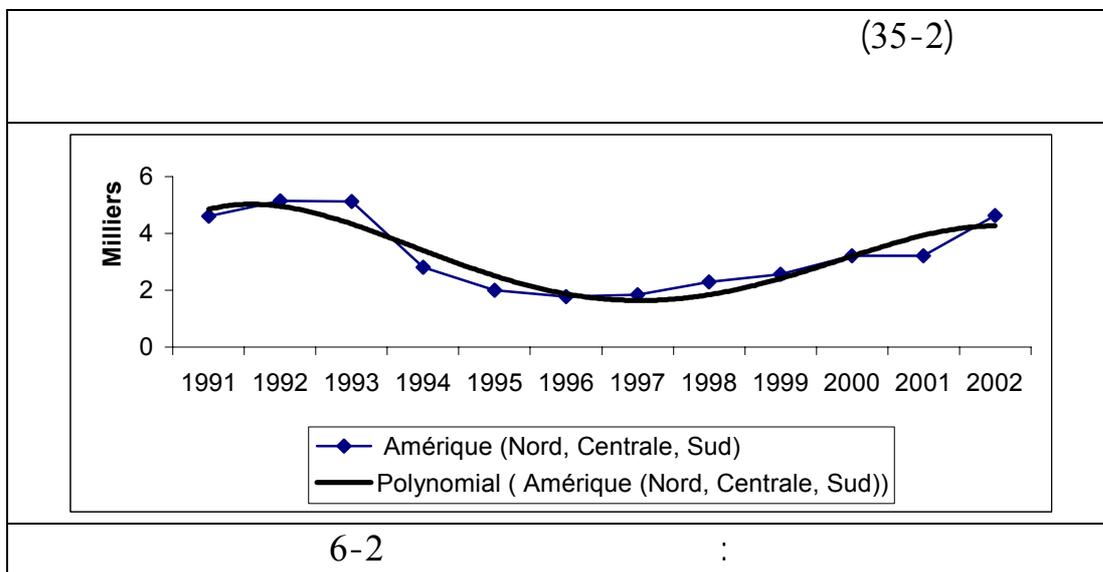
.35-2

% 18

$$y = -4.1202*t^4 + 113.18*t^3 - 943.62*t^2 + 2211.3*t + 3469.4 ; R^2 = 0.8766.....35-2$$

35-2

$$- 2700.64*t^3 + 50631*t^2 - 364162*t + 503657 :$$



6-2

:

.7.3.2

3803

36-2

% 44-

1996

94

1991

1099

2001

1997

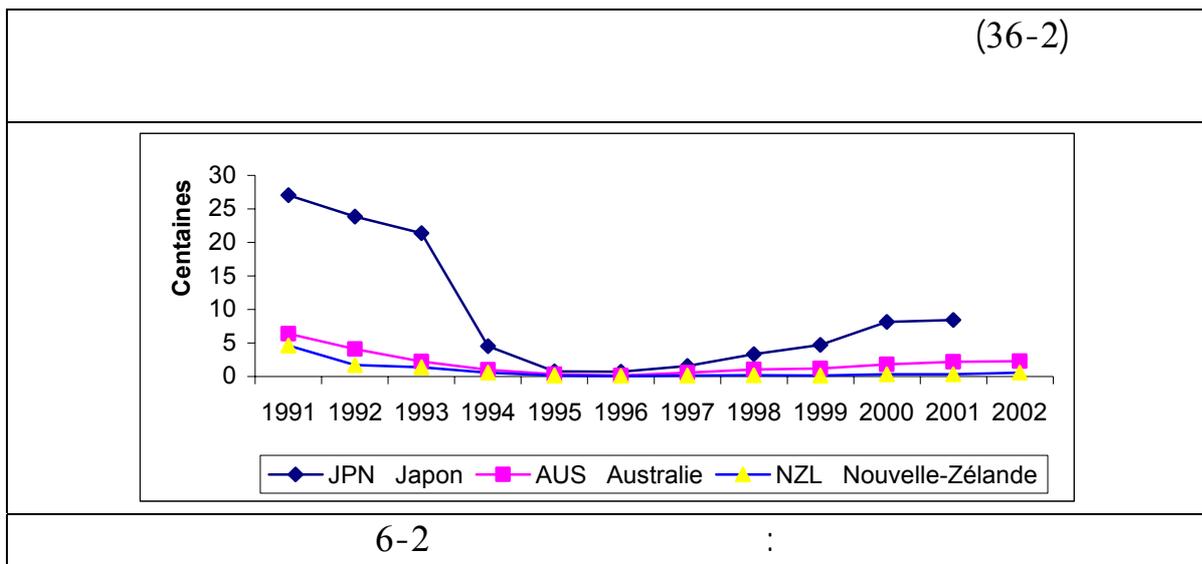
36-2

% 46

$$y = -11.216*t^3 + 288.93*t^2 - 2322.4*t + 6280.4 ; R^2 = 0.9036.....36-2$$

36-2

$$- 2700.64*t^3 + 50631*t^2 - 364162*t + 503657 :$$



4.2

7-2

(7-2)													
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	658138	269856	365881	305730	101262	75801	60559	84818	132739	164096	202905	225652	253307
	513384	173011	267969	221778	55886	36866	31500	48638	80672	95149	116921	142772	168325
	69523	57061	52232	37744	23438	15362	12003	7704	8512	10104	12635	13003	13371
()	22468	8373	12524	16670	7729	7607	4084	10451	15811	11170	13606	15725	17844
	34921	25303	24321	22259	10787	12561	7794	6389	7728	8230	8495	14139	10404
	17842	6108	8835	7279	3422	3405	5178	11636	19908	38820	50746	39800	28854
26/08/2003 www.ons.dz :													

37-2 7-2 : 1.4.2

1990 658138

223134

% 1.28

2002

253307

37-2

% 72.46

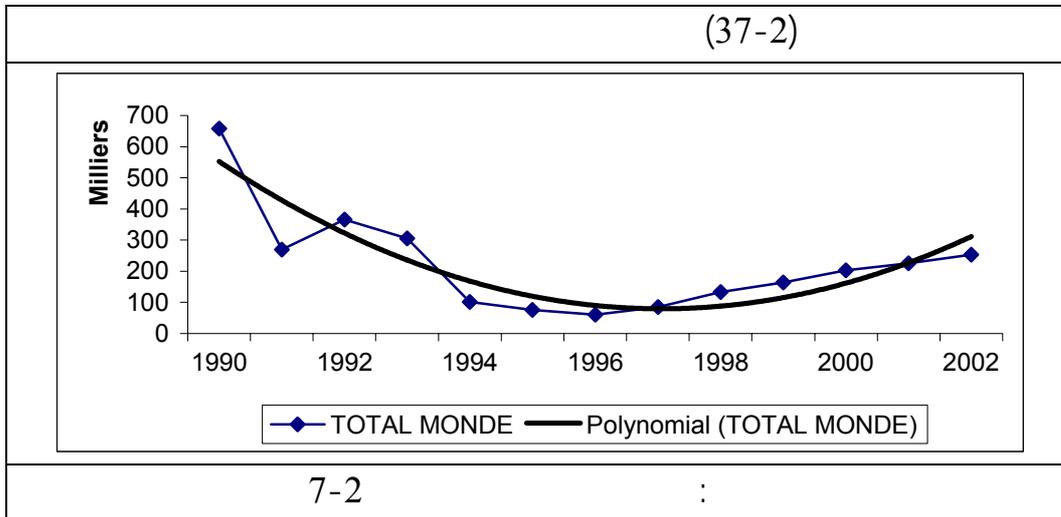
161688

:

$$y = 9498*t^2 - 153053*t + 696134 ; R^2 = 0.8096.....37-2$$

:

$$18996*t - 153053$$



: .2.4.2

2002 168325 1990 513384

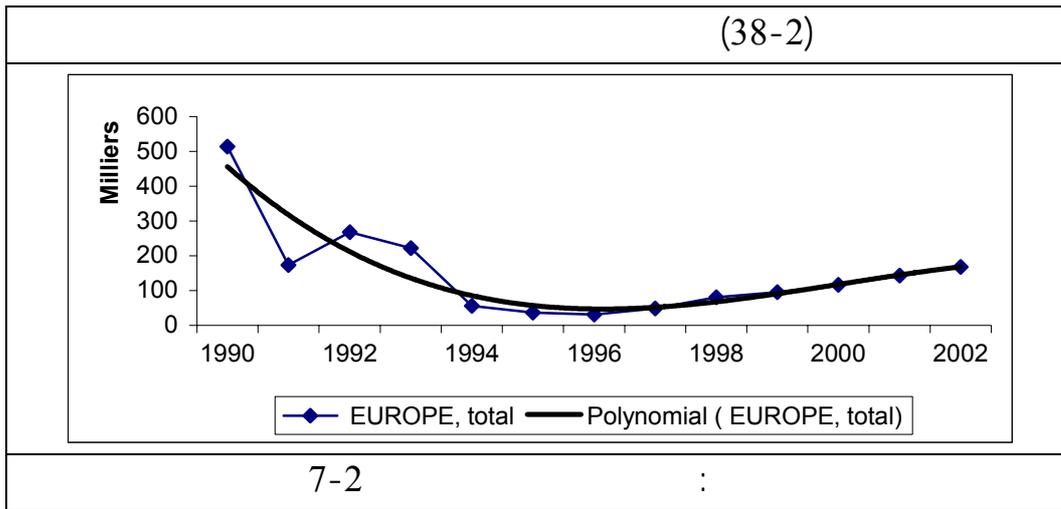
131313 150221 % 4.09

: 38-2 % 87.4

$$y = -610.99*t^3 + 20193*t^2 - 194882*t + 631462 ; R^2 = 0.824.....38-2$$

:

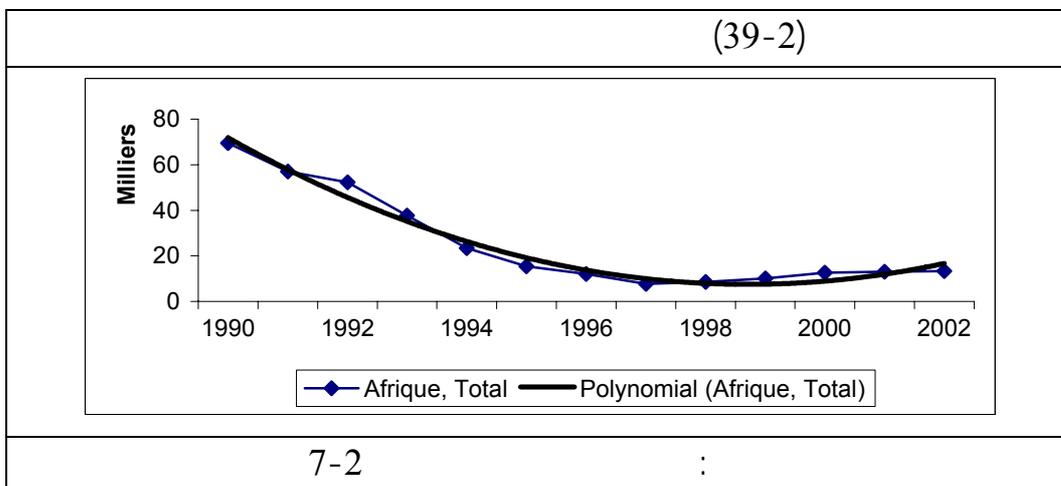
$$- 1832.97*t^2 + 40386*t - 194882$$



	39-2	7-2		: <u>3.4.2</u>
2002	13371	1990	69523	
21211			25592	% 10.35 –
		:	39-2	% 82.9

$$y = 847.89*t^2 - 16464*t + 87422 ; R^2 = 0.9779.....39-2$$

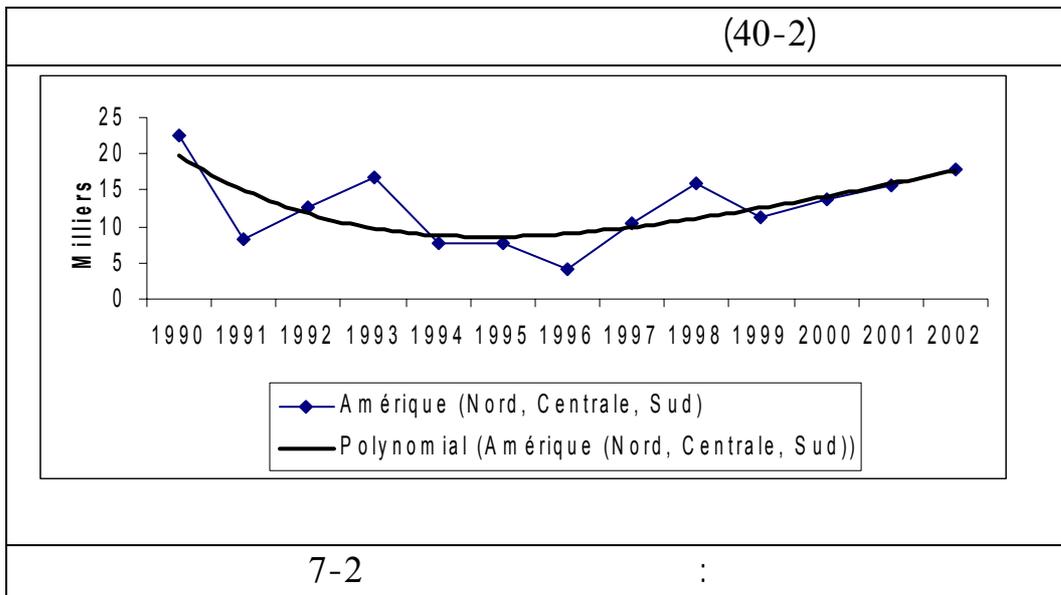
$$1695.78*t - 16464$$



	40-2	7-2	:	<u>.4.4.2</u>
17844	1990	22468		
	12620		% 12.26	2002
:	40-2		% 40.16	5068

$$y = 1.2537*t^4 - 58.793*t^3 + 1090.4*t^2 - 7663.8*t + 26413 ; R^2 = 0.5115.....40-2$$

$$5.015*t^3 - 176.38*t^2 + 2180.8*t - 7663.8$$

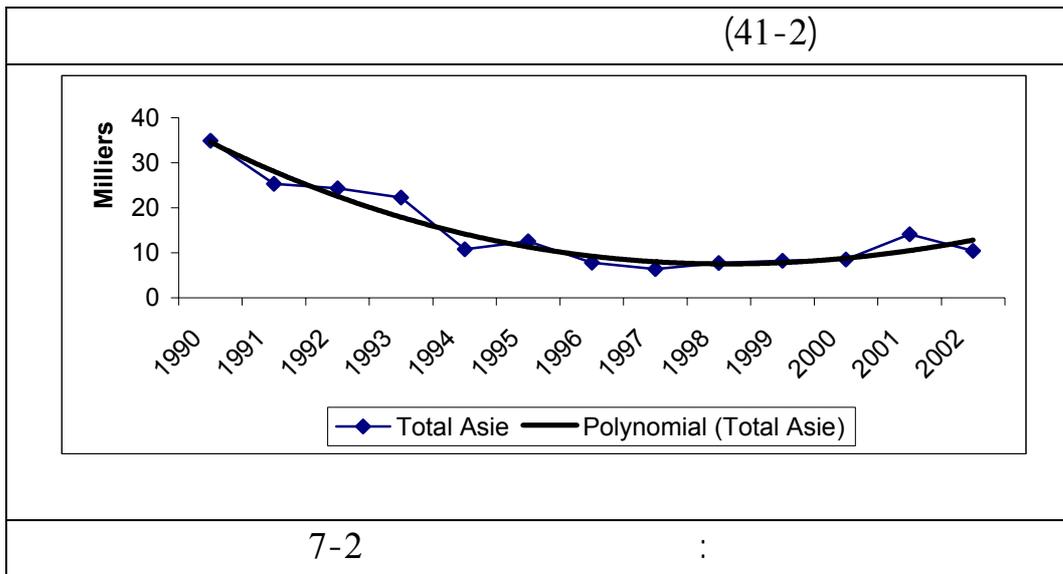


	41-2	7-2	:	<u>.5.4.2</u>
17844	1990	34921		
14872			% 5.02 -	2002
:	41-2		% 60	8921

$$y = -4.778*t^3 + 501.73*t^2 - 7963.9*t + 42054 ; R^2 = 0.9296.....41-2$$

:

$$- 14.334*t^2 + 1003.46*t - 7963.9$$

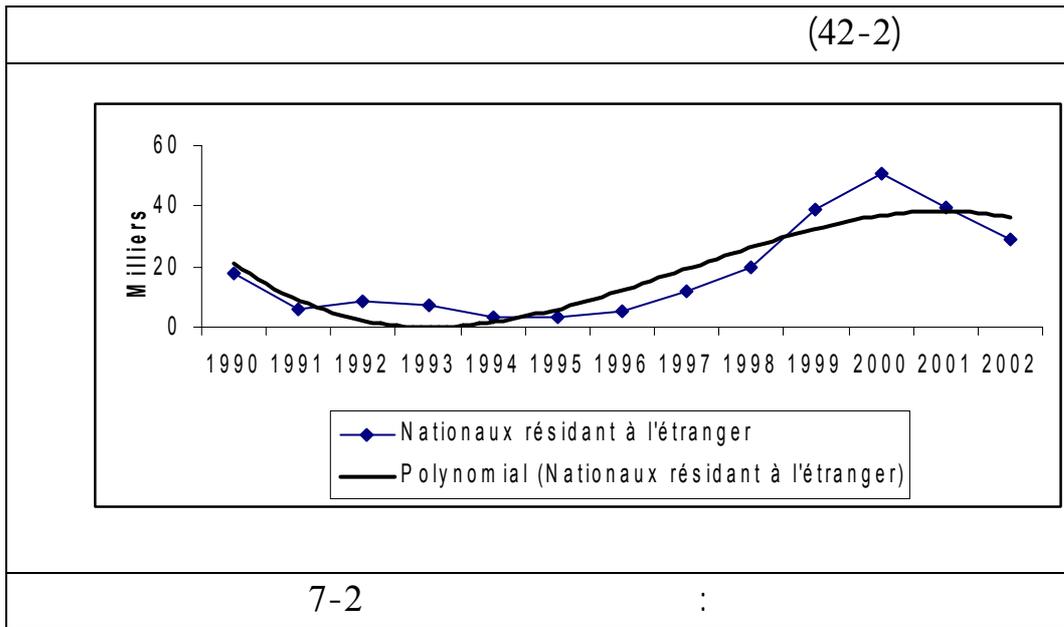


	42-2	7-2	:	.6.4.2
1990	17842			
	18603	% 19.36		2002 28854
:	42-2		% 86	15991

$$y = -154.72*t^3 + 3708.4*t^2 - 22350*t + 39980 ; R^2 = 0.8166.....42-2$$

:

$$- 464.16*t^2 + 7416.8*t - 22350$$



4"
2002 1990

8-2

(8-2)			
:			
1990	105.0	149.0	-44.0
1991	83.9	136.9	-52.9
1992	74.4	164.4	-90.0
1993	72.8	176.9	-104.0
1994	49.5	135.0	-85.4
1995	32.7	187.8	-155.1
1996	45.8	165.1	-119.3
1997	28.8	144.7	-115.8
1998	74.3	269.0	-194.7
1999	80.0	250.9	-171.0
2000	95.7	192.5	-96.8
2001	99.5	193.9	-94.4
2002	99.6	247.7	-148.1
www.ons.dz 26/08/2003 :			

: 1.3

105

8-2

.2001- 1991

% 0.18⁵

1997

1990

43-2

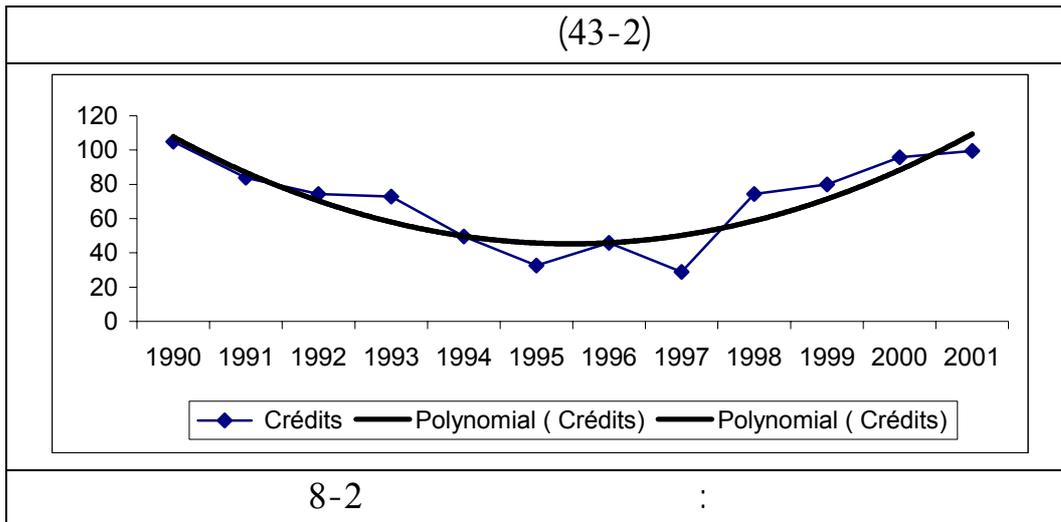
% 35.6

43-2

$$y = 2.0912*t^2 - 27.033*t + 132.65 ; R^2 = 0.8123.....43-2$$

:

$$4.182*t - 27.033$$



$$44-2 \quad 8-2 \quad : \quad \underline{\quad \quad \quad} \quad .2.3$$

$$44-2$$

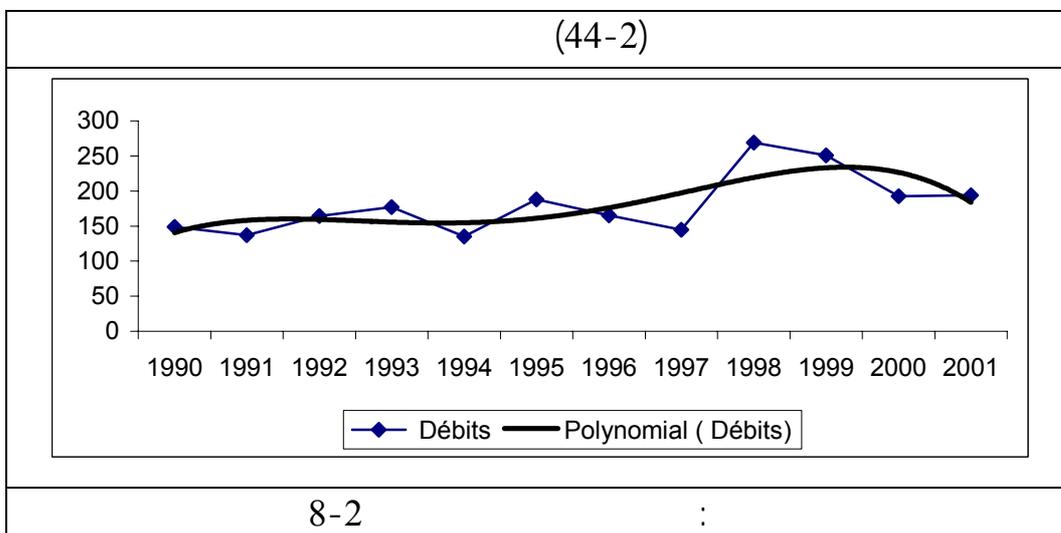
247.7 1990 149 .

185.7 2002

% 24.1

$$y = -0.1399*t^4 + 3.2719*t^3 - 24.274*t^2 + 69.575*t + 92.194 ; R^2 = 0.5467.....44-2$$

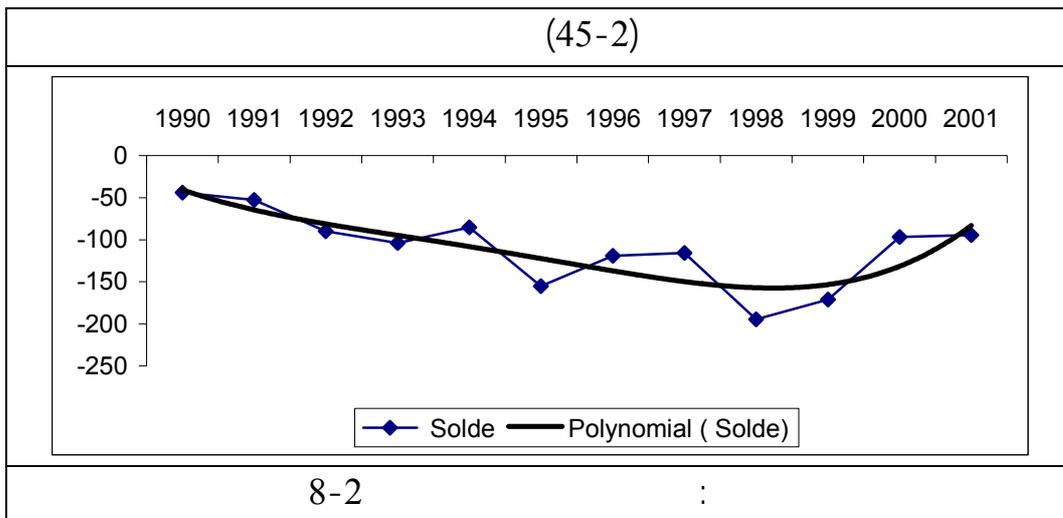
$$- 0.5596*t^3 + 9.8157*t^2 - 48.548*t + 69.575$$



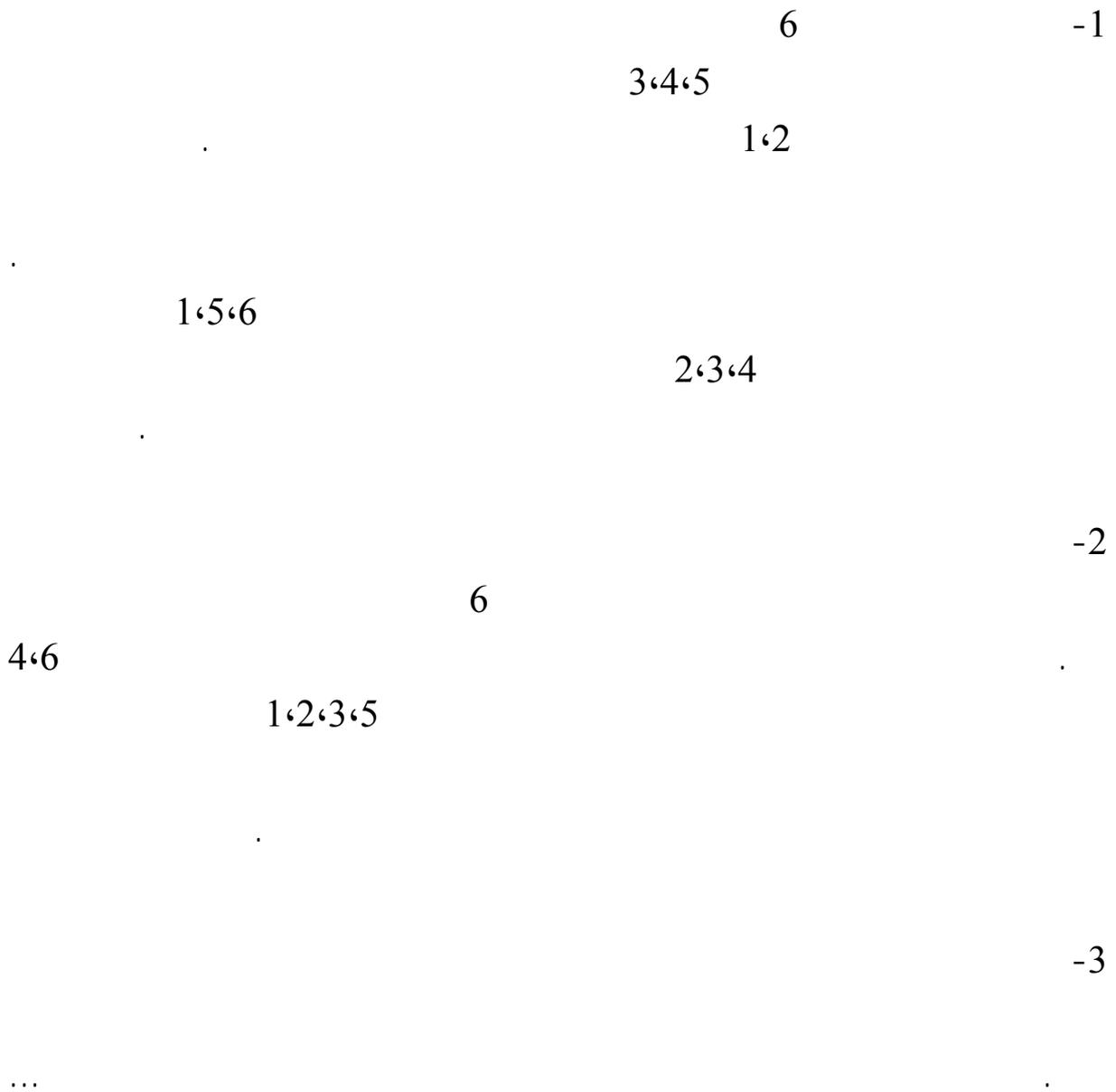
3.3
 :
 -2 45-2 8-2
 45
 194.7 1990 44
 113.2 1998
 .% 39

$$y = 0.0682*t^4 - 1.4159*t^3 + 10.497*t^2 - 46.62*t - 3.104 ; R^2 = 0.7092.....45-2$$

$$0.273*t^3 - 4.248*t^2 + 20.994*t - 46.62$$



:



-4

1995

1990

-5

-6

1996 1995

-7

.

.

.

الفصل الثالث :

التقدير الإحصائي لدوال إنتاج المؤسسات الفندقية العمومية الجزائرية

Cobb-Douglas

. . . .

Coob-Douglas

:

-
-
-

Coob-Douglas

Coob-Douglas

: 1997 2002 .

11
10
09

L

VA

CA

K

Coob-Douglas :

$$P = f(x_1, x_2, \dots, x_n) : \quad x_1, x_2, \dots, x_n \quad P$$

$$P = A * L^\alpha * K^\beta ; \quad \text{Coob-Douglas}$$

L

K

.1

LOG

$$\boxed{LOG(P) = LOG(A) + \alpha * LOG(L) + \beta * LOG(K)}$$

:

: **.1.1**

% α	P	% 1	L	K	-
% β	P	% 1	K	L	-
.(% $(\beta+\alpha)$)	P	% 1	K	% 1	L

$$\frac{\partial LOG(P)}{\partial LOG(L)} = \alpha \quad \alpha$$

$$\frac{\partial LOG(P)}{\partial LOG(K)} = \beta \quad \beta$$

: **.2.1**

:	($\beta+\alpha$)	
	$1 > \beta+\alpha$	-
	$1 < \beta+\alpha$	-

¹ - Pierre Picard : Éléments de microéconomie, Théorie et applications, 5^e éd. Montchrestien, Paris 1998, P149.

$$1 = \beta + \alpha \quad -$$

$$: \quad .3 \quad .1$$

$$\frac{\alpha}{\alpha + \beta} \quad -$$

$$\frac{\beta}{\alpha + \beta} \quad -$$

$$: \quad .4 \quad .1$$

$$1 < \frac{\alpha}{\beta} \quad \frac{\alpha}{\beta}$$

$$1 > \frac{\alpha}{\beta}$$

$$: \quad \text{Euler} \quad .\beta + \alpha \quad -$$

$$\boxed{L * \frac{\partial P}{\partial L} + K * \frac{\partial P}{\partial K} = (\alpha + \beta) * P}$$

$$1 > \beta + \alpha :$$

$$1 < \beta + \alpha :$$

Euler

.2

$$: \quad .5 \quad .1$$

$$MPL = \frac{P}{L} :$$

$$MPK = \frac{P}{K} :$$

2- Edmond Berrebi : Mathématique, Exercices corrigés avec rappels de cours, Tome 2, 5° éd. Dunod, Paris 1982, PP283-284.

: .6.1

$$\frac{\partial P}{\partial L} = \alpha * \frac{P}{L} = f(P, L)$$

$$\frac{\partial P}{\partial K} = \beta * \frac{P}{K} = f(P, K)$$

$$\frac{\partial^2 P}{\partial L^2} = \alpha * (\alpha - 1) * \frac{P}{L^2} < 0$$

$$\frac{\partial^2 P}{\partial K^2} = \beta * (\beta - 1) * \frac{P}{K^2} < 0 :$$

$$\frac{\partial^2 P}{\partial L \partial K} = \frac{\alpha * \beta * P}{L * K} > 0$$

: 3

() CA -

(79+74+71+70)

81 : () VA -

63 : () L -

() K -

20

DE -

.DB -

:

(1-3)

:											
T	B	D	CA	VA	L	K	CA/L	CA/K	VA/L	VA/K	L/K
1	a1	0	40649	18441	13916	84059	2.92	0.48	1.33	0.22	0,17
2	a0	0	30877	14998	12277	87726	2.52	0.35	1.22	0.17	0,14
3	a9	0	30030	10548	14638	87448	2.05	0.34	0.72	0.12	0,17
4	a8	0	27707	12302	12516	88839	2.21	0.31	0.98	0.14	0,14
5	a7	0	34600	15971	10860	84891	3.19	0.41	1.47	0.19	0,13
6	b1	1	95451	57917	26835	231824	3.56	0.41	2.16	0.25	0,12
7	b0	1	86274	55459	24400	226653	3.54	0.38	2.27	0.24	0,11
8	b9	1	80332	46214	20853	221593	3.85	0.36	2.22	0.21	0,09
9	b8	1	84309	41467	21615	219803	3.90	0.38	1.92	0.19	0,10
10	b7	1	74149	36339	21875	216671	3.39	0.34	1.66	0.17	0,10
11	c1	2	30900	23352	15286	205320	2.02	0.15	1.53	0.11	0,07
12	c0	2	24570	18430	11232	198972	2.19	0.12	1.64	0.09	0,06
13	c9	2	20968	14672	10705	197184	1.96	0.11	1.37	0.07	0,05
14	c8	2	21445	12806	10736	196611	2.00	0.11	1.19	0.07	0,05
15	d1	3	23256	14361	9576	70904	2.43	0.33	1.50	0.20	0,14
16	d0	3	18189	10871	9185	68771	1.98	0.26	1.18	0.16	0,13
17	g1	4	74783	37014	14742	440097	5.07	0.17	2.51	0.08	0,03
18	g0	4	62844	30281	10569	389503	5.95	0.16	2.86	0.08	0,03
19	g9	4	51519	28172	9340	378205	5.52	0.14	3.02	0.07	0,02
20	g8	4	55988	28914	9375	376099	5.97	0.15	3.08	0.08	0,02
21	g7	4	72288	26988	10544	377781	6.86	0.19	2.56	0.07	0,03
22	h1	5	17477	8123	7382	140973	2.37	0.12	1.10	0.06	0,05
23	h0	5	22770	10942	5731	138233	3.97	0.16	1.91	0.08	0,04
24	h9	5	17255	8036	5192	134284	3.32	0.13	1.55	0.06	0,04
25	h8	5	17960	9421	4343	133742	4.14	0.13	2.17	0.07	0,03
26	h7	5	24692	9694	4744	130596	5.20	0.19	2.04	0.07	0,04
27	t1	6	51347	28094	13812	119101	3.72	0.43	2.03	0.24	0,12
28	t0	6	49782	26210	13020	114389	3.82	0.44	2.01	0.23	0,11
29	t9	6	49467	27477	11870	109744	4.17	0.45	2.31	0.25	0,11
30	t8	6	59146	32368	12527	109075	4.72	0.54	2.58	0.30	0,11

:

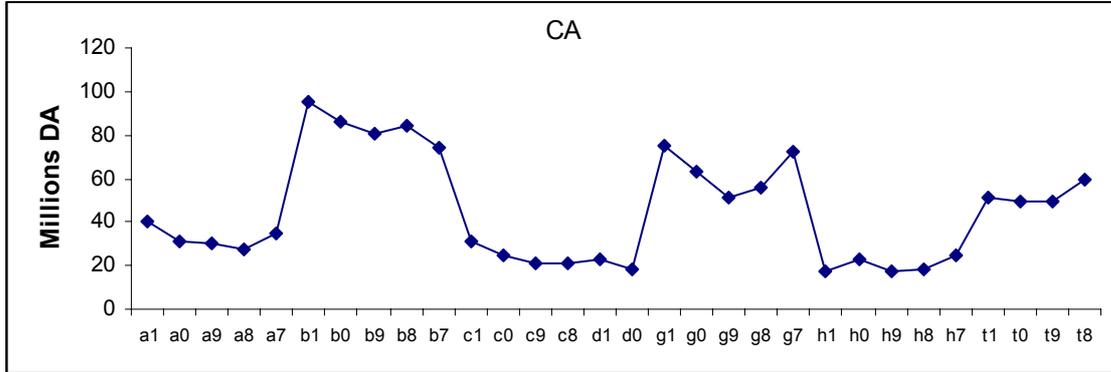
(2-3)										
		CA	VA	L	K	CA/L	CA/K	VA/L	VA/K	L/K
CA	Pearson Corrélation	1	,955(**)	,792(**)	,553(**)	,515(**)	,423(*)	,592(**)	,459(*)	,033
	Sig. (2-tailed)		,000	,000	,002	,004	,020	,001	,011	,863
	N	30	30	30	30	30	30	30	30	30
VA	Pearson Corrélation	,955(**)	1	,849(**)	,486(**)	,361	,409(*)	,558(**)	,526(**)	,058
	Sig. (2-tailed)	,000		,000	,006	,050	,025	,001	,003	,760
	N	30	30	30	30	30	30	30	30	30
L	Pearson Corrélation	,792(**)	,849(**)	1	,165	-,099	,530(**)	,056	,598(**)	,429(*)
	Sig. (2-tailed)	,000	,000		,382	,601	,003	,769	,000	,018
	N	30	30	30	30	30	30	30	30	30
K	Pearson Corrélation	,553(**)	,486(**)	,165	1	,667(**)	-,445(*)	,705(**)	-,399(*)	-,675(**)
	Sig. (2-tailed)	,002	,006	,382		,000	,014	,000	,029	,000
	N	30	30	30	30	30	30	30	30	30
CA/L	Pearson Corrélation	,515(**)	,361	-,099	,667(**)	1	-,063	,893(**)	-,113	-,545(**)
	Sig. (2-tailed)	,004	,050	,601	,000		,742	,000	,552	,002
	N	30	30	30	30	30	30	30	30	30
CA/K	Pearson Corrélation	,423(*)	,409(*)	,530(**)	-,445(*)	-,063	1	-,039	,948(**)	,808(**)
	Sig. (2-tailed)	,020	,025	,003	,014	,742		,839	,000	,000
	N	30	30	30	30	30	30	30	30	30
VA/L	Pearson Corrélation	,592(**)	,558(**)	,056	,705(**)	,893(**)	-,039	1	,038	-,541(**)
	Sig. (2-tailed)	,001	,001	,769	,000	,000	,839		,842	,002
	N	30	30	30	30	30	30	30	30	30
VA/K	Pearson Corrélation	,459(*)	,526(**)	,598(**)	-,399(*)	-,113	,948(**)	,038	1	,743(**)
	Sig. (2-tailed)	,011	,003	,000	,029	,552	,000	,842		,000
	N	30	30	30	30	30	30	30	30	30
L/K	Pearson Corrélation	,033	,058	,429(*)	-,675(**)	-,545(**)	,808(**)	-,541(**)	,743(**)	1
	Sig. (2-tailed)	,863	,760	,018	,000	,002	,000	,002	,000	
	N	30	30	30	30	30	30	30	30	30

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

CA : 1.2

(1-3)



(2-3)

:

(h9)

.	17255	.	95451
(b1)			
.	23975	.	24384
.	45034	.	45034
0.289		53.24	5
			4
:		1.960	
	0.01	% 79.2	-
	0.01	% 95.5	-
	0.01	% 55.3	-
0.05		%42.3	-
0.01		%51.5	-
0.05		%45.9	-
.0.01		% 59.2	-

- EC.TYPE ECHAN.(DDL=N-1) : -4

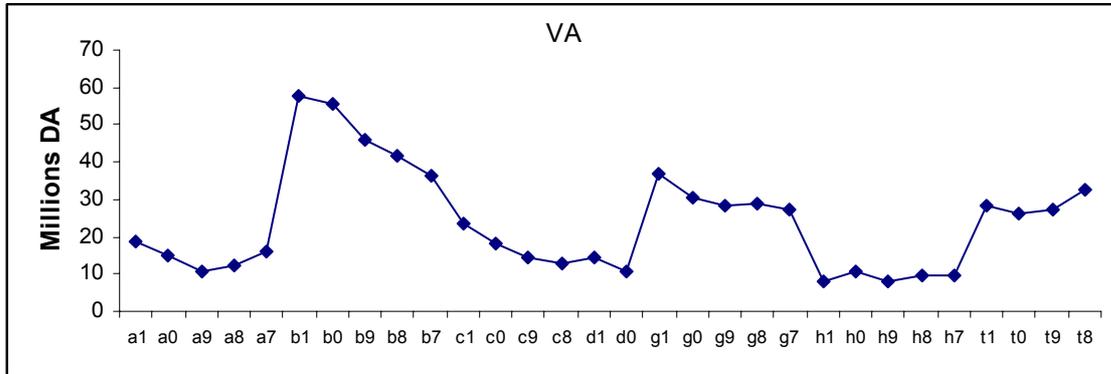
. EC.TYPE SERIE (DDL=N) :

100* (/) = COEFF. DE VARIATION : -5

: %15

.2.2 :

(2-3)



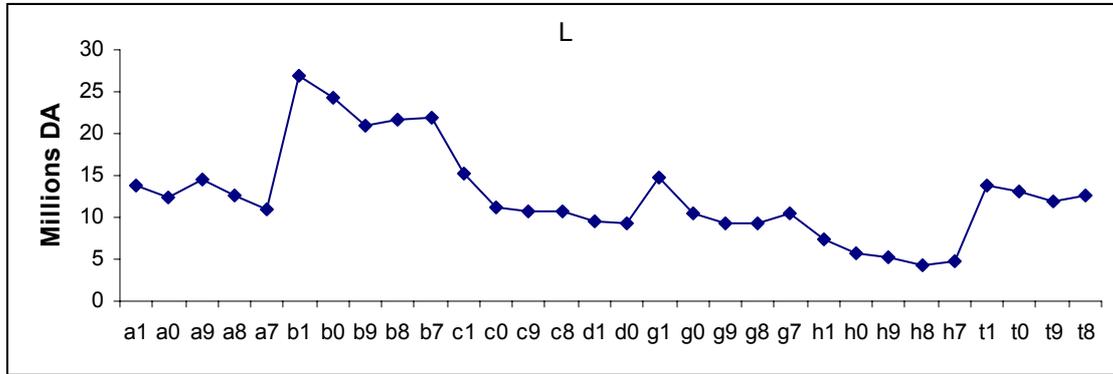
(2-3)

:

(h9)	.	8036	
.	23863	(b1)	. 57917
,	13603	,	. 13836
	0.779		% 57.01
		:	3.023
	0.01		% 84.9
	0.01		% 95.5
	0.01		% 48.6
0.05		% 40.9	-
0.01		% 52.6	-
.0.01		% 55.8	-

: L .3 .2

(3-3)



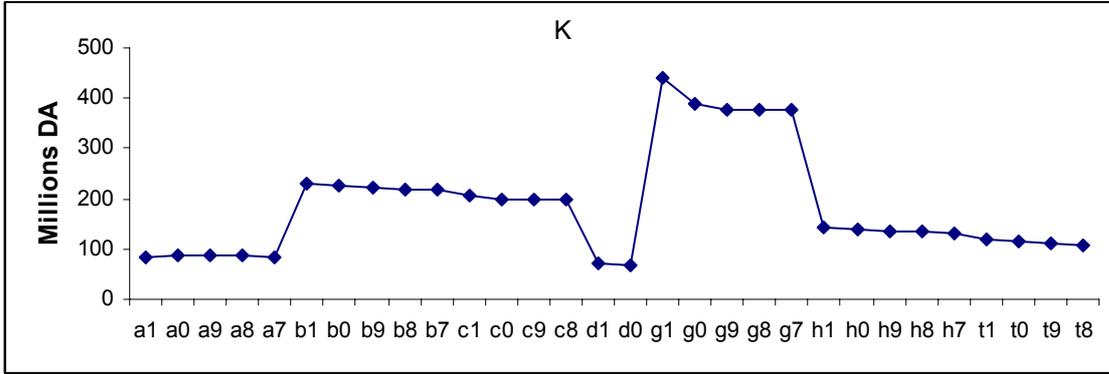
(2-3)

:

(h8)	.	4343	
.	12657	(b1)	. 26835
	5533	5628	.
0.753		% 43.72	.
	:	3.311	
	0.01	% 84.9	-
	0.01	% 79.2	-
0.01		% 53.00	-
0.01		% 59.8	-
.0.01		%. 48.5 -	-

.4. 2 :

(4-3)

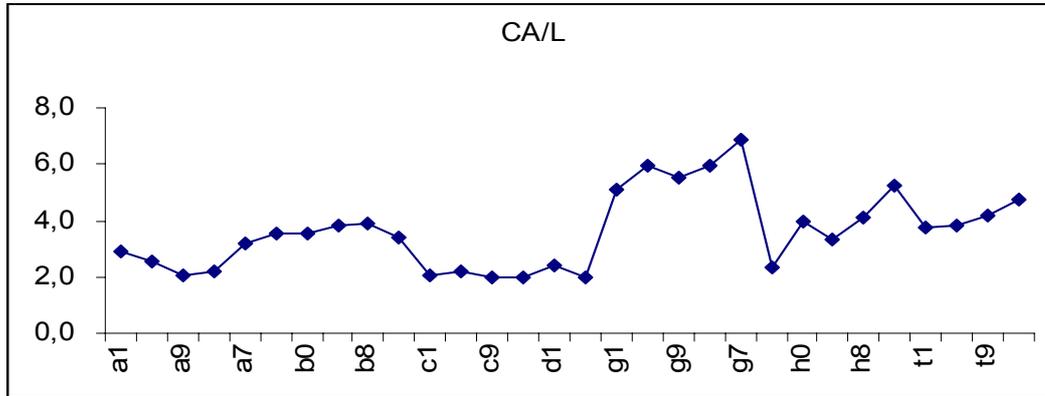


(2-3)

440097 (d0)	.	68771	.
185970	(g1)	.	.
105555	.	107360	.
1.036	% 56.76	.	.
:	2.933	.	.
0.01	% 48.6	-	-
0.01	%55.3	-	-
0.05	% 44.50 -	-	-
0.01	% 66.7	-	-
0.05	% 39.9 -	-	-
0.01	% 70.5	-	-
.0.01	% 73.7	-	-

5.2

(5-3)



(2-3)

6.86 (c9)

1.96

3.617

(g7)

1.340

1.363

2.527

0.360

% 37.054

:

0.01

% 51.5

-

0.01

% 66.7

-

01.

% 89.3

-

0.05

% 39.9-

-

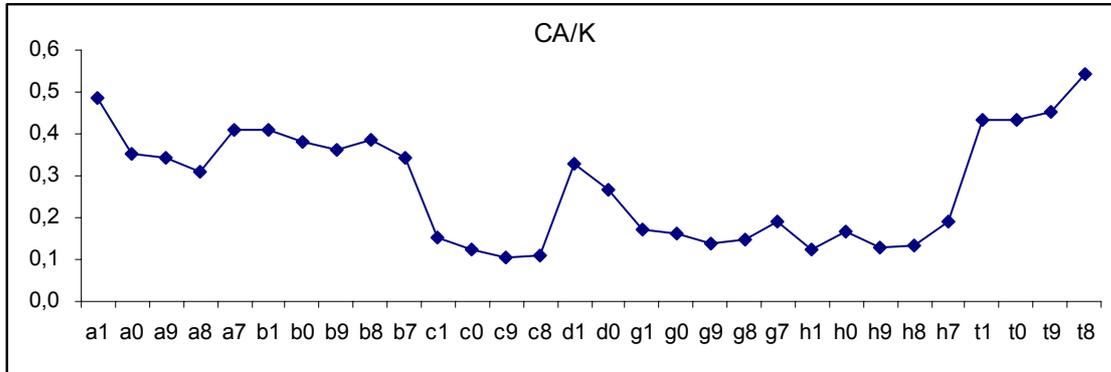
.0.01

% 69.6

-

6.2

(6-3)



(2-3)

(c9)

0.11

,0.275

(t8)

0.54

,0.132

, 0.134

0.053

,% 48.132

:

.1.629

0.01

% 53.0

-

0.05

% 40.9

-

0.05

% 42.3

-

0.05

% 44.5

-

0.01

% 94.8

-

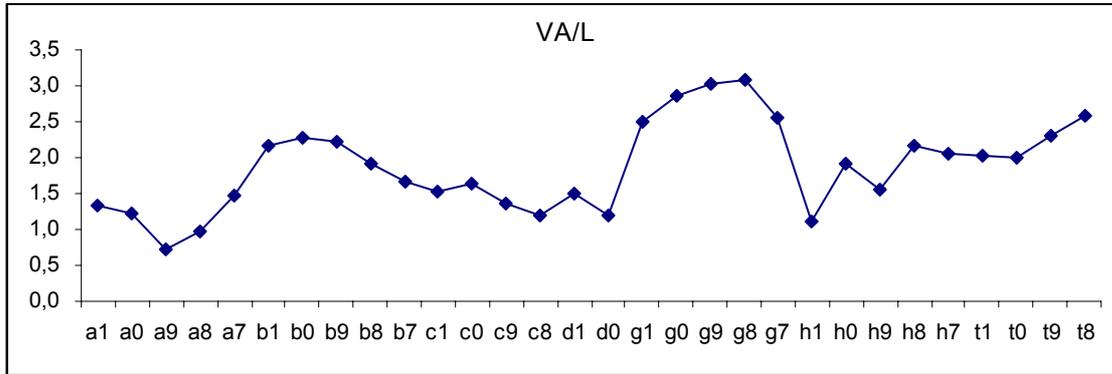
0.01

%73.7-

-

7.2

(7-3)



(2-3)

(a9)

0.72

1.870

(g8)

3.08

0.608

, 0.619

.2.229

0.042

% 32.54

:

0.01

% 55.8

-

0.01

% 59.2

-

0.01

% 70.5

-

0.01

% 89.3

-

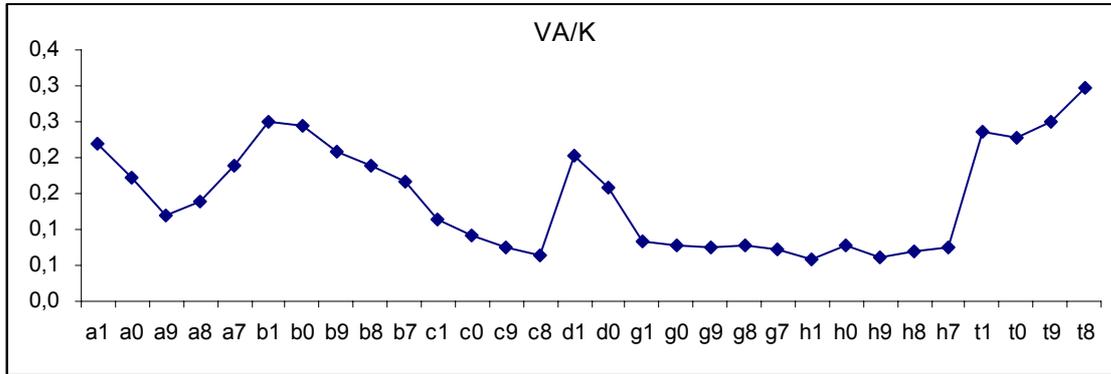
.0.01

% 62.3

-

8.2

(8-3)



(2-3)

0.30 (h1)

0.06

0.145

(t8)

7.300

7.422

.1.747

0.151

% 50.44

:

0.01

% 59.8

-

0.01

% 52.6

-

0.05

% 45.9

-

0.05

% 39.9

-

0.01

% 94.8

-

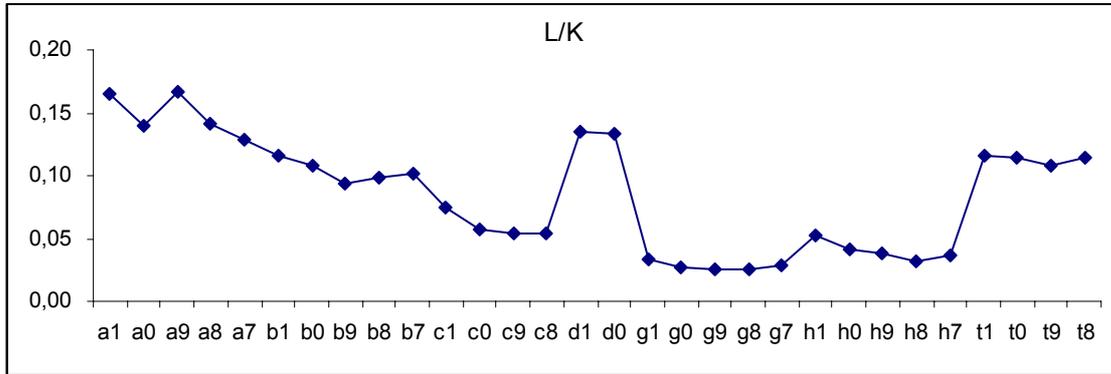
.0.01

%74.3

-

9.2

(9-3)



(2-3)

0.167 (a9)

0.025

0.085

(g9)

0.045

0.046

.1.668 =

0.0132=

% 52.79

:

0.05

% 42.9

-

0.01

%67.5-

-

0.01

% 80.8

-

0.01

%54.5-

-

0.01

%74.3

-

0.01

% 54.1-

-

:

-

Cobb-

Douglas

(CA)

(CA)

.(VA) ⁶

(K)

(L)

:

$$CA = A * L^{\alpha} * K^{\beta}$$

:

LOG

$$LOG(CA) = LOG(A) + \alpha * LOG(L) + \beta * LOG(K)$$

:

$LCA = LOG(CA)$	$LVA = LOG(VA)$	$C = LOG(A)$	$LL = LOG(L)$	$LK = LOG(K)$
-----------------	-----------------	--------------	---------------	---------------

:

.1.3

```

LS // Dependent Variable is LCA
Date: 8-04-2005 / Time: 21:38
SMPL range: 1 - 30
Number of observations: 30
=====
      VARIABLE      COEFFICIENT      STD. ERROR      T-STAT.      2-TAIL SIG.
=====
          C          -1.9914142          1.5933647          -1.2498169          0.2221
          LL           0.8127697           0.1306310           6.2218766          0.0000
          LK           0.4137901           0.1086567           3.8082340          0.0007
=====
R-squared              0.708715      Mean of dependent var      10.56754
Adjusted R-squared    0.687138      S.D. of dependent var      0.559874
S.E. of regression    0.313160      Sum of squared resid      2.647874
Log likelihood         -6.156550      F-statistic                 32.84631
Durbin-Watson stat    0.759668      Prob(F-statistic)          0.000000
=====
    
```

T_c(c)=-1.2498 : T-Stuedent .1
 2.0518 27 0.05 7

T-STAT.

0.05 0.2221

T_c(LL)=6.2219 : T-Stuedent LL .2
 2.0518 27 0.05

T-

0.05 0.000 STAT.

T_c(LK)=3.8082: T-Stuedent LK .3
 2.0518 27 0.05

. 0.05 0.0007 T-STAT.

f_x

Loi.Stuedent.Inverse

Microsoft Office Excel 2003

T-Stuedent -7

$$t_{27}^{0.01} = 2.7707 \quad t_{27}^{0.05} = 2.0518$$

$$\% 10 \quad \hat{\alpha} = 0.813 : \quad .4$$

% 8.13

$$\hat{\beta} = 0.414 : \quad .5$$

.% 4.14 % 10

8

$$\hat{A} = e^{-1.9914142} = 0.1365 \quad .6$$

$$\hat{CA} = 0.1365 * L^{0.813} * K^{0.414} : \quad .7$$

.8

$$\hat{\alpha} + \hat{\beta} = 0.813 + 0.414 = 1.227 :$$

:

$$\begin{cases} H_0 : \hat{\alpha} + \hat{\beta} = 1 \\ H_1 : \hat{\alpha} + \hat{\beta} < 1 \end{cases}$$

: T-STAT.

$$\% 7.323 \quad H_0$$

$$\hat{\alpha} + \hat{\beta} = 1.227 .$$

H_1

% 10

.9

. % 12.27

$$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 33.74 \% :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 66.26 \% :$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 1.964 :$$

$$\bar{R}^2 = 0.6871$$

$$R^2 = 0.7087$$

% 70.87

.15 : .8

.17 : .9

$$F\text{-statistic} = 32.846$$

:

$$\frac{\partial CA}{\partial L} = 2.94$$

2.94 :

$$\frac{\partial CA}{\partial K} = 0.12 :$$

0.12 :

DB 10 DE

2.3

$$LCA = C + \alpha * LL + \beta * LK + \gamma * DB + \delta * DE$$

LS // Dependent Variable is LCA
Date : 8-04-2005 / Time : 21 :39
SMPL range : 1 - 30
Number of observations : 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-3.5921316	1.5994603	-2.2458399	0.0338
LL	1.0474458	0.1481438	7.0704648	0.0000
LK	0.3408821	0.1034656	3.2946424	0.0029
DB	0.0098962	0.0373374	0.2650473	0.7931
DE	0.0432603	0.1549810	0.2791328	0.7824

R-squared	0.774018	Mean of dependent var	10.56754
Adjusted R-squared	0.737861	S.D. of dependent var	0.559874
S.E. of regression	0.286653	Sum of squared resid	2.054242
Log likelihood	-2.348801	F-statistic	21.40713
Durbin-Watson stat	1.097582	Prob(F-statistic)	0.000000

Durbin-Watson stat : _____

β α C

δ γ

F-stat =21.407

DB

DE

$$\hat{\alpha} + \hat{\beta} = 1.388 :$$

$$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 24.57 \% :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 75.43 \% :$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 3.070 :$$

$$\frac{\partial CA}{\partial L} = 3.79 :$$

$$\frac{\partial CA}{\partial K} = 0.10 :$$

.3.3

DB

$$LCA = C + \alpha * LL + \beta * LK + \gamma * DB$$

:

LS // Dependent Variable is LCA
Date : 8-04-2005 / Time : 21 :40
SMPL range : 1 - 30
Number of observations : 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-3.6516061	1.5568418	-2.3455216	0.0269
LL	1.0463208	0.1454393	7.1942081	0.0000
LK	0.3441076	0.1009786	3.4077279	0.0021
DB	0.0201046	0.0073860	2.7220056	0.0114

R-squared	0.773314	Mean of dependent var	10.56754
Adjusted R-squared	0.747158	S.D. of dependent var	0.559874
S.E. of regression	0.281524	Sum of squared resid	2.060645
Log likelihood	-2.395477	F-statistic	29.56540
Durbin-Watson stat	1.043432	Prob(F-statistic)	0.000000

C

T-STAT

γ

$\beta \quad \alpha$

F-stat =29.565

DB

1.046:

% 10.46

%10

%.% 3.44

%10

0.344:

:

$$\hat{\alpha} + \hat{\beta} = 1.390 \quad :$$

$$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 24.75\% \quad :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 75.25\%$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 3.04 \quad :$$

:

$$\frac{\partial LCA}{\partial DB} = 0.020$$

$$\frac{\partial CA}{\partial L} = 3.79 \quad :$$

.0.020

$$\frac{\partial CA}{\partial K} = 0.10 \quad :$$

.4.3

: DE

$$LCA = C + \alpha * LL + \beta * LK + \delta * DE$$

LS // Dependent Variable is LCA
Date: 8-04-2005 / Time: 21:40
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-3.5036616	1.5360205	-2.2809992	0.0310
LL	1.0438282	0.1448522	7.2061604	0.0000
LK	0.3392737	0.1014239	3.3451060	0.0025
DE	0.0834957	0.0306532	2.7238812	0.0114

R-squared	0.773383	Mean of dependent var	10.56754
Adjusted R-squared	0.747235	S.D. of dependent var	0.559874
S.E. of regression	0.281481	Sum of squared resid	2.060015
Log likelihood	-2.390892	F-statistic	29.57709
Durbin-Watson stat	1.146439	Prob(F-statistic)	0.000000

C

T-STAT

δ

β α

F-stat =29.577

DE

F-stat

1.044:

% 10.44

%10

.% 3.93

%10

0.339:

$\hat{\alpha} + \hat{\beta} = 1.383$:

$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 24.51\%$:

$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 75.49\%$

$\frac{\hat{\alpha}}{\hat{\beta}} = 3.080$:

$$\frac{\partial LCA}{\partial DE} = 0.083 :$$

DE

:

$$\frac{\partial CA}{\partial L} = 3.78 :$$

$$\frac{\partial CA}{\partial K} = 0.09 :$$

:

.5.3

$$\alpha + \beta = 1 :$$

$$\boxed{LOG(CA) = LOG(A) + \alpha * LOG(L) + \beta * LOG(K)}$$

:

$$\boxed{LOG(CA/L) = LOG(A) + (1 - \alpha) * LOG(K/L)}$$

$$LOG(K/L) = LK1 \quad LOG(A) = A1 \quad LOG(CA/L) = LCA1 :$$

: 11

:

LS // Dependent Variable is LCA1
Date : 8-04-2005 / Time : 21 :45
SMPL range : 1 - 30
Number of observations : 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	0.3573750	0.2531882	1.4114994	0.1691
LK1	0.3263514	0.0934870	3.4908738	0.0016
R-squared	0.303243	Mean of dependent var		1.217378
Adjusted R-squared	0.278359	S.D. of dependent var		0.376633
S.E. of regression	0.319947	Sum of squared resid		2.866259
Log likelihood	-7.345310	F-statistic		12.18620
Durbin-Watson stat	0.793033	Prob(F-statistic)		0.001614

: :

$$T(A1)=1.4115 : \quad LOG(A) = A1 \quad T\text{-Stuedent} \quad .1$$

$$2.0484 \quad 28 \quad 0.05$$

T-STAT.

$$. 0.05 \quad 0.1691$$

$$: \quad T\text{-Stuedent} \quad LOG(K / L) = LK1 \quad LK1 \quad .2$$

$$28 \quad 0.05 \quad .T_c(LK1)=3.4909$$

$$2.0484$$

$$0.0016 \quad T\text{-STAT.}$$

$$. 0.05$$

.3

$$10 \quad 1 - \hat{\alpha} = 0.3263 : \quad LOG(K / L) = LK1$$

$$\% 3.26 \quad \%$$

$$\hat{\alpha} = 0.6737$$

$$: \quad \hat{\alpha} + \hat{\beta} = 1 : \quad . \hat{\beta} = 0.3263$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 2.065 : \quad . \frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 32.60\% : \quad \frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 67.40\%$$

$$\hat{A} = e^{0.3573} = 1.429 \quad .4$$

$$\hat{CA} = 1.429 * L^{0.674} * K^{0.326} \quad ; \quad .5$$

$$R^2 = 0.3032 \quad .6$$

F-statistic =

$$\bar{R}^2 = 0.2784$$

0.05

12.186

Sum of squared resid

.00016

:

$$\frac{\partial CA}{\partial K} = 0.09 \quad ;$$

$$\frac{\partial CA}{\partial L} = 3.44$$

:

.6. 3

:

$$VA = A * L^\alpha * K^\beta$$

:

LOG

$$LOG(VA) = LOG(A) + \alpha * LOG(L) + \beta * LOG(K)$$

:

LS // Dependent Variable is LVA
Date : 8-04-2005 / Time : 21 :42
SMPL range : 1 - 30
Number of observations : 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-3.8167555	1.4089535	-2.7089292	0.0116
LL	0.9094428	0.1155121	7.8731362	0.0000
LK	0.4365492	0.0960811	4.5435492	0.0001

R-squared	0.789997	Mean of dependent var	9.918879
Adjusted R-squared	0.774441	S.D. of dependent var	0.583066
S.E. of regression	0.276916	Sum of squared resid	2.070429
Log likelihood	-2.466530	F-statistic	50.78468
Durbin-Watson stat	0.903723	Prob(F-statistic)	0.000000

: T-STAT. :

$T_c(c) = -2.7089$: T-Student .1
2.0518 27 0.05

T-STAT.

. 0.05 0.0116

$T_c(LL) = 7.8731$: T-Student LL .2
2.0518 27 0.05

. 0.05 0.000 T-STAT.

: T-Student LK .3
27 0.05 $T_c(LK) = 4.5435$
2.0518

0.0001 T-STAT. . 0.05

% 10 $\hat{\alpha} = 0.9094$: .4

% 9.094

$$\hat{\beta} = 0.4365 : \quad .5$$

$$\% 4.365 \quad \% 10$$

$$\hat{A} = e^{-3.8168} = 0.021999 \quad .6$$

$$\hat{VA} = 0.022 * L^{0.909} * K^{0.437} : \quad .7$$

$$. \quad .8$$

$$\hat{\alpha} + \hat{\beta} = 0.909 + 0.437 = 1.346 :$$

:

$$\begin{cases} H_0 : \hat{\alpha} + \hat{\beta} = 1 \\ H_1 : \hat{\alpha} + \hat{\beta} < 1 \end{cases}$$

: T-STAT.

$$t_c = \frac{\hat{\alpha} + \hat{\beta} - 1}{\hat{\sigma}_{\hat{\alpha} + \hat{\beta}}} = 2.577 = T_{27}^{0.00787}$$

% 0.787

H_0

% 99

H_1

:

$$\hat{\alpha} + \hat{\beta} = 1.346 :$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 2.080 :$$

$$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 32.47\% :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 67.53\%$$

$$\bar{R}^2 = 0.7744$$

$$R^2 = 0.7899$$

% 78.99

$$F\text{-statistic} = 50.7846$$

$$\frac{\partial VA}{\partial L} = 1.70 :$$

1.70

$$\frac{\partial VA}{\partial K} = 0.06 :$$

0.06

.7.3

DE

DB

$$LVA = C + \alpha * LL + \beta * LK + \gamma * DB + \delta * DE$$

LS // Dependent Variable is LVA
Date: 8-04-2005 / Time: 21:43
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-5.7008126	1.2560798	-4.5385752	0.0001
LL	1.1827928	0.1163396	10.166730	0.0000
LK	0.3524634	0.0812531	4.3378475	0.0002
DB	0.0145124	0.0293216	0.4949392	0.6250
DE	0.0378573	0.1217089	0.3110477	0.7583
R-squared	0.871499	Mean of dependent var	9.918879	
Adjusted R-squared	0.850939	S.D. of dependent var	0.583066	
S.E. of regression	0.225112	Sum of squared resid	1.266891	
Log likelihood	4.901319	F-statistic	42.38790	
Durbin-Watson stat	1.652703	Prob(F-statistic)	0.000000	

C

$\delta \quad \gamma$

$\beta \quad \alpha$

F-stat =42.3879

DB

DE

$$\hat{\alpha} + \hat{\beta} = 1.535 :$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 3.361 :$$

$$\frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 22.93 \% :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 77.07 \%$$

$$\frac{\partial VA}{\partial L} = 2.21 :$$

$$\frac{\partial VA}{\partial K} = 0.05 :$$

.8.3

DB

$$LCA = C + \alpha * LL + \beta * LK + \gamma * DB$$

LS // Dependent Variable is LVA
Date: 8-04-2005 / Time: 21:43
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-5.7528589	1.2230699	-4.7036223	0.0001
LL	1.1818083	0.1142585	10.343282	0.0000
LK	0.3552860	0.0793298	4.4785965	0.0001
DB	0.0234459	0.0058025	4.0406616	0.0004
R-squared	0.871002	Mean of dependent var	9.918879	
Adjusted R-squared	0.856118	S.D. of dependent var	0.583066	
S.E. of regression	0.221168	Sum of squared resid	1.271794	
Log likelihood	4.843380	F-statistic	58.51788	
Durbin-Watson stat	1.627419	Prob(F-statistic)	0.000000	

T-STAT

γ

β α

C

F-stat =58.5179

DB

1.182 :

%11.82

%10

%. 3.55

%10

0.355 :

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 76.90\% : \quad \hat{\alpha} + \hat{\beta} = 1.537$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 3.330 : \quad \frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 23.10\%$$

$$\frac{\partial LVA}{\partial DB} = 0.023$$

$$\frac{\partial VA}{\partial K} = 0.05 :$$

$$\frac{\partial VA}{\partial L} = 2.21 :$$

9.3

DE

$$LCA = C + \alpha * LL + \beta * LK + \delta * DE$$

LS // Dependent Variable is LVA
Date: 8-04-2005 / Time: 21:43
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-5.5710743	1.2104555	-4.6024609	0.0001
LL	1.1774876	0.1141503	10.315243	0.0000
LK	0.3501047	0.0799268	4.3803194	0.0002
DE	0.0968612	0.0241561	4.0097934	0.0005
R-squared	0.870240	Mean of dependent var	9.918879	
Adjusted R-squared	0.855268	S.D. of dependent var	0.583066	
S.E. of regression	0.221820	Sum of squared resid	1.279305	
Log likelihood	4.755055	F-statistic	58.12344	
Durbin-Watson stat	1.678697	Prob(F-statistic)	0.000000	

T-STAT

δ

β α

C

F-stat = 58.123

DE

% 11.77

%10

1.177:

%10

0.350:

.% 3.50

$$\hat{\alpha} + \hat{\beta} = 1.5276 :$$

$$: \frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 22.92\% :$$

$$\frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 77.08\% :$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 3.363$$

$$\frac{\partial LVA}{\partial DE} = 0.0969 :$$

. 0.0969

$$\frac{\partial VA}{\partial L} = 2.20 :$$

$$\frac{\partial VA}{\partial K} = 0.05 :$$

:

.10. 3

$$\alpha + \beta = 1$$

$$\boxed{LOG(VA) = LOG(A) + \alpha * LOG(L) + \beta * LOG(K)}$$

:

$$\boxed{LOG(VA/L) = LOG(A) + (1 - \alpha) * LOG(K/L)}$$

$$LOG(K/L) = LK1 \quad LOG(A) = A1 \quad LOG(VA/L) = LVA1 \quad :$$

:

LS // Dependent Variable is LVA1
 Date: 8-04-2005 / Time: 21:48
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.2297914	0.2402009	-0.9566633	0.3469
LK1	0.3030171	0.0886916	3.4165259	0.0020
R-squared	0.294224	Mean of dependent var		0.568721
Adjusted R-squared	0.269018	S.D. of dependent var		0.355023
S.E. of regression	0.303536	Sum of squared resid		2.579751
Log likelihood	-5.765587	F-statistic		11.67265
Durbin-Watson stat	0.812793	Prob(F-statistic)		0.001957

$$T_c(A1) = -0.9567 \quad ; \quad \text{T-Student} \quad \text{LOG}(A) = A1 \quad .1$$

$$2.0484 \quad 28 \quad 0.05$$

$$T- \quad . 0.05 \quad 0.3496 \quad \text{STAT.}$$

$$\text{T-Student} \quad \text{LOG}(K/L) = LK1 \quad LK1 \quad .2$$

$$0.05 \quad T_c(LK1) = 3.4165:$$

$$2.0484 \quad 28$$

$$0.0020 \quad \text{T-STAT.}$$

$$. 0.05$$

$$10 \quad 1 - \hat{\alpha} = 0.3030 \quad ; \quad \text{LOG}(K/L) = LK1$$

$$. \% 3.03 \quad \%$$

$$\hat{\beta} = 0.3030 \quad \hat{\alpha} = 0.697$$

$$: \quad \frac{\hat{\alpha}}{\hat{\alpha} + \hat{\beta}} = 69.70\% \quad ; \quad \hat{\alpha} + \hat{\beta} = 1:$$

$$\frac{\hat{\alpha}}{\hat{\beta}} = 2.300 \quad ; \quad \frac{\hat{\beta}}{\hat{\alpha} + \hat{\beta}} = 30.30\%$$

$$\hat{A} = e^{-0.2298} = 0.7947 \quad ; \quad .4$$

$$\hat{VA} = 0.7947 * L^{0.697} * K^{0.303} \quad ; \quad .5$$

$$R^2 = 0.2942 \quad .6$$

F-

$$\bar{R}^2 = 0.2690$$

0.05

statistic = 11.672

Sum of squared resid

.000196

$$\frac{\partial VA}{\partial L} = 1.30 \quad ; \quad .7$$

$$\frac{\partial VA}{\partial K} = 0.04 \quad ;$$

: **.11 .3**

LCA :

.LVA1

LVA

LCA1

LK

LL :

. DE

DB

LK1

:

12

.1

.2

.3

F-statistic

.4

.5

.6

()

:

.1

13

:

0.01

-

-

0.01

Cobb-Douglas .2

.3

COEFFICIENT ,
3

COEFFICIENT DE SYMETRIE,

-13

D' APLATISSEMENT

:

26 SPSS

.4

.5

.6

.7

.8

.9

الفصل الرابع :

تقدير دوال التمييز

للمؤسسات الفندقية العمومية الجزائرية

(BFR)

(FR)

(TNG)

:

:

Stepwise

L'analyse Factorielle Discriminante (AFD)

:

SPSS

:

-

. Lambda de Wilks

:

-

.1

Fisher

"

.2"

:

-

¹- D. STILI : La detection precoce des defaillances d'entreprises dans le secteur de construction, Score BDFB, Cahiers Etudes et Recherches de l'Observatoire des Entreprises, Banque de France, Direction des entreprises, Page 43.

1997

: 3

.2002

11 -

10 -

09 -

4

: 5

R₁ :

R₂:

R₃:

R₄:

R₅:

R₆ :

R₇:

R₈:

•

•

•

•

•

•

•

•

-3

-4

-5

63

63

M de Box l'homoscedasticité des covariances

.F-FISHER

(2-4)

0.05

0.001

.DTNG

Résultats du test (2-4)		
M de Box		
	55,224	
F	Approximativement	2,590
	Ddl1	15
	Ddl2	703,353
	Signification	,001
Teste l'hypothèse nulle de matrices de covariance à égales populations.		

:

. 2 .1

(3-4)

:

(R17)

•

(R3)

•

(R6)

•

(R8)

•

F exact

(R10)

•

0.05

0.000

Variables introduites/éliminées(a,b,c,d) (3-4)									
Pas	Introduite	Lambda de Wilks							
		Statistique	ddl1	ddl2	ddl3	F exact			
						Statistique	ddl1	ddl2	Signification
1	R17	,764	1	1	28	8,635	1	28	,007
2	R3	,544	2	1	28	11,325	2	27	,000
3	R6	,332	3	1	28	17,460	3	26	,000
4	R8	,271	4	1	28	16,829	4	25	,000
5	R10	,222	5	1	28	16,860	5	24	,000
A chaque pas, la variable qui minimise le lambda de Wilks global est introduite.									
a Le nombre maximum de pas est 34.									
b La signification maximum du F pour introduire est .05.									
c La signification minimum du F pour éliminer est .10.									
d Seuil du F, tolérance ou VIN insuffisant pour la poursuite du calcul.									

. 3 .1

(4-4)

3.513

.9

.0882

0.7779

% 22.21 0.2221

.11 .10

Valeurs propres (4-4)				
Fonction	Valeur propre	% de la variance	% cumulé	Corrélation canonique
1	3,513(a)	100	100	,882
a Les 1 premières fonctions discriminantes canoniques ont été utilisées pour l'analyse.				

-9

. 232 -10

-11

0.222 Lambda de Wilks 5-4

$$\chi^2 = 38.425$$

0.05 0.001 12

Lambda de Wilks (5-4)				
Test de la fonction	Lambda de Wilks	Khi-deux	ddl	Signification
1	,222	38,425	5	,000

: (Canonique) **.4 .1**

: $ZCS(TNG)$

$$ZCS(TNG) = 1.661 * R3 - 1.110 * R6 - 0.737 * R8 - 0.572 * R10 + 0.837 * R17 \dots 1 - 4$$

Bêta

(R3)

: **.5 .1**

(6-4)

% 29.6 (R₁₇) -
 % 28.8 (R₃) -
 % 25.2 (R₆) -

% 3.9 (R₁₀) -

% 2.2 (R₈) -

(R₃) (R₁₇) (R₁₀) (R₈) (R₆)

Matrice de structure (6-4)					
DTNG	Fonction	DFR	Fonction	DBFR	Fonction
R1(a)	,489	R6	1.000	R14(a)	-.693
R14(a)	-.419	R13(a)	-.304	R13	-.658
R13(a)	-.410	R7(a)	.268	R7	.544
R5(a)	,397	R3(a)	.240	R5(a)	.533
R16(a)	-.393	R14(a)	-.228	R2(a)	.457
R2(a)	,373	R5(a)	.227	R3(a)	.421
R7(a)	,320	R16(a)	-.196	R16(a)	-.417
R17	,296	R2(a)	.195	R1(a)	.313
R3	,288	R10(a)	-.182	R12(a)	-.263
R11(a)	-.261	R11(a)	-.159	R11(a)	-.241
R12(a)	-.255	R8(a)	-.152	R15(a)	-.232
R6	-.252	R4(a)	.147	R9(a)	.209
R15(a)	-.157	R1(a)	.131	R10	.154
R4(a)	-.071	R12(a)	-.086	R8(a)	.094
R10	,039	R15(a)	.073	R6(a)	.060
R8	-.022	R17(a)	-.072	R17(a)	.015
R9(a)	,002	R9(a)	-.034	R4(a)	-.002

Les corrélations intra-groupes combinés entre variables discriminantes et les variables des fonctions discriminantes canoniques standardisées sont ordonnées par tailles absolues des corrélations à l'intérieur de la fonction.

a Cette variable n'est pas utilisée dans l'analyse.

: (Fonction Discriminante Canonique) .6.1

: ZC(TNG)

$$ZC(TNG) = 0.094 * R3 - 0.079 * R6 - 0.074 * R8 - 0.088 * R10 + 0.031 * R17 + 4.803 \dots 2 - 4$$

Bêta

.13

: (6-4)

Predicted Group for Analysis 1: Total (6-4)			
DTNG = 1	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	-1,0918	-2,89387	,99648
DTNG = 2	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	3,0025822	2,27601	4,22373

:

.7.1

7-4

. 4.095:

Fonctions aux barycentres des groupes (7-4)	
DTNG	Fonction
	1
1	-1,092
2	3,003
Fonctions discriminantes canoniques non standardisées évaluées aux moyennes des groupes	

8-4 : **.8.1**

14

,15

:

$$D_1(TNG) = -0.640 * R_3 + 0.441 * R_6 + 1.015 * R_8 + 1.107 * R_{10} - 0.141 * R_{17} - 40.748 \dots 3-4$$

:

$$D_2(TNG) = -0.254 * R_3 + 0.118 * R_6 + 0.713 * R_8 + 0.748 * R_{10} - 0.015 * R_{17} - 24.992 \dots 4-4$$

Coefficients des fonctions de classement (8-4)		
	DTNG	
	1	2
R3	-,640	-,254
R6	,441	,118
R8	1,015	,713
R10	1,107	,748
R17	-,141	-,015
(Constante)	-40,748	-24,992
Fonctions discriminantes linéaires de Fisher		

: **.9.1**

9-4

-Bays

Mahalanobis

.8.1

.(*)

14- Voir : www-rocq.fr/axis/modulad/archives/numero-30/desbois-30/desbois-30.pdf .

Diagnostic des observations (9-4)											
Nombre d'observations	Groupe effectif	Plus grand groupe					Deuxième plus grand groupe			Scores discriminants	
		Groupe prévu	P(D>d G=g)		P(C=g D=d)	Carré de la distance de Mahalanobis au barycentre	Groupe	P(C=g D=d)	Carré de la distance de Mahalanobis au barycentre	Fonction 1	
			p	ddl							
1	1	1	,937	1	1,000	,006	2	,000	17,420	-1,171	
2	1	1	,062	1	,678	3,480	2	,322	4,969	,774	
3	1	1	,093	1	1,000	2,826	2	,000	33,356	-2,773	
4	1	1	,072	1	1,000	3,247	2	,000	34,768	-2,894	
5	1	1	,146	1	,919	2,115	2	,081	6,971	,362	
6	2	2	,886	1	1,000	,021	1	,000	15,607	2,859	
7	2	2	,563	1	1,000	,334	1	,000	21,832	3,581	
8	1	2(**)	,045	1	,542	4,024	1	,458	4,361	,996	
9	2	2	,516	1	,997	,422	1	,003	11,868	2,353	
10	1	1	,518	1	,997	,418	2	,003	11,888	-4,445	
11	1	1	,474	1	1,000	,512	2	,000	23,133	-1,807	
12	1	1	,413	1	1,000	,669	2	,000	24,131	-1,910	
13	1	1	,227	1	1,000	1,460	2	,000	28,118	-2,300	
14	1	1	,073	1	1,000	3,220	2	,000	34,677	-2,886	
15	2	2	,783	1	1,000	,076	1	,000	19,095	3,278	
16	1	1	,945	1	1,000	,005	2	,000	16,208	-1,023	
17	1	1	,870	1	1,000	,027	2	,000	15,454	-,929	
18	1	1	,434	1	1,000	,612	2	,000	23,781	-1,874	
19	1	1	,943	1	1,000	,005	2	,000	17,354	-1,163	
20	1	1	,258	1	,977	1,280	2	,023	8,781	,039	
21	2	2	,604	1	,998	,269	1	,002	12,787	2,484	
22	1	1	,998	1	1,000	,000	2	,000	16,784	-1,094	
23	1	1	,733	1	,999	,116	2	,001	14,090	-,751	
24	1	1	,677	1	,999	,173	2	,001	13,529	-,676	
25	1	1	,590	1	,998	,291	2	,002	12,639	-,553	
26	2	2	,467	1	,996	,528	1	,004	11,342	2,276	
27	1	1	,957	1	1,000	,003	2	,000	16,327	-1,038	
28	2	2	,222	1	1,000	1,491	1	,000	28,255	4,224	
29	1	1	,852	1	1,000	,035	2	,000	15,273	-,906	
30	2	2	,971	1	1,000	,001	1	,000	16,470	2,966	

** Observation mal classée

.10.1

(10-4)

(22)

.% 100

.% 100

(30)

.% 100

Résultats du classement(a) (10-4)					
		DTNG	Classe(s) d'affectation prévue(s)		Total
			1	2	
Original	Effectif	1	22	0	22
		2	0	8	8
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0

a 100.0% des observations originales classées correctement.

.11.1

(R₁₇)

(R₈)

(R₁₀)

(R₃)

(R₆)

.1

0.05	0.834	F	12	
0.05	T			
	.			
	-	-		.4
	Spearman		Pearson	
	. 0.412-		R17	0.05
53.36				.5
		:(R ₈)		
0.924		% 18.66	9.96	
	.75.57	35.13	0.859	
% 19		10.09	52.48	
.64.28	37.33	1.106-	0.524-	
0.05	0.863	F	12	
0.05	T			
	.			
	.			
	-	-		.6
	.Spearman		Pearson	
20.48				.7
		:(R ₁₀)		
1.011		% 28	5.80	
	.33.21	13.04	0.371	
% 39		8.32	21.53	
.35.87	12.57	0.409-	0.823	
0.05	0.265	F	12	
0.05	T			

	-	-	.8
	.Spearman	Pearson	
43.25		:(R ₁₇)	.9
0.533	% 58	25.03	
	. 88.19 18.34	1.383-	
% 43	33.06	76.33	
. 112.72 26.54	0.766-	0.727-	
0.05	0.555	12	
0.05	T		
	-	-	
	Spearman	Pearson	
	.0.41-	R6	0.05

Test d'échantillons indépendants (11-4)										
		Test de Levene sur l'égalité des variances		Test-t pour égalité des moyennes						
		F	Sig.	t	ddl	Sig. (bilatérale)	Différence moyenne	Différence écart-type	Intervalle de confiance 95% de la différence	
									Inférieure	Supérieure
R3	Hypothèse de ariances égales	3,178	,085	-2,86	28	,008	-20,84393	7,28613	-35,76889	-5,91897
	Hypothèse de ariances inégales			-4,22	27,99	,000	-20,84393	4,94180	-30,96693	-10,72093
R6	Hypothèse de ariances égales	,045	,834	2,497	28	,019	14,49556	5,80514	2,60426	26,38685
	Hypothèse de ariances inégales			2,293	10,80	,043	14,49556	6,32075	,55142	28,43969
R8	Hypothèse de ariances égales	,030	,863	,214	28	,832	,88130	4,12506	-7,56850	9,33110
	Hypothèse de ariances inégales			,212	12,322	,835	,88130	4,15124	-8,13730	9,89990
R10	Hypothèse de ariances égales	1,292	,265	-,388	28	,701	-1,04528	2,69328	-6,56222	4,47165
	Hypothèse de ariances inégales			-,327	9,591	,750	-1,04528	3,19208	-8,19900	6,10844
R17	Hypothèse de ariances égales	,357	,555	-2,94	28	,007	-33,07501	11,25538	-56,13061	-10,01941
	Hypothèse de ariances inégales			-2,57	10,076	,028	-33,07501	12,84991	-61,67702	-4,47300

T-student

(12-4)

Levene

Test d'échantillons indépendants (12-4)										
		Test de Levene sur l'égalité des variances		Test-t pour égalité des moyennes						
		F	Sig.	t	ddl	Sig. (bilatérale)	Différence moyenne	Différence écart-type	Intervalle de confiance 95% de la différence	
									Inférieure	Supérieure
R1	Hypothèse de ariances égales	2,260	,144	-2,846	28	,008	-13,61585	4,78366	-23,415	-3,81697
	Hypothèse de ariances inégales			-2,502	10,124	,031	-13,61585	5,44284	-25,723	-1,50850
R2	Hypothèse de ariances égales	,001	,975	-2,652	28	,013	-16,92770	6,38290	-30,002	-3,85292
	Hypothèse de ariances inégales			-3,072	17,123	,007	-16,92770	5,51071	-28,548	-5,30745
R4	Hypothèse de ariances égales	,001	,976	-1,010	28	,321	-3,91623	3,87908	-11,862	4,02970
	Hypothèse de ariances inégales			-1,191	17,915	,249	-3,91623	3,28831	-10,827	2,99461
R5	Hypothèse de ariances égales	3,961	,056	-1,555	28	,131	-7,70169	4,95364	-17,849	2,44538
	Hypothèse de ariances inégales			-2,092	24,808	,047	-7,70169	3,68127	15,28637	-1,1701
R7	Hypothèse de ariances égales	8,334	,007	-1,291	28	,207	-11,77596	9,12210	-30,462	6,90980
	Hypothèse de ariances inégales			-2,065	25,109	,049	-11,77596	5,70384	-23,521	-,03128
R9	Hypothèse de ariances égales	4,861	,036	1,628	28	,115	9,78190	6,00715	-2,523	22,08698
	Hypothèse de ariances inégales			2,197	24,953	,038	9,78190	4,45206	,61183	18,95197
R11	Hypothèse de ariances égales	2,720	,110	2,214	28	,035	3,25906	1,47182	,24416	6,27395
	Hypothèse de ariances inégales			2,821	21,787	,010	3,25906	1,15527	,86183	5,65629
R12	Hypothèse de ariances égales	2,563	,121	1,753	28	,091	6,66107	3,80084	-1,12460	14,44674
	Hypothèse de ariances inégales			2,299	23,413	,031	6,66107	2,89736	,67328	12,64886
R13	Hypothèse de ariances égales	5,882	,022	1,793	28	,084	8,34458	4,65504	-1,19084	17,88001
	Hypothèse de ariances inégales			2,185	19,472	,041	8,34458	3,81828	,36590	16,32326
R14	Hypothèse de ariances égales	5,141	,031	1,767	28	,088	16,60333	9,39784	-2,647	35,85392
	Hypothèse de ariances inégales			2,622	27,999	,014	16,60333	6,33263	3,632	29,57515
R15	Hypothèse de ariances égales	3,245	,082	,953	28	,349	,86361	,90585	-,99195	2,71917
	Hypothèse de ariances inégales			1,599	21,009	,125	,86361	,54020	-,25976	1,98698
R16	Hypothèse de ariances égales	7,764	,009	2,489	28	,019	11,09898	4,45927	1,96459	20,23338
	Hypothèse de ariances inégales			3,933	25,929	,001	11,09898	2,82195	5,29761	16,90035

				.12 .1
			:	
5	(12-4)			
				: .16
		:(R ₁)		.1
	Levene			
		.(R ₃)	(R ₁₇)	
		:(R ₂)		.2
	Levene			
		.(R ₃)	(R ₈)	
			:(R ₄)	.3
			Levene	
		(R ₁₇)	.(R ₃)	
		:R ₅		.4
Levene				
		.(R ₃)		
		:R ₇		.5
Levene				
	.(R ₃)	R ₆		

	:R ₉	.6
Levene		
	.(R ₈)	
	:R ₁₁	.7
Levene		
		.(R ₃)
	:R ₁₂	.8
Levene		
	(R ₈)	
		.(R ₃)
	:R ₁₃	.9
Levene		
	.(R ₃)	(R ₈)
	:(R ₁₄)	.10
Levene		
	.(R ₃)	
	: R ₁₅	.11
Levene		

.12 (R_{16})

Levene

(R_3)

-

: **BOX** .1 .2

Rang

Déterminant

Log

Déterminants Log (13-4)		
DFR	Rang	Déterminant Log
1	1	4.162
2	1	5.557
Intra-groupes combinés	1	4.787
Les rangs et logarithmes naturels des déterminants imprimés sont ceux des matrices de covariance du groupe.		

M de Box

0.05

.F-FISHER

0.001

Test de Box de l'égalité des matrices de covariances (14-4)		
M de Box		6.323
F	Approximativement	6.065
	ddl1	1
	ddl2	1391.716
	Signification	.014
Teste l'hypothèse nulle de matrices de covariance à égales populations.		

: . 2 . 2

15-4

0.000 F exact (R₆)

0.05

T-test

0.05 0.038 F

Variables introduites/éliminées(a,b,c,d) (15-4)									
Pas	Introduite	Lambda de Wilks							
		Statistique	ddl1	ddl2	ddl3	F exact			
						Statistique	ddl1	ddl2	Signification
1	R6	.496	1	1	28.000	28.457	1	28.000	.000
A chaque pas, la variable qui minimise le lambda de Wilks global est introduite.									
a Le nombre maximum de pas est 34.									
b La signification maximum du F pour introduire est .05.									
c La signification minimum du F pour éliminer est .10.									
d Seuil du F, tolérance ou VIN insuffisant pour la poursuite du calcul.									

: . 3 . 2

.1.016

16-4

% 100

0.710

0.504

% 49.59 0.4959

Valeurs propres (16-4)				
Fonction	Valeur propre	% de la variance	% cumulé	Corrélation canonique
1	1.016(a)	100.0	100.0	.710
a Les 1 premières fonctions discriminantes canoniques ont été utilisées pour l'analyse.				

0.496 Lambda de Wilks 17-5

$$\chi^2 = 19.285$$

0.001 (R_6)

0.05

Lambda de Wilks (17-4)				
Test de la ou des fonctions	Lambda de Wilks	Khi-deux	ddl	Signification
1	.496	19.285	1	.000

: .4 .2

: 19-4 18-4

: $ZCS(FR)$:

$$ZCS(FR) = R6.....5 - 4$$

Coefficients des fonctions discriminantes canoniques standardisées (18-5)	
	Fonction
	1
R6	1.000

: $ZC(FR)$:

$$ZC(FR) = 0.091 * R6 - 0.385.....6 - 4$$

Coefficients des fonctions discriminantes canoniques (19-4)	
	Fonction
	1
R6	.091
(Constante)	-.385
Coefficients non standardisés	

: .5 .2

0.638

20-5

1.488-

.2.126 :

:

.6 .2

20-5

:

$$D_1(FR) = 0.093 * R_6 - 1.216.....7 - 4$$

:

$$D_2(FR) = -0.101 * R_6 - 1.301.....8 - 4$$

Coefficients des fonctions de classement (20-4)		
	DFR	
	1	2
R6	.093	-.101
(Constante)	-1.216	-1.301
Fonctions discriminantes linéaires de Fisher		

: 7.2

21-4

(21)

.% 100

.% 100

.% 100

= (30)

Résultats du classement (a) (21-4)					
		DFR	Classe(s) d'affectation prévue(s)		Total
			1	2	
Original	Effectif	1	21	0	21
		2	0	9	9
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0
a 100.0% des observations originales classées correctement.					

:

:

BOX 1.3

22-4

Rang

Test de Box de l'égalité des matrices de covariances (22-4) الجدول رقم (22-4)		
Déterminants Log		
DBFR	Rang	Déterminant Log
1	3	11.757
2	3	12.949
Intra-groupes combinés	3	12.554
Les rangs et logarithmes naturels des déterminants imprimés sont ceux des matrices de covariance du groupe.		

23-4

M de Box

0.05

.F-FISHER

0.173

Résultats du test (23-4)		
M de Box		10.381
F	Approximativement	1.502
	ddl1	6
	ddl2	2827.326
	Signification	.173
Teste l'hypothèse nulle de matrices de covariance à égales populations.		

: **.2.3**

24-4

(R₁₀)

(R₁₃)

F exact

(R₇)

0.05

0.000

T-test

F

(R₇)

0.05

0.17

F

(R₁₀)

0.05

0.316

0.562 F (R₁₃)

0.05

Variables introduites/éliminées (a,b,c,d) (24-4)									
Pas	Introduite	Lambda de Wilks							
		Statistique	ddl1	ddl2	ddl3	F exact			
						Statistique	Ddl1	ddl2	Signification
1	R13	.301	1	1	28.000	64.948	1	28.000	.000
2	R7	.198	2	1	28.000	54.668	2	27.000	.000
3	R10	.157	3	1	28.000	46.450	3	26.000	.000
A chaque pas, la variable qui minimise le lambda de Wilks global est introduite.									
a Le nombre maximum de pas est 34.									
b La signification maximum du F pour introduire est .05.									
c La signification minimum du F pour éliminer est .10.									
d Seuil du F, tolérance ou VIN insuffisant pour la poursuite du calcul.									

. 3 .3

:

25-4

% 100

0.918

0.8427

% 15.73 0.1573

Valeurs propres (25-4)				
Fonction	Valeur propre	% de la variance	% cumulé	Corrélation canonique
1	5.360(a)	100.0	100.0	.918
a Les 1 premières fonctions discriminantes canoniques ont été utilisées pour l'analyse.				

0.157 Lambda de Wilks 26-4

$\chi^2 = 49.024$

0.000

0.05

Lambda de Wilks (26-4)				
Test de la ou des fonctions	Lambda de Wilks	Khi-deux	ddl	Signification
1	.157	49.024	3	.000

: .4 .3

$ZCS(BFR)$

: -

: 27-4

$$ZCS(BFR) = 0.696 * R7 + 0.529 * R10 - 0.821 * R13 \dots 9 - 4$$

Coefficients des fonctions discriminantes canoniques standardisées (27-4)	
	Fonction
	1
R7	.696
R10	.529
R13	-.821

$ZC(BFR)$

: -

: 28-4

$$ZCS(BFR) = 0.049 * R7 + 0.086 * R10 - 0.126 * R13 + 2.254 \dots 10 - 4$$

Coefficients des fonctions discriminantes canoniques (28-4)	
	Fonction
	1
R7	.049
R10	.086
R13	-.126
(Constante)	2.254
Coefficients non standardisés	

: **.5.3**

: 29-4

:

$$D_1(BFR) = 0.105 * R_7 + 0.527 * R_{10} + 0.433 * R_{13} - 12.485 \dots 11-4$$

:

$$D_2 = -0.123 * R_7 + 0.128 * R_{10} + 1.016 * R_{13} - 25.818 \dots 12-4$$

Coefficients des fonctions de classement (29-4)		
	DBFR	
	1	2
R7	.105	-.123
R10	.527	.128
R13	.433	1.016
(Constante)	-12.485	-25.818
Fonctions discriminantes linéaires de Fisher		

: **.5.3**

1.702

.4.641 :

2.939 -

: 30-4

Fonctions aux barycentres des groupes (30-4)	
DBFR	Fonction
	1
1	1.702
2	-2.939
Fonctions discriminantes canoniques non standardisées évaluées aux moyennes des groupes	

: .6.3

31-4

(19)

(18)

.% 94.7

.% 100

(29)

.% 96.7

Résultats du classement(a) (31-4)					
		DBFR	Classe(s) d'affectation prévue(s)		Total
			1	2	
Original	Effectif	1	18	1	19
		2	0	11	11
	%	1	94.7	5.3	100.0
		2	.0	100.0	100.0
a 96.7% des observations originales classées correctement.					

:

-

.16

Multinormalité

-

.17

9-4 5-4 1-4 :

-

10-4 6-4 2-4 :

-

-

:

¹⁶- D. STILI : Op cit, Page 43.

Spearman Pearson

.Multicolenaret 18

OLAP Cubes(a)			
Predicted Group for Analysis 1: Total جدول			
DTNG = 1	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	-1,0918	-2,89387	,99648
DTNG = 2	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	3,0025822	2,27601	4,22373
DFR = 1	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	,6375928	-,32742	2,60619
DFR = 2	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	-1,4877	-4,55626	-,40720
DBFR = 1	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	1,7018	-,76662	2,89056
DBFR = 2	Mean	Minimum	Maximum
Discriminant Scores from Function 1 for Analysis 1	-2,9394	-5,43429	-,90870

الفصل الخامس :

قطاع الفنادق في الجزائر

من منظور حساب الإنتاج وحساب الاستغلال

للفترة الممتدة بين 1974 و2001

1988

1994

1989

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.2001 1974

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.	.6
.	.7
.	.8

1974 2001.

1

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.1 .1 (la PTB – production totale brute)

.()

)

.2(

.2 .1 (la PIB – production intérieur brute)

.62

-

2 1	- 1
: 1994	- 2

l'Amortissement des)

.³(immobilisations

(Agrégat) : (le PIB – Produit intérieur brut) .3 .1

(Richesse)

(Généré) (le PIB) .4

.⁵

: (le PNB – Produit national brut) .4 .1

(Facteurs)

(Gagné) (le PNB)

.⁶

:(VA–Valeur ajouté) .5 .1

:⁷

: (VAB – Valeur ajouté brute) -

(Charges salariales)

: (VAB – Valeur ajouté nette) -

: (CI – Consommation intermédiaire) .6 .1

.⁸()

³ - LAKEHAL Mokhtar : Dictionnaire d'économie contemporaine, Vuibert éd., Paris 2001, page 560.

⁴ - Ibidem, page 562.

⁵ - MANKIW G. N. : Macroéconomie « une perspective européenne », de boeck 2° édition, Bruxelles 2001, page 20.

⁶ - Ibidem, page 33.

⁷ - BERAUD Alain : Introduction à l'analyse macro-économique, Anthropos 3° édition, Paris 1990, page 52.

⁸ - LAKEHAL Mokhtar : Op. cit. page 158.

.7 .1 : (Sub. E)

.9

.8 .1 : (RS – Rémunération des salaries)

.10

.9 .1 : (ILP – Impôt indirecte lie à la production)

(TAP)

. ... (VF) (TVA)

.10 .1 : (EBE)

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+

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$$\boxed{EBE = VAB + Sub - RS - ILP}$$

.11 .1 : (AFF – Amortissement des fonds fixes)

.98 : 1994 - 9

.99 - 10

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$$PB = VA + CI$$

$$\sum PB = \sum VA + \sum CI$$

(01) la $PTB_{pp} = VAB + CI$

(02) la $PTB_{pm} = VAB + CI + TVA + DT/I$

:

-

$$EBE = VA + Sub - RS - ILP$$

(03) la $PTB_{pm} = CI + RS + ILP - Sub + EBE$

la)

:

.(PIB

(VAB) :	(PB)

:

(RS)	(VAB)
(ILP)	(Sub.)
(EBE) :	

:

(4-6)

(3-6)

(2-6)

(5-6)

(1-6)

(1-5)		
		:
EPB	PPB	
ECI	PCI	
EVA	PVA	
ECFF	PCFF	
ERI	PRI	
EILP	PILP	
ERS	PRS	
EENE	PENE	

(2-5)								
السنة	PPB	PCI	PVA	PCFF	PRI	PILP	PRS	PENE
1974	85,87	85,73	85,95	51,74	87,99	71,43	77,34	100,36
75	84,04	84,67	83,64	43,33	86,46	74,22	74,83	97,25
76	83,35	84,00	82,95	39,80	86,21	73,02	75,04	99,14
77	77,09	77,92	76,60	30,75	80,76	64,21	68,21	99,64
78	80,09	82,82	77,92	33,81	82,19	60,89	70,47	100,61
79	76,62	81,76	73,56	32,68	76,99	64,98	63,71	92,73
80	76,45	80,60	74,10	33,31	77,48	65,60	64,36	92,92
81	74,56	77,12	72,98	32,04	76,46	62,71	63,03	93,02
82	73,78	77,78	71,28	31,47	74,64	61,38	61,85	90,28
83	73,65	79,27	70,35	30,49	73,79	60,32	60,79	89,89
84	75,29	80,50	72,21	32,75	75,44	63,51	61,70	92,00
85	78,79	88,18	74,67	34,71	77,18	58,57	61,70	93,27
86	81,67	88,37	79,07	40,86	81,09	63,85	62,13	95,68
87	81,27	88,16	78,78	40,09	80,69	68,53	61,69	94,62
88	80,52	85,26	78,79	40,14	80,70	78,13	61,85	92,09
89	86,71	91,31	85,06	43,01	87,15	79,65	72,95	97,22
90	87,66	91,32	86,12	24,00	89,15	79,49	73,76	98,62
91	88,03	87,48	88,20	64,57	89,44	80,29	71,34	97,79
92	90,63	88,10	91,42	70,79	92,43	89,56	64,56	100,25
93	89,52	89,06	89,71	49,08	93,02	92,49	68,56	101,15
94	90,00	88,99	90,42	49,53	93,66	91,64	75,64	101,15
95	90,22	91,28	89,76	58,38	92,50	93,92	74,54	98,90
96	90,27	89,67	90,54	52,06	93,90	93,44	74,74	100,74
97	90,07	89,78	90,21	61,49	92,72	92,17	76,03	99,00
98	88,38	87,23	88,88	54,55	91,89	92,35	74,12	98,69
99	88,13	83,64	90,02	37,20	94,64	92,75	74,71	102,68
2000	88,13	83,64	89,93	36,63	94,59	92,74	74,48	102,66
2001	88,13	83,64	89,89	36,38	94,57	92,74	74,38	102,66
02 01							:	

(3-5)								
السنة	EPB	ECI	EVA	ECFF	ERI	EILP	ERS	EENE
1974	14,13	14,27	14,05	48,26	12,01	28,57	22,66	-0,36
75	15,96	15,33	16,36	56,67	13,54	25,78	25,17	2,75
76	16,65	16,00	17,05	60,20	13,79	26,98	24,96	0,86
77	22,91	22,08	23,40	69,25	19,24	35,79	31,79	0,36
78	19,91	17,18	22,08	66,19	17,81	39,11	29,53	-0,61
79	23,38	18,24	26,44	67,32	23,01	35,02	36,29	7,27
80	23,55	19,40	25,90	66,69	22,52	34,40	35,64	7,08
81	25,44	22,88	27,02	67,96	23,54	37,29	36,97	6,98
82	26,22	22,22	28,72	68,53	25,36	38,62	38,15	9,72
83	26,35	20,73	29,65	69,51	26,21	39,68	39,21	10,11
84	24,71	19,50	27,79	67,25	24,56	36,49	38,30	8,00
85	21,21	11,82	25,33	65,29	22,82	41,43	38,30	6,73
86	18,33	11,63	20,93	59,14	18,91	36,15	37,87	4,32
87	18,73	11,84	21,22	59,91	19,31	31,47	38,31	5,38
88	19,48	14,74	21,21	59,86	19,30	21,87	38,15	7,91
89	13,29	8,69	14,94	56,99	12,85	20,35	27,05	2,78
90	12,34	8,68	13,88	76,00	10,85	20,51	26,24	1,38
91	11,97	12,52	11,80	35,43	10,56	19,71	28,66	2,21
92	9,37	11,90	8,58	29,21	7,57	10,44	35,44	-0,25
93	10,48	10,94	10,29	50,92	6,98	7,51	31,44	-1,15
94	10,00	11,01	9,58	50,47	6,34	8,36	24,36	-1,15
95	9,78	8,72	10,24	41,62	7,50	6,08	25,46	1,10
96	9,73	10,33	9,46	47,94	6,10	6,56	25,26	-0,74
97	9,93	10,22	9,79	38,51	7,28	7,83	23,97	1,00
98	11,62	12,77	11,12	45,45	8,11	7,65	25,88	1,31
99	11,87	16,36	9,98	62,80	5,36	7,25	25,29	-2,68
2000	11,87	16,36	10,07	63,37	5,41	7,26	25,52	-2,66
2001	11,87	16,36	10,11	63,62	5,43	7,26	25,62	-2,66
02 01							:	

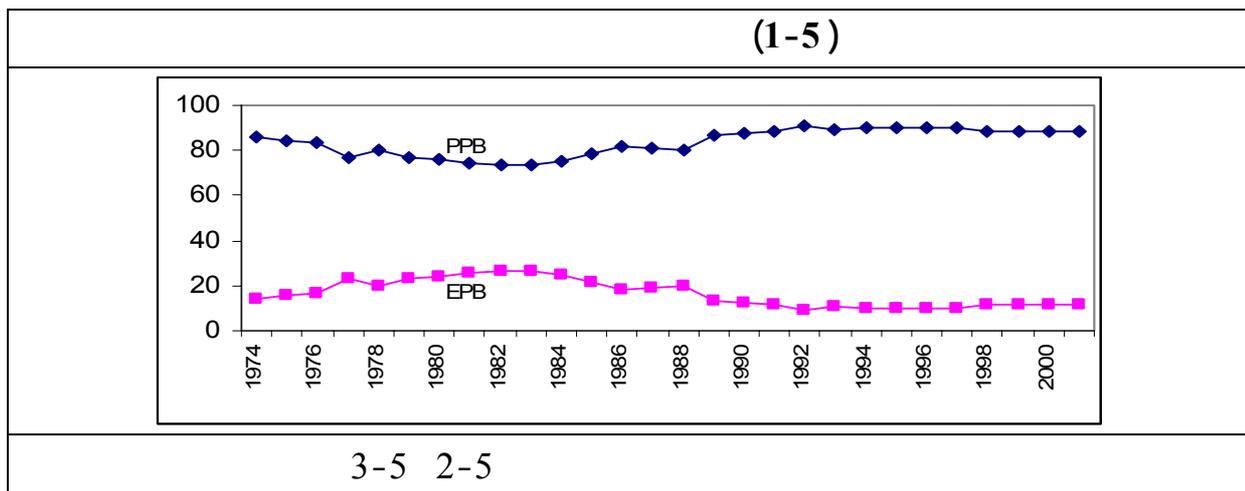
(4-5)						
%						%
PPB	16.98	73,65	90.63	83.53	5,88	7,04
PCI	14.21	77.12	91.32	85.26	4.33	5,08
PVA	21.07	70.36	91.42	82.61	7,25	8,78
PCFF	46.79	24,00	70.79	42.35	11,71	27,65
PRI	20.85	73,79	94.64	85.63	47,2	8,45
PILP	35.34	58,57	93.92	76.95	13,12	17,05
PRS	16.55	60,79	77.34	69.23	15,9	8,54
PENE	12.79	89,89	102.68	97.32	43,9	4,05
EPB	16.98	9.37	26.35	16.47	5,88	35,70
ECI	14.21	8.68	22.88	14.74	34,3	29,38
EVA	21.07	8.58	29.65	17.39	7,25	41,69
ECFF	46.79	29.21	76.00	57.66	11,71	20,31
ERI	20.85	5.36	26.21	14.37	47,2	50,38
EILP	35.34	6.08	41.43	23.05	13,12	56,92
ERS	16.55	22.66	39.21	30.77	15,9	19,21
EENE	12.79	2.68-	10.11	2.68	43,9	147,01
3-5 2-5 :						

Corrélation de Pearson (5-5)								
N=28	PPB	PVA	PCI	PCFF	PRI	PILP	PRS	PENE
PPB	1	,990(**)	,786(**)	,698(**)	,970(**)	,911(**)	,763(**)	,820(**)
Sig. (bilatérale)		,000	,000	,000	,000	,000	,000	,000
	28	28	28	28	28	28	28	28
PVA	,990(**)	1	,692(**)	,681(**)	,991(**)	,932(**)	,791(**)	,860(**)
Sig. (bilatérale)	,000		,000	,000	,000	,000	,000	,000
PCI	,786(**)	,692(**)	1	,577(**)	,627(**)	,583(**)	,434(*)	,429(*)
Sig. (bilatérale)	,000	,000		,001	,000	,001	,021	,023
PCFF	,698(**)	,681(**)	,577(**)	1	,605(**)	,608(**)	,374	,405(*)
Sig. (bilatérale)	,000	,000	,001		,001	,001	,050	,032
PRI	,970(**)	,991(**)	,627(**)	,605(**)	1	,939(**)	,821(**)	,896(**)
Sig. (bilatérale)	,000	,000	,000	,001		,000	,000	,000
PILP	,911(**)	,932(**)	,583(**)	,608(**)	,939(**)	1	,682(**)	,729(**)
Sig. (bilatérale)	,000	,000	,001	,001	,000		,000	,000
PRS	,763(**)	,791(**)	,434(*)	,374	,821(**)	,682(**)	1	,813(**)
Sig. (bilatérale)	,000	,000	,021	,050	,000	,000		,000
PENE	,820(**)	,860(**)	,429(*)	,405(*)	,896(**)	,729(**)	,813(**)	1
Sig. (bilatérale)	,000	,000	,023	,032	,000	,000	,000	
2-5 :								

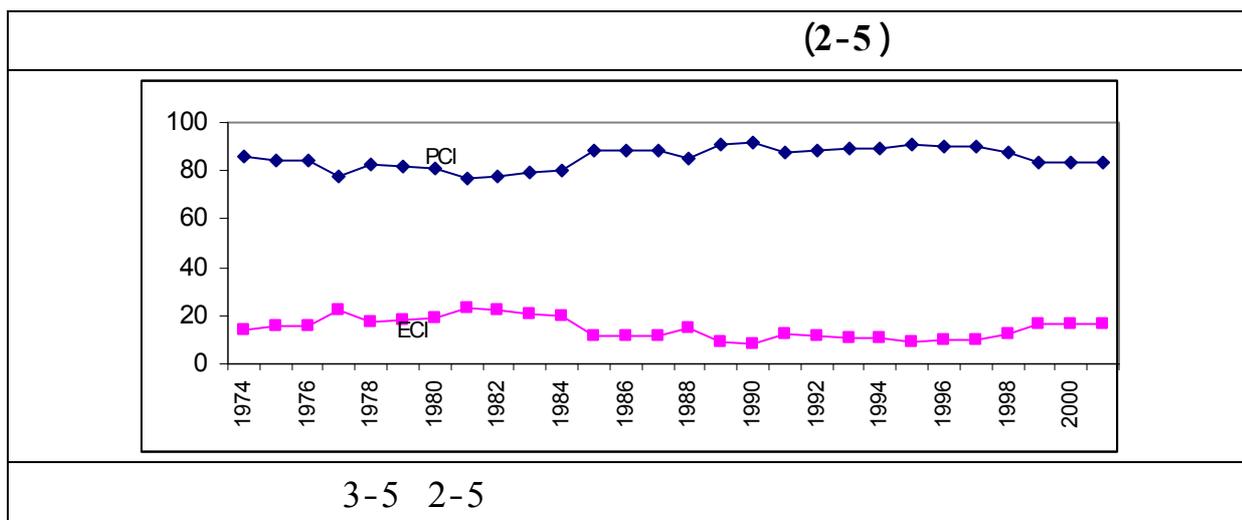
** La corrélation est significative au niveau 0.01 (bilatéral).

* La corrélation est significative au niveau 0.05 (bilatéral).

		:		:	1-2
PPB			1-5		
16.98	1992	90.63	1983	73.65	
7.04		5.88	83.53		
1984		1983	1974		
EPB					
	1983	26.35	1992	9.37	
35.71		16.98			
		1983	1974		
.0.01					

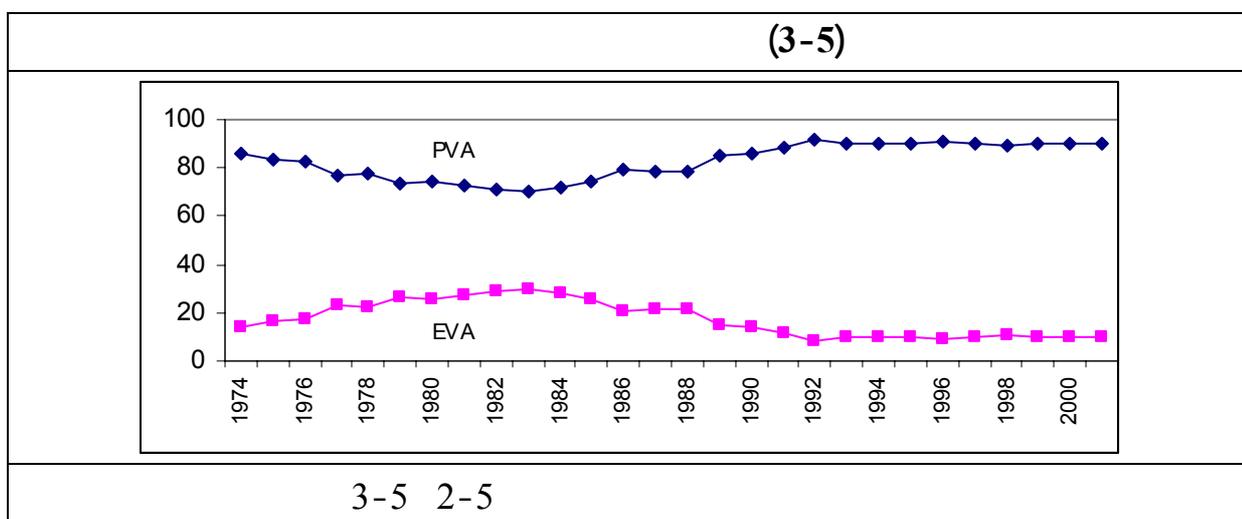


		:		:	2-2
PCI			2-5		
14.21	1990	91.32	1981	77.12	
	.5.06	4.33	85.26		
1990	8.68				ECI
	.29.37		1981	22.88	
.0.05					

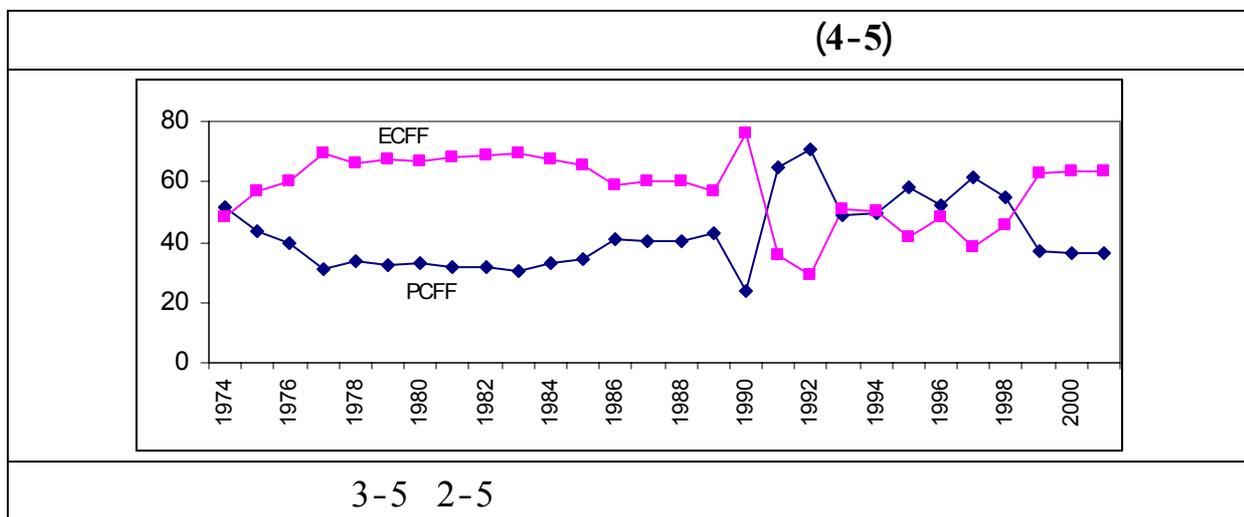


: 3-2

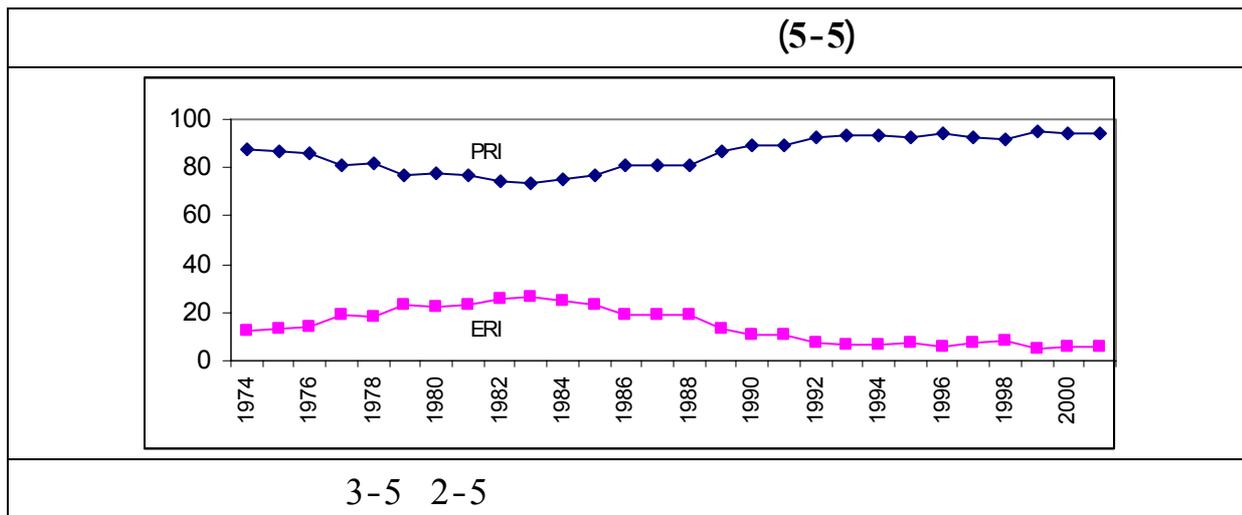
21.07	PVA	3-5	
	1992	91.42	1983
	8.78	7.25	70.36
8.58		EVA	
17.39	1983	29.65	1992
		.41.70	
		.0.05	



	:				4-2
				4-5	
1992	70.79	1990	24.00		46.79
	27.66		11.71	42.43	
ECFF					
1992	29.21				
	57.66	1990	76.00		.20.32
				.0.05	



	:				5-2
				5-5	
PRI		1999	1983	73.79	
	.8.45		7.24	85.63	20.85
		1983	26.21	1999	5.36
			14.37		ERI
					.50.36
				.0.05	



:

PILP

6-5

1995

93.92

1985

58.57

13.12

76.95

35.34

.17.05

1985

41.43

1995

6.08

EILP

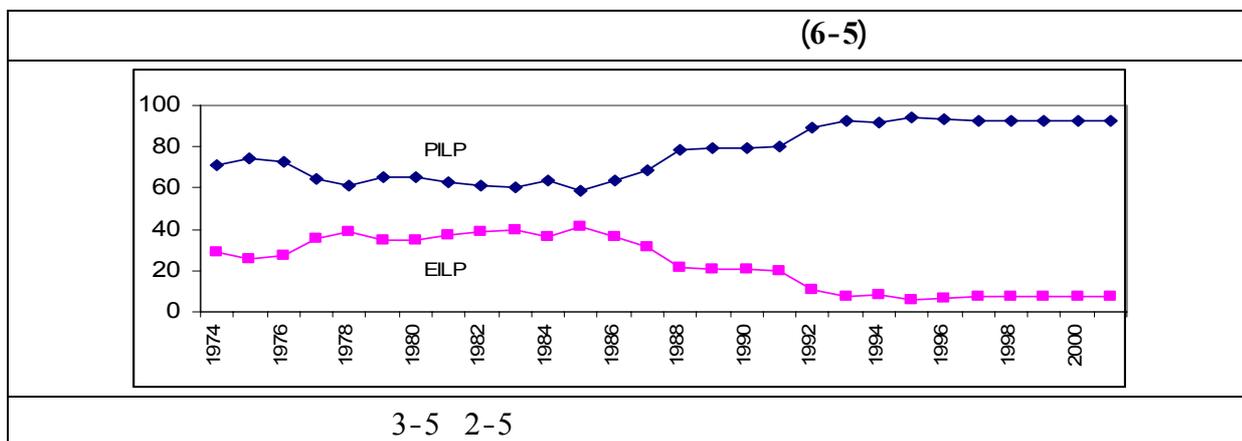
23.05

1985

1974

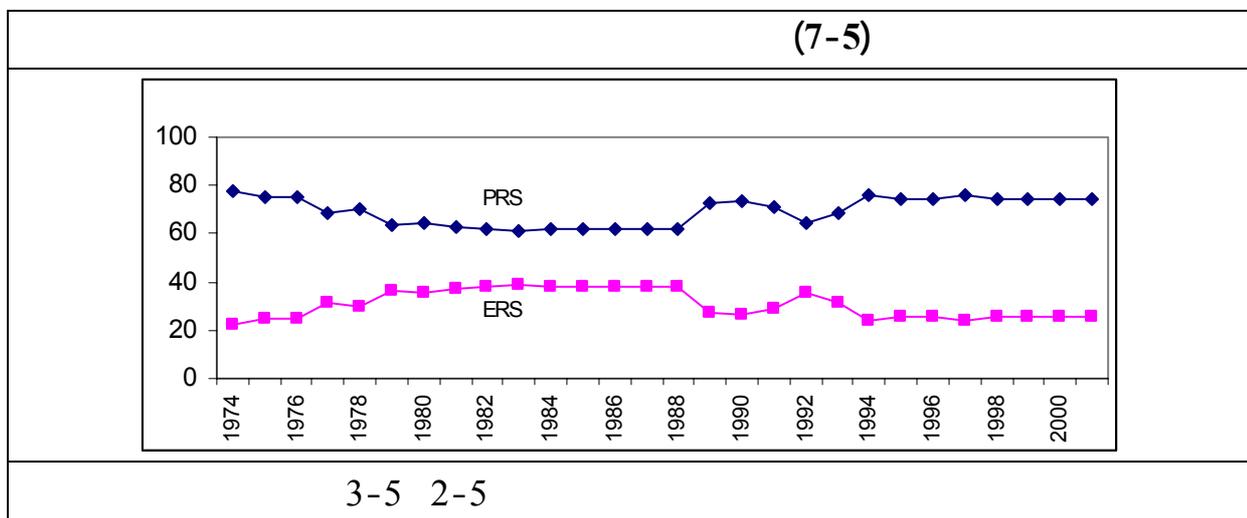
.56.92

.0.05



: 7-2

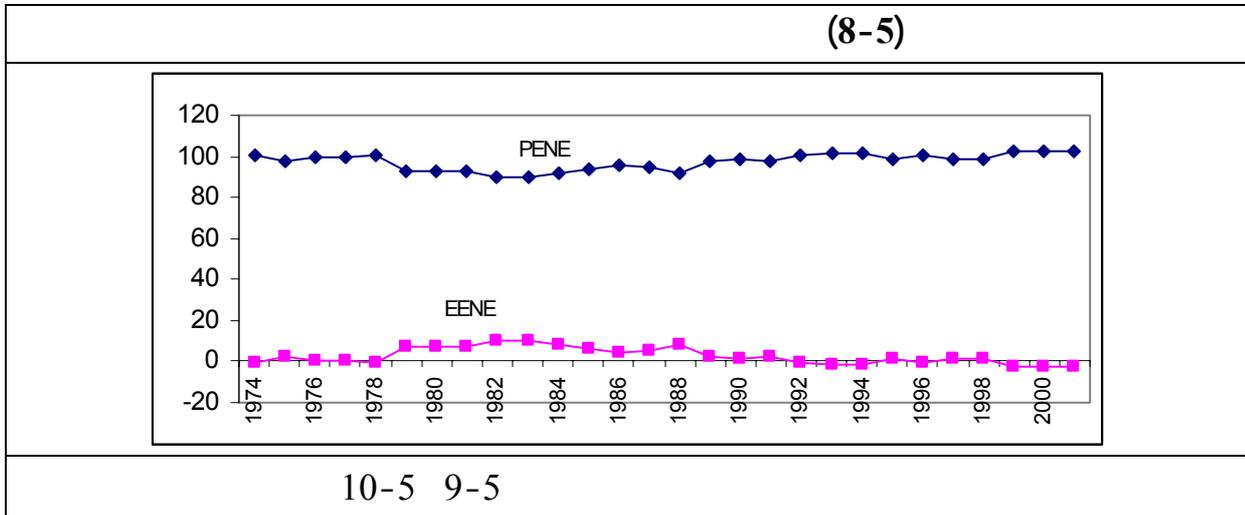
PRS			7-5
77.34	1983	60.79	16.55
8.53	5.91	69.23	1974
ERS			
1974	22.66		
	30.77	1983	39.21
			.19.19
			.0.05



: 8-2

PENE			8-5
102.68	1999	89.89	12.79
	3.94	97.32	1983
- 2.68			EENE
	2.68	1983	10.11
			1999
			147.10

.0.05



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\bar{X}_E

\bar{X}_P

:

$$H_0 : \bar{X}_P = \bar{X}_E$$

$$H_1 : \bar{X}_P \neq \bar{X}_E$$

t_T	t	t	12	6-5
	$t_T(27,0.05)=2.0518$	df=27	0.05	
.13	H_1	t	t	t
	$t_T(27,0.05)=2.0518$	t		
Paired	.100%			

Differences
:

- .PPB -
- .PCI -
- .PVA -
- .PRS -
- .PILP -
- .PRI -
- .PENE -

.ECFF

(6-5)									
		Paired Differences	Std. Devia tion	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
		Mean			Lower	Upper			
Pair 1	EPB - PPB	-67,07	11,76	2,22	-71,63	-62,51	-30,18	27	,000
Pair 2	ECI - PCI	-70,52	8,66	1,64	-73,88	-67,16	-43,10	27	,000
Pair 3	EVA - PVA	-65,21	14,50	2,74	-70,84	-59,59	-23,79	27	,000
Pair 4	ECFF - PCFF	15,31	23,43	4,43	6,23	24,39	3,46	27	,002
Pair 5	ERI - PRI	-71,27	14,47	2,73	-76,88	-65,65	-26,06	27	,000
Pair 6	EILP - PILP	-53,90	26,24	4,96	-64,07	-43,72	-10,87	27	,000
Pair 7	ERS - PRS	-38,46	11,81	2,23	-43,04	-33,88	-17,23	27	,000
Pair 8	EENE - PENE	-94,65	7,88	1,49	-97,70	-91,59	-63,58	27	,000

:

: **1.3**

F-Fisher

: $H_0 : X_A = X_B$ **0.05**

$F_t(0.05,20) = 4.35$ $H_1 : X_A \neq X_B$

$X_B \quad X_A$ $H_1 \quad H_0$ $F_c > F_t$

$X_B \quad X_A$ $F_c < F_t$

$H_1 \quad H_0$ $F_t = 4.35 < F_c = 38.33$ **-1**

SPB

$H_1 \quad H_0$ $F_t = 4.35 < F_c = 90.24$ **- 2**

SCI

	H1	H0	$F_t = 4.35 < F_c = 8.18$	-3
	SVA			
SCFF	H1	H0	$F_t = 4.35 < F_c = 431.65$	-4
	SRS			
	H1	H0	$F_t = 4.35 < F_c = 52.74$	-5
	SILP			
	H1	H0	$F_t = 4.35 < F_c = 403.75$	-6
	.SRI			
	H1	H0	$F_t = 4.35 > F_c = 0.01$	-7
SENE	H1	H0	$F_t = 4.35 < F_c = 92.96$	-8

.2 .3

: 14

$$Z = -3.43*PB + 1.97*CI + 2.54*VA - 0.95*CFF + 0.51*RS - 0.63*ILP - 1.04*RI + 0.27*ENE$$

Z

:

0.9993 : ()
-0.9993 : ()

D = 1.9987 : 15 MAHALANOBIS

% 100

statitcf	_ 14
46.45	_ 15
.F-Fisher	R ²

-2

$$CIP = 1.473 * T + 30.516 \quad R^2 = 86.46 \%$$

$$\sigma \quad 0.194 \quad 1.318$$

$$T_c \quad 7.580 \quad 23.149$$

-

$$CIE = -1.473 * T + 69.484 \quad R^2 = 86.46 \%$$

$$\sigma \quad 0.194 \quad 1.318$$

$$T_c \quad 7.580 \quad 52.710$$

-

1.473

-3

$$VAP = 0.852 * T + 42.543 \quad R^2 = 54.10 \%$$

$$\sigma \quad 0.261 \quad 1.775$$

$$T_c \quad 3.257 \quad 23.972$$

-

$$VAE = -0.852 * T + 42.543 \quad R^2 = 54.10 \%$$

$$\sigma \quad 0.261 \quad 1.775$$

$$T_c \quad -3.257 \quad 32.376$$

-

0.852

-4

$$CFFP = 0.460 * T + 20.824 \quad R^2 = 6.53 \%$$

$$\sigma \quad 0.580 \quad 3.931$$

$$T_c \quad 0.793 \quad 5.298$$

-

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$$CFFE = -0.460 * T + 79.176 \quad R^2 = 6.53 \%$$

$$\begin{array}{l} \sigma \quad 0.580 \quad 3.931 \\ T_c \quad 0.793 \quad 20.143 \end{array}$$

0.460

: -5

: -

$$RIP = 0.912 * T + 44.431 \quad R^2 = 47.81 \%$$

$$\begin{array}{l} \sigma \quad 0.318 \quad 2.154 \\ T_c \quad 2.872 \quad 20.628 \end{array}$$

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$$RIE = -0.912 * T + 55.569 \quad R^2 = 47.81 \%$$

$$\begin{array}{l} \sigma \quad 0.318 \quad 2.154 \\ T_c \quad 2.872 \quad 25.872 \end{array}$$

0.912

: -6

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$$RILPP = 1.469 * T + 12.737 \quad R^2 = 53.81 \%$$

$$\begin{array}{l} \sigma \quad 0.454 \quad 4.141 \\ T_c \quad 3.238 \quad 20.628 \end{array}$$

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$$RILPE = -1.469 * T + 87.263 \quad R^2 = 53.81 \%$$

$$\begin{array}{l} \sigma \quad 0.454 \quad 3.076 \\ T_c \quad 3.238 \quad 28.368 \end{array}$$

1.469

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$$RSP = 2.213 * T + 24.809 \quad R^2 = 90.99 \%$$

$$\begin{array}{l} \sigma \quad 0.232 \quad 1.574 \\ T_c \quad 9.533 \quad 15.758 \end{array}$$

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$$RSE = -2.213 * T + 75.190 \quad R^2 = 90.99 \%$$

$$\begin{array}{l} \sigma \quad 0.232 \quad 1.574 \\ T_c \quad 9.533 \quad 47.759 \end{array}$$

2.213

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$$ENEP = -0.101 * T + 61.460 \quad R^2 = 00.40 \%$$

$$\begin{array}{l} \sigma \quad 0.530 \quad 3.592 \\ T_c \quad 0.192 \quad 17.110 \end{array}$$

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$$ENEE = 0.101 * T + 38.540 \quad R^2 = 00.40 \%$$

$$\begin{array}{l} \sigma \quad 0.530 \quad 3.592 \\ T_c \quad 0.192 \quad 10.729 \end{array}$$

0.101

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(CI)	(PB)	(VA)	-1
	.(ILP)	(CFF)	
)		.(
	(ENE)		-2
.	()		
	.(RI)		-3
	(HCR)		-4
		.% 100	

الخاتمة

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Cobb-Douglas

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Multinormalité

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Spearman Pearson

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.Multicolinéarité

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(PB)

-

(CFF)

(VA)

(CI)

(ILP)

(ENE)

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.(RI)

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(HCR)

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المراجع

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				1999	
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الملاحق

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LS // Dependent Variable is LCA :11
Date: 8-04-2005 / Time: 21:39
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	2.0142867	1.4571143	1.3823807	0.1778
LL	0.9147706	0.1556605	5.8767014	0.0000
R-squared	0.552255	Mean of dependent var		10.56754
Adjusted R-squared	0.536264	S.D. of dependent var		0.559874
S.E. of regression	0.381264	Sum of squared resid		4.070140
Log likelihood	-12.60535	F-statistic		34.53562
Durbin-Watson stat	0.814771	Prob(F-statistic)		0.000003

LS // Dependent Variable is LCA :12
Date: 8-04-2005 / Time: 21:39
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	3.9467527	1.9546106	2.0192016	0.0531
LK	0.5524057	0.1629193	3.3906704	0.0021
R-squared	0.291079	Mean of dependent var		10.56754
Adjusted R-squared	0.265760	S.D. of dependent var		0.559874
S.E. of regression	0.479744	Sum of squared resid		6.444312
Log likelihood	-19.49816	F-statistic		11.49665
Durbin-Watson stat	0.556485	Prob(F-statistic)		0.002092

LS // Dependent Variable is LCA :13
Date: 8-04-2005 / Time: 21:41
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.7149766	0.1056487	6.7674883	0.0000
LK	0.3241417	0.0824312	3.9322692	0.0005
R-squared	0.691863	Mean of dependent var		10.56754
Adjusted R-squared	0.680858	S.D. of dependent var		0.559874
S.E. of regression	0.316288	Sum of squared resid		2.801062
Log likelihood	-7.000177	F-statistic		62.86863
Durbin-Watson stat	0.794943	Prob(F-statistic)		0.000000

LS // Dependent Variable is LCA :14
Date: 8-04-2005 / Time: 21:41
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	1.1297070	0.0075521	149.58897	0.0000
R-squared	0.521697	Mean of dependent var		10.56754
Adjusted R-squared	0.521697	S.D. of dependent var		0.559874
S.E. of regression	0.387206	Sum of squared resid		4.347923
Log likelihood	-13.59567	Durbin-Watson stat		0.723732

LS // Dependent Variable is LCA :15
 Date: 8-04-2005 / Time: 21:41
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK	0.8810421	0.0076782	114.74577	0.0000
R-squared	0.187851	Mean of dependent var		10.56754
Adjusted R-squared	0.187851	S.D. of dependent var		0.559874
S.E. of regression	0.504555	Sum of squared resid		7.382690
Log likelihood	-21.53727	Durbin-Watson stat		0.459176

LS // Dependent Variable is LCA :16
 Date: 8-04-2005 / Time: 21:42
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8257936	0.1187619	6.9533560	0.0000
LK	0.2256941	0.0965937	2.3365293	0.0274
DB	-0.0076032	0.0392523	-0.1936999	0.8479
DE	0.0896266	0.1651130	0.5428202	0.5919
R-squared	0.728426	Mean of dependent var		10.56754
Adjusted R-squared	0.697091	S.D. of dependent var		0.559874
S.E. of regression	0.308139	Sum of squared resid		2.468689
Log likelihood	-5.105506	F-statistic		23.24609
Durbin-Watson stat	1.029615	Prob(F-statistic)		0.000000

LS // Dependent Variable is LCA :17
 Date: 8-04-2005 / Time: 21:42
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8156801	0.1157491	7.0469656	0.0000
LK	0.2284748	0.0951895	2.4002093	0.0235
DB	0.0133177	0.0073402	1.8143491	0.0808
R-squared	0.725349	Mean of dependent var		10.56754
Adjusted R-squared	0.705004	S.D. of dependent var		0.559874
S.E. of regression	0.304087	Sum of squared resid		2.496667
Log likelihood	-5.274543	F-statistic		35.65321
Durbin-Watson stat	0.957519	Prob(F-statistic)		0.000000

LS // Dependent Variable is LCA :18
 Date: 8-04-2005 / Time: 21:42
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8243145	0.1163846	7.0826789	0.0000
LK	0.2247072	0.0947244	2.3722208	0.0251
DE	0.0582237	0.0307250	1.8949962	0.0688
R-squared	0.728034	Mean of dependent var		10.56754
Adjusted R-squared	0.707889	S.D. of dependent var		0.559874
S.E. of regression	0.302597	Sum of squared resid		2.472252
Log likelihood	-5.127137	F-statistic		36.13863
Durbin-Watson stat	1.004800	Prob(F-statistic)		0.000000

LS // Dependent Variable is LCA1 :19

Date: 8-04-2005 / Time: 21:46
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	0.4359165	0.2911139	1.4974088	0.1463
LK1	0.2410957	0.1054833	2.2856288	0.0307
DB	-0.0024654	0.0407635	-0.0604803	0.9522
DE	0.0628426	0.1704336	0.3687218	0.7153
R-squared	0.370394	Mean of dependent var		1.217378
Adjusted R-squared	0.297747	S.D. of dependent var		0.376633
S.E. of regression	0.315620	Sum of squared resid		2.590021
Log likelihood	-5.825183	F-statistic		5.098555
Durbin-Watson stat	0.964581	Prob(F-statistic)		0.006580

LS // Dependent Variable is LCA1 :20

Date: 8-04-2005 / Time: 21:46
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	0.3810364	0.2461528	1.5479671	0.1333
LK1	0.2450068	0.1032557	2.3728153	0.0250
DB	0.0123031	0.0074540	1.6505305	0.1104
R-squared	0.367102	Mean of dependent var		1.217378
Adjusted R-squared	0.320220	S.D. of dependent var		0.376633
S.E. of regression	0.310529	Sum of squared resid		2.603564
Log likelihood	-5.903414	F-statistic		7.830441
Durbin-Watson stat	0.923411	Prob(F-statistic)		0.002080

LS // Dependent Variable is LCA1 :21

Date: 8-04-2005 / Time: 21:46
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	0.4272353	0.2485504	1.7189085	0.0971
LK1	0.2411630	0.1035130	2.3297840	0.0275
DE	0.0527143	0.0310866	1.6957234	0.1014
R-squared	0.370305	Mean of dependent var		1.217378
Adjusted R-squared	0.323661	S.D. of dependent var		0.376633
S.E. of regression	0.309742	Sum of squared resid		2.590385
Log likelihood	-5.827293	F-statistic		7.938963
Durbin-Watson stat	0.958050	Prob(F-statistic)		0.001942

LS // Dependent Variable is LCA1 :22

Date: 8-04-2005 / Time: 21:46
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.4547482	0.0219347	20.731894	0.0000
R-squared	0.253666	Mean of dependent var		1.217378
Adjusted R-squared	0.253666	S.D. of dependent var		0.376633
S.E. of regression	0.325375	Sum of squared resid		3.070207
Log likelihood	-8.376368	Durbin-Watson stat		0.713743

LS // Dependent Variable is LCA1 :23
 Date: 8-04-2005 / Time: 21:47
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.3682541	0.0639972	5.7542200	0.0000
DB	0.0276310	0.0362706	0.7618002	0.4528
DE	-0.0676389	0.1498054	-0.4515119	0.6552
R-squared	0.316097	Mean of dependent var		1.217378
Adjusted R-squared	0.265437	S.D. of dependent var		0.376633
S.E. of regression	0.322799	Sum of squared resid		2.813383
Log likelihood	-7.066012	F-statistic		6.239638
Durbin-Watson stat	0.778782	Prob(F-statistic)		0.005921

LS // Dependent Variable is LCA1 :24
 Date: 8-04-2005 / Time: 21:47
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.3858834	0.0499803	7.7207151	0.0000
DB	0.0116311	0.0076247	1.5254612	0.1384
R-squared	0.310933	Mean of dependent var		1.217378
Adjusted R-squared	0.286324	S.D. of dependent var		0.376633
S.E. of regression	0.318177	Sum of squared resid		2.834626
Log likelihood	-7.178844	F-statistic		12.63466
Durbin-Watson stat	0.779951	Prob(F-statistic)		0.001368

LS // Dependent Variable is LCA1 :25
 Date: 8-04-2005 / Time: 21:48
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.4047552	0.0421056	9.6128505	0.0000
DE	0.0438573	0.0317086	1.3831351	0.1776
R-squared	0.301397	Mean of dependent var		1.217378
Adjusted R-squared	0.276447	S.D. of dependent var		0.376633
S.E. of regression	0.320371	Sum of squared resid		2.873854
Log likelihood	-7.385007	F-statistic		12.07999
Durbin-Watson stat	0.780079	Prob(F-statistic)		0.001680

LS // Dependent Variable is LVA :26
 Date: 8-04-2005 / Time: 21:43
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	0.4092652	1.3805133	0.2964587	0.7691
LL	1.0170538	0.1474774	6.8963359	0.0000
R-squared	0.629431	Mean of dependent var		9.918879
Adjusted R-squared	0.616196	S.D. of dependent var		0.583066
S.E. of regression	0.361221	Sum of squared resid		3.653451
Log likelihood	-10.98528	F-statistic		47.55945
Durbin-Watson stat	0.744804	Prob(F-statistic)		0.000000

LS // Dependent Variable is LVA :27

Date: 8-04-2005 / Time: 21:43
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	2.8277133	2.0113226	1.4058974	0.1708
LK	0.5916521	0.1676463	3.5291682	0.0015
R-squared	0.307873	Mean of dependent var		9.918879
Adjusted R-squared	0.283155	S.D. of dependent var		0.583066
S.E. of regression	0.493663	Sum of squared resid		6.823694
Log likelihood	-20.35621	F-statistic		12.45503
Durbin-Watson stat	0.527841	Prob(F-statistic)		0.001461

LS // Dependent Variable is LVA :28

Date: 8-04-2005 / Time: 21:44
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.7220119	0.1024332	7.0486154	0.0000
LK	0.2647286	0.0799223	3.3123248	0.0026
R-squared	0.732920	Mean of dependent var		9.918879
Adjusted R-squared	0.723381	S.D. of dependent var		0.583066
S.E. of regression	0.306661	Sum of squared resid		2.633148
Log likelihood	-6.072896	F-statistic		76.83753
Durbin-Watson stat	0.815522	Prob(F-statistic)		0.000000

LS // Dependent Variable is LVA :29

Date: 8-04-2005 / Time: 21:44
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	1.0607249	0.0069336	152.98374	0.0000
R-squared	0.628268	Mean of dependent var		9.918879
Adjusted R-squared	0.628268	S.D. of dependent var		0.583066
S.E. of regression	0.355495	Sum of squared resid		3.664918
Log likelihood	-11.03229	Durbin-Watson stat		0.732341

LS // Dependent Variable is LVA :30

Date: 8-04-2005 / Time: 21:44
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK	0.8271089	0.0076379	108.29002	0.0000
R-squared	0.259016	Mean of dependent var		9.918879
Adjusted R-squared	0.259016	S.D. of dependent var		0.583066
S.E. of regression	0.501906	Sum of squared resid		7.305385
Log likelihood	-21.37937	Durbin-Watson stat		0.494193

LS // Dependent Variable is LVA :31

Date: 8-04-2005 / Time: 21:44
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8310246	0.1148999	7.2325994	0.0000
LK	0.1696567	0.0934526	1.8154308	0.0810
DB	-0.0132595	0.0379759	-0.3491568	0.7298
DE	0.1114420	0.1597436	0.6976302	0.4916
R-squared	0.765622	Mean of dependent var		9.918879
Adjusted R-squared	0.738578	S.D. of dependent var		0.583066
S.E. of regression	0.298119	Sum of squared resid		2.310741
Log likelihood	-4.113721	F-statistic		28.31060
Durbin-Watson stat	0.958033	Prob(F-statistic)		0.000000

LS // Dependent Variable is LVA :32

Date: 8-04-2005 / Time: 21:45
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8184495	0.1123933	7.2820159	0.0000
LK	0.1731143	0.0924297	1.8729284	0.0719
DB	0.0127536	0.0071274	1.7893687	0.0848
R-squared	0.761234	Mean of dependent var		9.918879
Adjusted R-squared	0.743548	S.D. of dependent var		0.583066
S.E. of regression	0.295271	Sum of squared resid		2.353996
Log likelihood	-4.391906	F-statistic		43.04083
Durbin-Watson stat	0.960561	Prob(F-statistic)		0.000000

LS // Dependent Variable is LVA :33

Date: 8-04-2005 / Time: 21:45
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LL	0.8284451	0.1127822	7.3455323	0.0000
LK	0.1679357	0.0917924	1.8295151	0.0784
DE	0.0566769	0.0297740	1.9035734	0.0677
R-squared	0.764523	Mean of dependent var		9.918879
Adjusted R-squared	0.747080	S.D. of dependent var		0.583066
S.E. of regression	0.293231	Sum of squared resid		2.321576
Log likelihood	-4.183889	F-statistic		43.83039
Durbin-Watson stat	0.959523	Prob(F-statistic)		0.000000

LS // Dependent Variable is LVA1 :34

Date: 8-04-2005 / Time: 21:48
SMPL range: 1 - 30
Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.1487083	0.2734237	-0.5438747	0.5912
LK1	0.2149219	0.0990734	2.1693207	0.0394
DB	-0.0025263	0.0382864	-0.0659831	0.9479
DE	0.0648487	0.1600768	0.4051097	0.6887
R-squared	0.374915	Mean of dependent var		0.568721
Adjusted R-squared	0.302790	S.D. of dependent var		0.355023
S.E. of regression	0.296441	Sum of squared resid		2.284808
Log likelihood	-3.944425	F-statistic		5.198123
Durbin-Watson stat	0.934264	Prob(F-statistic)		0.006022

LS // Dependent Variable is LVA1 :35
 Date: 8-04-2005 / Time: 21:48
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.2053403	0.2313193	-0.8876921	0.3825
LK1	0.2189579	0.0970334	2.2565209	0.0323
DB	0.0127137	0.0070048	1.8149859	0.0807
R-squared	0.370970	Mean of dependent var		0.568721
Adjusted R-squared	0.324375	S.D. of dependent var		0.355023
S.E. of regression	0.291816	Sum of squared resid		2.299230
Log likelihood	-4.038808	F-statistic		7.961610
Durbin-Watson stat	0.945254	Prob(F-statistic)		0.001915

LS // Dependent Variable is LVA1 :36
 Date: 8-04-2005 / Time: 21:48
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-0.1576038	0.2334498	-0.6751078	0.5053
LK1	0.2149909	0.0972241	2.2112916	0.0357
DE	0.0544704	0.0291980	1.8655533	0.0730
R-squared	0.374811	Mean of dependent var		0.568721
Adjusted R-squared	0.328500	S.D. of dependent var		0.355023
S.E. of regression	0.290924	Sum of squared resid		2.285191
Log likelihood	-3.946937	F-statistic		8.093461
Durbin-Watson stat	0.935983	Prob(F-statistic)		0.001763

LS // Dependent Variable is LVA1 :37
 Date: 8-04-2005 / Time: 21:49
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.2204582	0.0204325	10.789592	0.0000
R-squared	0.271155	Mean of dependent var		0.568721
Adjusted R-squared	0.271155	S.D. of dependent var		0.355023
S.E. of regression	0.303092	Sum of squared resid		2.664072
Log likelihood	-6.248033	Durbin-Watson stat		0.818839

LS // Dependent Variable is LVA1 :38
 Date: 8-04-2005 / Time: 21:49
 SMPL range: 1 - 30
 Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.1715432	0.0580000	2.9576412	0.0064
DB	-0.0127933	0.0328717	-0.3891892	0.7002
DE	0.1093610	0.1357670	0.8055053	0.4276
R-squared	0.367804	Mean of dependent var		0.568721
Adjusted R-squared	0.320975	S.D. of dependent var		0.355023
S.E. of regression	0.292550	Sum of squared resid		2.310802
Log likelihood	-4.114115	F-statistic		7.854133
Durbin-Watson stat	0.956418	Prob(F-statistic)		0.002049

LS // Dependent Variable is LVA1 :39

Date: 8-04-2005 / Time: 21:49

SMPL range: 1 - 30

Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.1430395	0.0456655	3.1323300	0.0040
DB	0.0130758	0.0069664	1.8769772	0.0710
R-squared	0.352612	Mean of dependent var		0.568721
Adjusted R-squared	0.329491	S.D. of dependent var		0.355023
S.E. of regression	0.290709	Sum of squared resid		2.366333
Log likelihood	-4.470318	F-statistic		15.25069
Durbin-Watson stat	0.976653	Prob(F-statistic)		0.000541

LS // Dependent Variable is LVA1 :40

Date: 8-04-2005 / Time: 21:49

SMPL range: 1 - 30

Number of observations: 30

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
LK1	0.1546430	0.0378620	4.0843795	0.0003
DE	0.0577376	0.0285129	2.0249676	0.0525
R-squared	0.364257	Mean of dependent var		0.568721
Adjusted R-squared	0.341552	S.D. of dependent var		0.355023
S.E. of regression	0.288083	Sum of squared resid		2.323766
Log likelihood	-4.198029	F-statistic		16.04297
Durbin-Watson stat	0.968783	Prob(F-statistic)		0.000414

***** PARAMETRES STATISTIQUES *****

VARIABLE ANALYSEE: L

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 5.724141E+09
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 9.185058E+08
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 3.167261E+07
VALEUR MINIMUM	= 4343	- VAR. SERIE (DDL=N)	= 3.061686E+07
VALEUR MAXIMUM	= 26835	- VAR. DE LA MOYENNE	= 1055754
SOMME	= 379696	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 12656.53	- MOMENT D ' ORDRE 2	= 3.061686E+07
EC.TYPE ECHAN. (DDL=N-1)	= 5627.843	- MOMENT D ' ORDRE 3	= 1.470486E+11
EC.TYPE SERIE (DDL=N)	= 5533.25	- MOMENT D ' ORDRE 4	= 3.104122E+15
EC.TYPE DE LA MOYENNE	= 1027.499	- COEFF. SYMETRIE	= .7534245
COEFF. DE VARIATION	= 43.71853	- COEFF. APLATISSEMENT	= 3.311444

VARIABLE ANALYSEE: VA

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 2.263412E+10
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 5.551224E+09
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 1.914215E+08
VALEUR MINIMUM	= 8036	- VAR. SERIE (DDL=N)	= 1.850408E+08
VALEUR MAXIMUM	= 57917	- VAR. DE LA MOYENNE	= 6380718
SOMME	= 715882	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 23862.73	- MOMENT D ' ORDRE 2	= 1.850408E+08
EC.TYPE ECHAN. (DDL=N-1)	= 13835.52	- MOMENT D ' ORDRE 3	= 2.221999E+12
EC.TYPE SERIE (DDL=N)	= 13602.97	- MOMENT D ' ORDRE 4	= 1.035146E+17
EC.TYPE DE LA MOYENNE	= 2526.008	- COEFF. SYMETRIE	= .779265
COEFF. DE VARIATION	= 57.00508	- COEFF. APLATISSEMENT	= 3.023198

VARIABLE ANALYSEE: CA

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 7.808569E+10
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 1.724349E+10
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 5.946032E+08
VALEUR MINIMUM	= 17255	- VAR. SERIE (DDL=N)	= 5.747831E+08
VALEUR MAXIMUM	= 95451	- VAR. DE LA MOYENNE	= 1.982011E+07
SOMME	= 1351024	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 45034.13	- MOMENT D ' ORDRE 2	= 5.747831E+08
EC.TYPE ECHAN. (DDL=N-1)	= 24384.49	- MOMENT D ' ORDRE 3	= 7.405357E+12
EC.TYPE SERIE (DDL=N)	= 23974.63	- MOMENT D ' ORDRE 4	= 6.473979E+17
EC.TYPE DE LA MOYENNE	= 4451.978	- COEFF. SYMETRIE	= .2887886
COEFF. DE VARIATION	= 53.23658	- COEFF. APLATISSEMENT	= 1.959581

VARIABLE ANALYSEE: K

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 1.371798E+12
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 3.342565E+11
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 1.152609E+10
VALEUR MINIMUM	= 68771	- VAR. SERIE (DDL=N)	= 1.114188E+10
VALEUR MAXIMUM	= 440097	- VAR. DE LA MOYENNE	= 3.842028E+08
SOMME	= 5579091	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 185969.7	- MOMENT D ' ORDRE 2	= 1.114188E+10
EC.TYPE ECHAN. (DDL=N-1)	= 107359.6	- MOMENT D ' ORDRE 3	= 1.196903E+15
EC.TYPE SERIE (DDL=N)	= 105555.1	- MOMENT D ' ORDRE 4	= 3.641591E+20
EC.TYPE DE LA MOYENNE	= 19601.09	- COEFF. SYMETRIE	= 1.035719
COEFF. DE VARIATION	= 56.75931	- COEFF. APLATISSEMENT	= 2.933418

VARIABLE ANALYSEE: CA/K

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 2.7876
No PREMIERE OBSERVATION	= 1	- S.C.E.	= .5243466
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 1.808092E-02
VALEUR MINIMUM	= .11	- VAR. SERIE (DDL=N)	= 1.747822E-02
VALEUR MAXIMUM	= .54	- VAR. DE LA MOYENNE	= 6.026973E-04
SOMME	= 8.24	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= .2746667	- MOMENT D ' ORDRE 2	= 1.747822E-02
EC.TYPE ECHAN. (DDL=N-1)	= .1344653	- MOMENT D ' ORDRE 3	= 5.3427E-04
EC.TYPE SERIE (DDL=N)	= .1322052	- MOMENT D ' ORDRE 4	= 4.976566E-04
EC.TYPE DE LA MOYENNE	= 2.454989E-02	- COEFF. SYMETRIE	= .0534601
COEFF. DE VARIATION	= 48.13297	- COEFF. APLATISSEMENT	= 1.629053

VARIABLE ANALYSEE: CA/L

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 446.3689
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 53.88823
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 1.858215
VALEUR MINIMUM	= 1.96	- VAR. SERIE (DDL=N)	= 1.796274
VALEUR MAXIMUM	= 6.86	- VAR. DE LA MOYENNE	= 6.194049E-02
SOMME	= 108.51	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 3.617	- MOMENT D ' ORDRE 2	= 1.796274
EC.TYPE ECHAN. (DDL=N-1)	= 1.363164	- MOMENT D ' ORDRE 3	= 1.444619
EC.TYPE SERIE (DDL=N)	= 1.340252	- MOMENT D ' ORDRE 4	= 8.156702
EC.TYPE DE LA MOYENNE	= .2488785	- COEFF. SYMETRIE	= .3600715
COEFF. DE VARIATION	= 37.05423	- COEFF. APLATISSEMENT	= 2.527955

VARIABLE ANALYSEE: VA/K

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= .7876
No PREMIERE OBSERVATION	= 1	- S.C.E.	= .1597467
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 5.508506E-03
VALEUR MINIMUM	= .06	- VAR. SERIE (DDL=N)	= 5.324889E-03
VALEUR MAXIMUM	= .3	- VAR. DE LA MOYENNE	= 1.836169E-04
SOMME	= 4.34	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= .1446667	- MOMENT D ' ORDRE 2	= 5.324889E-03
EC.TYPE ECHAN. (DDL=N-1)	= 7.421931E-02	- MOMENT D ' ORDRE 3	= 1.508166E-04
EC.TYPE SERIE (DDL=N)	= 7.297184E-02	- MOMENT D ' ORDRE 4	= 4.952317E-05
EC.TYPE DE LA MOYENNE	= 1.355053E-02	- COEFF. SYMETRIE	= .1506493
COEFF. DE VARIATION	= 50.44136	- COEFF. APLATISSEMENT	= 1.746576

VARIABLE ANALYSEE: VA/L

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= 115.9765
No PREMIERE OBSERVATION	= 1	- S.C.E.	= 11.1069
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= .3829964
VALEUR MINIMUM	= .72	- VAR. SERIE (DDL=N)	= .3702299
VALEUR MAXIMUM	= 3.08	- VAR. DE LA MOYENNE	= 1.276655E-02
SOMME	= 56.09	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 1.869667	- MOMENT D ' ORDRE 2	= .3702299
EC.TYPE ECHAN. (DDL=N-1)	= .618867	- MOMENT D ' ORDRE 3	= 4.624117E-02
EC.TYPE SERIE (DDL=N)	= .6084652	- MOMENT D ' ORDRE 4	= .3055384
EC.TYPE DE LA MOYENNE	= .1129891	- COEFF. SYMETRIE	= 4.213503E-02
COEFF. DE VARIATION	= 32.54404	- COEFF. APLATISSEMENT	= 2.229065

VARIABLE ANALYSEE: L/K

NB OBSERV.SELLECTIONNEES, N	= 30	- SOMME DES CARRES	= .2791616
No PREMIERE OBSERVATION	= 1	- S.C.E.	= .0608493
No DERNIERE OBSERVATION	= 30	- VAR. ECHANT. (DDL=N-1)	= 2.098252E-03
VALEUR MINIMUM	= .0246956	- VAR. SERIE (DDL=N)	= 2.02831E-03
VALEUR MAXIMUM	= .1673909	- VAR. DE LA MOYENNE	= 6.994173E-05
SOMME	= 2.559173	- MOMENT D ' ORDRE 1	= 0
MOYENNE ARITHMETIQUE	= 8.530578E-02	- MOMENT D ' ORDRE 2	= 2.02831E-03
EC.TYPE ECHAN. (DDL=N-1)	= 4.580668E-02	- MOMENT D ' ORDRE 3	= 1.050283E-05
EC.TYPE SERIE (DDL=N)	= 4.503677E-02	- MOMENT D ' ORDRE 4	= 6.863932E-06
EC.TYPE DE LA MOYENNE	= 8.363117E-03	- COEFF. SYMETRIE	= 1.321933E-02
COEFF. DE VARIATION	= 52.79451	- COEFF. APLATISSEMENT	= 1.668416

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الميزانيات	DTNG	DFR	DBFR	FR	BFR	TNG
a1	1	2	2	-1899807	-11203153	9303346
a0	1	2	2	-4770310	-14890191	10119881
a9	1	2	2	-1358949	-19917065	18558116
a8	1	1	2	2612562	-8566384	11178947
a7	1	1	2	318623	-7328502	7647125
b1	2	1	1	441644	5018972	-4577328
b0	2	2	1	-1770051	8955230	-10725280
b9	1	1	1	11639736	5305605	6334130
b8	2	1	1	2241493	5214158	-2972665
b7	1	1	1	9039677	235262	8804415
c1	1	1	2	2140820	-1744345	3885165
c0	1	1	2	3902489	-1265225	5167714
c9	1	1	2	3248643	-5699695	8948339
c8	1	1	2	8171741	-5504972	13676713
d1	2	2	2	-348939	-22969	-325971
d0	1	1	2	3110868	-717539	3828408
g1	1	1	1	42501272	13898630	28602642
g0	1	1	1	71039023	4322746	66716277
g9	1	1	1	34298068	4991833	29306235
g8	1	1	1	20547728	5173960	15373769
g7	2	2	1	-4729462	6631819	-11361281
h1	1	1	1	7464813	1303233	6161581
h0	1	1	1	8848461	2191905	6656555
h9	1	1	1	10709821	6238912	4470909
h8	1	1	1	6849808	5716079	1133729
h7	2	2	1	-204712	3537395	-3742107
t1	1	1	1	11528477	6855946	4672531
t0	2	2	1	-55131782	6391433	-61523215
t9	1	1	1	13189748	8178026	5011721
t8	2	2	1	-1148910	831265	-1980175

ملحق الفصل الرابع
جدول قيم النسب المالية المستخدمة في الدراسة

الميزانيات	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17
A1	18,88	-5,79	-54,81	-49,02	7,20	-12,25	-27,56	45,37	35,43	13,04	9,06	19,97	34,23	75,46	0,84	20,74	88,19
A0	7,87	-22,21	-39,64	-17,43	3,78	-32,17	-48,22	48,57	36,74	14,85	10,61	21,84	39,76	81,86	1,03	29,74	66,64
A9	-23,14	-57,94	-62,25	-4,30	-10,77	-9,72	-66,32	35,13	36,59	19,78	15,79	44,97	48,74	138,77	6,18	46,13	59,93
A8	-5,07	-20,74	-26,49	-5,76	-5,78	8,27	-30,92	44,40	63,21	29,25	12,58	28,34	45,17	101,74	0,05	40,23	41,97
A7	13,64	-2,67	-6,87	-4,20	13,43	0,94	-21,18	46,16	41,56	21,23	13,54	29,33	31,39	68,00	0,04	34,80	50,32
B1	38,21	29,74	12,48	-17,26	27,87	0,63	5,26	60,68	13,10	22,44	6,25	10,30	28,11	46,33	0,06	10,19	109,94
B0	35,51	25,29	22,42	-2,87	32,05	-2,27	10,38	64,28	14,39	19,15	4,63	7,20	28,28	44,00	0,02	14,36	94,78
B9	27,38	21,19	11,28	-9,91	26,73	14,84	6,60	57,53	16,64	20,10	4,19	7,28	25,96	45,12	0,10	10,50	75,25
B8	19,22	12,46	7,97	-4,48	19,91	2,57	6,18	49,18	15,50	21,58	4,93	10,02	25,64	52,13	0,05	14,24	82,18
B7	13,59	-0,11	-6,42	-6,31	16,28	10,17	0,32	49,01	9,97	27,88	13,02	26,56	29,50	60,20	0,03	33,49	72,25
C1	6,90	3,41	-3,45	-6,86	17,18	2,78	-5,65	75,57	7,77	18,28	6,46	8,55	49,47	65,46	0,04	11,49	36,20
C0	6,62	2,59	-3,95	-6,55	20,67	5,09	-5,15	75,01	10,01	14,73	5,74	7,66	45,71	60,94	0,06	16,77	28,84
C9	2,78	-2,06	-7,67	-5,61	10,23	4,21	-27,18	69,97	11,46	18,22	9,37	13,39	51,06	72,97	0,11	25,47	23,11
C8	0,16	-8,35	-13,33	-4,98	0,64	9,67	-25,67	59,72	13,23	22,24	9,64	16,15	50,06	83,83	0,15	56,16	22,25
D1	18,82	5,92	5,51	-0,40	14,46	-1,95	-0,10	61,75	3,95	12,57	5,33	8,64	41,18	66,68	0,02	16,05	112,72
D0	2,66	-11,82	-16,13	-4,30	2,70	16,81	-3,94	59,77	3,36	13,44	5,90	9,87	50,50	84,49	0,04	24,65	84,90
G1	7,79	5,73	3,12	-2,61	27,84	15,90	18,59	49,50	24,47	20,70	6,17	12,46	19,71	39,83	0,09	14,84	22,65
G0	8,49	6,29	4,41	-1,88	29,30	32,76	6,88	48,18	30,06	17,61	8,15	16,92	16,82	34,90	0,20	15,73	19,28
G9	10,36	8,78	1,57	-7,21	42,84	16,09	9,69	54,68	39,90	15,94	3,93	7,18	18,13	33,15	10,60	11,89	19,13
G8	7,99	6,63	6,24	-0,39	31,28	9,38	9,24	51,64	27,32	16,52	5,67	10,98	16,74	32,42	0,02	10,33	21,08
G7	6,33	5,01	7,71	2,70	19,79	-2,09	9,17	37,33	28,38	15,28	7,27	19,48	14,59	39,07	0,03	11,10	28,78
H1	0,69	-2,26	-4,17	-1,92	3,13	9,36	7,46	46,48	15,86	22,34	2,62	5,63	42,24	90,87	0,03	28,90	20,23
H0	5,28	2,67	1,09	-1,58	18,94	10,83	9,63	48,06	15,94	22,88	5,21	10,83	25,17	52,38	0,02	19,49	24,37
H9	2,44	0,18	-1,44	-1,61	12,06	12,55	36,16	46,57	53,78	16,90	4,12	8,85	30,09	64,61	0,03	23,99	18,34
H8	4,92	2,96	1,76	-1,20	24,02	7,81	31,83	52,46	48,56	18,40	7,65	14,58	24,18	46,10	0,03	18,27	18,82
H7	4,97	3,53	8,07	4,54	17,25	-0,24	14,33	39,26	26,24	13,97	2,04	5,21	19,21	48,94	0,02	12,76	26,54
T1	22,43	13,84	5,21	-8,63	23,73	21,23	13,35	54,71	21,78	33,21	2,21	4,03	26,90	49,16	0,02	16,62	74,66
T0	9,60	6,40	6,86	0,47	23,27	-45,67	12,84	52,65	22,33	35,87	1,02	1,94	26,15	49,68	0,02	14,72	71,56
T9	24,12	18,66	12,65	-6,02	27,55	23,35	16,53	55,55	31,19	33,05	1,69	3,05	24,00	43,20	0,09	11,23	63,15
T8	36,90	32,16	23,24	-8,92	31,74	-2,26	1,41	54,73	14,16	31,35	1,84	3,36	21,18	38,70	0,08	7,44	84,12

ملحق الفصل الرابع 32-4

DTNG		N	Minimum	Maximum	Coefficient de variation	Moyenne	Ecart type	Asymétrie	Kurtosis
1	R1	22	-23,14	27,38	140,729	7,5801	10,66740	-,634	2,492
	R2	22	-57,94	21,19	881,91	-1,8649	16,44671	-1,941	5,834
	R3	22	-62,25	12,65	220,34	-9,0592	19,96083	-1,625	2,086
	R4	22	-49,02	-,39	139,78	-7,1943	10,05615	-3,755	15,614
	R5	22	-10,77	42,84	85,409	15,5901	13,31536	-,112	-,386
	R6	22	-32,17	32,76	165,361	8,0848	13,36909	-1,249	3,213
	R7	22	-66,32	36,16	583,48	-4,3424	25,33702	-,732	,356
	R8	22	35,13	75,57	18,661	53,3648	9,95843	,924	,859
	R9	22	3,36	63,21	59,759	27,0373	16,15732	,538	-,419
	R10	22	13,04	33,21	28,321	20,4816	5,80063	1,011	,371
	R11	22	1,69	15,79	52,575	7,4234	3,90286	,530	-,495
	R12	22	3,05	44,97	68,023	14,9282	10,15460	1,437	2,282
	R13	22	16,74	51,06	35,977	33,8880	12,19189	,130	-1,515
	R14	22	32,42	138,77	39,783	64,7942	25,77701	1,090	1,764
	R15	22	,02	10,60	281,623	,8996	2,53348	3,386	11,388
	R16	22	10,33	56,16	52,152	23,7051	12,36265	1,120	,884
	R17	22	18,34	88,19	57,873	43,2525	25,03149	,533	-1,383

DTNG		N	Minimum	Maximum	Coefficient de variation	Moyenne	Ecart type	Asymétrie	Kurtosis
2	R1	8	4,97	38,21	65,986	21,1959	13,98630	,181	-2,007
	R2	8	3,53	32,16	79,827	15,0628	12,02423	,575	-1,891
	R3	8	5,51	23,24	60,293	11,7847	7,10536	1,151	-,481
	R4	8	-17,26	4,54	215,12	-3,2781	7,05199	-1,165	1,269
	R5	8	14,46	32,05	28,460	23,2918	6,62884	,248	-1,499
	R6	8	-45,67	2,57	248,91	-6,4107	15,95685	-2,761	7,723
	R7	8	-,10	14,33	69,679	7,4336	5,17964	-,195	-1,204
	R8	8	37,33	64,28	19,224	52,4835	10,08962	-,524	-1,106
	R9	8	3,95	28,38	46,230	17,2554	7,97723	-,096	-,301
	R10	8	12,57	35,87	38,666	21,5268	8,32345	,823	-,409
	R11	8	1,02	7,27	54,431	4,1644	2,26673	-,196	-1,502
	R12	8	1,94	19,48	65,878	8,2671	5,44616	1,203	2,147
	R13	8	14,59	41,18	30,971	25,5434	7,91092	,849	1,773
	R14	8	38,70	66,68	18,467	48,1909	8,89930	1,268	2,341
	R15	8	,02	,08	61,111	,0360	,02200	1,145	,343
	R16	8	7,44	16,05	22,620	12,6061	2,85144	-,785	-,078
	R17	8	26,54	112,72	43,316	76,3275	33,06229	-,727	-,766

DTNG		N	Minimum	Maximum	Coefficient de variation	Moyenne	Ecart type	Asymétrie	Kurtosis
Total	R1	30	-23.143	38.215	115.313	11.21096	12.927661	.168	1.145
	R2	30	-57.945	32.164	641.434	2.64913	16.992422	-1.397	4.803
	R3	30	-62.246	23.243	-563.091	-3.50085	19.712957	-1.655	2.869
	R4	30	-49.022	4.543	-152.825	-6.14999	9.398711	-3.495	15.341
	R5	30	-10.775	42.840	69.644	17.64390	12.287996	-.421	-.053
	R6	30	-45.669	32.755	362.076	4.21935	15.277257	-1.425	3.698
	R7	30	-66.323	36.157	-1858.957	-1.20214	22.347267	-1.143	1.549
	R8	30	35.125	75.570	18.494	53.12976	9.825607	.572	.368
	R9	30	3.363	63.208	61.234	24.42880	14.958619	.814	.211
	R10	30	12.571	35.870	30.959	20.76029	6.427208	.944	.072
	R11	30	1.020	15.795	57.935	6.55433	3.797266	.723	-.001
	R12	30	1.937	44.968	72.455	13.15187	9.529199	1.598	3.063
	R13	30	14.586	51.055	36.944	31.66281	11.697438	.413	-1.184
	R14	30	32.423	138.773	39.062	60.36668	23.580520	1.447	2.844
	R15	30	.015	10.605	327.308	.66929	2.190639	4.015	16.323
	R16	30	7.438	56.162	56.535	20.74537	11.728470	1.458	1.861
	R17	30	18.344	112.719	58.843	52.07251	30.641287	.423	-1.198

Corrélations

		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17
R1	Corrélation de Pearson	1	,868(**)	,611(**)	-,287	,653(**)	,032	,393(*)	,338	-,337	,241	-,474(**)	-,533(**)	-,424(*)	-,636(**)	-,264	-,609(**)	-,618(**)
	Sig. (bilatérale)		,000	,000	,124	,000	,867	,031	,067	,068	,199	,008	,002	,020	,000	,158	,000	,000
R2	Corrélation de Pearson	,868(**)	1	,879(**)	,036	,824(**)	,233	,718(**)	,391(*)	-,348	,239	-,700(**)	-,768(**)	-,567(**)	-,853(**)	-,312	-,749(**)	,235
	Sig. (bilatérale)	,000		,000	,850	,000	,215	,000	,033	,059	,203	,000	,000	,001	,000	,093	,000	,211
R3	Corrélation de Pearson	,611(**)	,879(**)	1	,508(**)	,775(**)	,303	,798(**)	,318	-,337	,260	-,696(**)	-,734(**)	-,565(**)	-,812(**)	-,306	-,659(**)	,012
	Sig. (bilatérale)	,000	,000		,004	,000	,104	,000	,087	,069	,165	,000	,000	,001	,000	,100	,000	,948
R4	Corrélation de Pearson	-,287	,036	,508(**)	1	,136	,213	,375(*)	-,041	-,076	,113	-,194	-,151	-,160	-,159	-,077	-,029	-,399(*)
	Sig. (bilatérale)	,124	,850	,004		,475	,258	,041	,830	,689	,554	,304	,426	,399	,400	,688	,881	,029
R5	Corrélation de Pearson	,653(**)	,824(**)	,775(**)	,136	1	,244	,692(**)	,265	-,152	,120	-,590(**)	-,607(**)	-,762(**)	-,938(**)	,090	-,807(**)	,010
	Sig. (bilatérale)	,000	,000	,000	,475		,194	,000	,157	,421	,528	,001	,000	,000	,000	,635	,000	,957
R6	Corrélation de Pearson	,032	,233	,303	,213	,244	1	,377(*)	,107	-,018	-,038	-,093	-,138	-,161	-,248	-,002	-,077	-,328
	Sig. (bilatérale)	,867	,215	,104	,258	,194		,040	,574	,923	,844	,626	,466	,396	,186	,992	,688	,076
R7	Corrélation de Pearson	,393(*)	,718(**)	,798(**)	,375(*)	,692(**)	,377(*)	1	,089	-,067	,127	-,733(**)	-,718(**)	-,642(**)	-,769(**)	-,251	-,654(**)	-,157
	Sig. (bilatérale)	,031	,000	,000	,041	,000	,040		,640	,725	,502	,000	,000	,000	,000	,181	,000	,409
R8	Corrélation de Pearson	,338	,391(*)	,318	-,041	,265	,107	,089	1	-,577(**)	-,051	-,240	-,479(**)	,397(*)	-,183	-,165	-,236	,149
	Sig. (bilatérale)	,067	,033	,087	,830	,157	,574	,640		,001	,789	,201	,007	,030	,333	,385	,209	,431
R9	Corrélation de Pearson	-,337	-,348	-,337	-,076	-,152	-,018	-,067	-,577(**)	1	,034	,295	,410(*)	-,217	,144	,271	,225	-,358
	Sig. (bilatérale)	,068	,059	,069	,689	,421	,923	,725	,001		,857	,113	,025	,250	,447	,147	,232	,052

		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	
R10	Corrélation de Pearson	,241	,239	,260	,113	,120	-,038	,127	-,051	,034	1	-,203	-,144	-,147	-,084	-,168	,041	,182	
	Sig. (bilatérale)	,199	,203	,165	,554	,528	,844	,502	,789	,857		,283	,446	,437	,658	,374	,831	,335	
R11	Corrélation de Pearson	-,474(**)	-,700(**)	-,696(**)	-,194	-,590(**)	-,093	-,733(**)	-,240	,295	-,203	1	,950(**)	,421(*)	,608(**)	,148	,716(**)	-,061	
	Sig. (bilatérale)	,008	,000	,000	,304	,001	,626	,000	,201	,113	,283		,000	,021	,000	,435	,000	,750	
R12	Corrélation de Pearson	-,533(**)	-,768(**)	-,734(**)	-,151	-,607(**)	-,138	-,718(**)	-,479(**)	,410(*)	-,144	,950(**)	1	,295	,642(**)	,243	,687(**)	-,053	
	Sig. (bilatérale)	,002	,000	,000	,426	,000	,466	,000	,007	,025	,446	,000		,113	,000	,196	,000	,781	
R13	Corrélation de Pearson	-,424(*)	-,567(**)	-,565(**)	-,160	-,762(**)	-,161	-,642(**)	,397(*)	-,217	-,147	,421(*)	,295	1	,813(**)	-,037	,629(**)	,091	
	Sig. (bilatérale)	,020	,001	,001	,399	,000	,396	,000	,030	,250	,437	,021	,113		,000	,847	,000	,631	
R14	Corrélation de Pearson	-,636(**)	-,853(**)	-,812(**)	-,159	-,938(**)	-,248	-,769(**)	-,183	,144	-,084	,608(**)	,642(**)	,813(**)	1	,150	,799(**)	,056	
	Sig. (bilatérale)	,000	,000	,000	,400	,000	,186	,000	,333	,447	,658	,000	,000	,000		,428	,000	,770	
R15	Corrélation de Pearson	-,264	-,312	-,306	-,077	,090	-,002	-,251	-,165	,271	-,168	,148	,243	-,037	,150	1	,099	-,136	
	Sig. (bilatérale)	,158	,093	,100	,688	,635	,992	,181	,385	,147	,374	,435	,196	,847	,428		,604	,474	
R16	Corrélation de Pearson	-,609(**)	-,749(**)	-,659(**)	-,029	-,807(**)	-,077	-,654(**)	-,236	,225	,041	,716(**)	,687(**)	,629(**)	,799(**)	,099	1	-,161	
	Sig. (bilatérale)	,000	,000	,000	,881	,000	,688	,000	,209	,232	,831	,000	,000	,000	,000	,604		,396	
R17	Corrélation de Pearson	,618(**)	,235	,012	-,399(*)	,010	-,328	-,157	,149	-,358	,182	-,061	-,053	,091	,056	-,136	-,161	1	
	Sig. (bilatérale)	,000	,211	,948	,029	,957	,076	,409	,431	,052	,335	,750	,781	,631	,770	,474	,396		
** La corrélation est significative au niveau 0.01 (bilatéral).																			
* La corrélation est significative au niveau 0.05 (bilatéral).																			

Corrélations non paramétriques

		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	
Rho de Spearman	R1	Coefficient de corrélation	1,000	,766(**)	,645(**)	,401(*)	,665(**)	-,090	,175	,342	-,181	,211	-,355	-,362(*)	-,393(*)	,543(**)	,003	,616(**)	,622(**)
		Sig. (bilatérale)	.	,000	,000	,028	,000	,638	,355	,064	,338	,263	,054	,050	,032	,002	,986	,000	,000
	R2	Coefficient de corrélation	,766(**)	1,000	,937(**)	-,033	,891(**)	,122	,577(**)	,402(*)	-,183	,273	,669(**)	,646(**)	,643(**)	,824(**)	-,208	,876(**)	,248
		Sig. (bilatérale)	,000	.	,000	,864	,000	,520	,001	,028	,333	,144	,000	,000	,000	,000	,270	,000	,187
	R3	Coefficient de corrélation	,645(**)	,937(**)	1,000	,188	,797(**)	,019	,639(**)	,270	-,152	,238	,695(**)	,639(**)	,681(**)	,789(**)	-,357	,860(**)	,218
		Sig. (bilatérale)	,000	,000	.	,319	,000	,919	,000	,149	,423	,206	,000	,000	,000	,000	,053	,000	,248
	R4	Coefficient de corrélation	-,401(*)	-,033	,188	1,000	,000	-,031	,466(**)	-,321	,130	,144	-,151	-,016	-,313	-,152	,630(**)	,002	-,410(*)
		Sig. (bilatérale)	,028	,864	,319	.	,999	,869	,009	,083	,495	,448	,426	,934	,093	,421	,000	,992	,024
	R5	Coefficient de corrélation	,665(**)	,891(**)	,797(**)	,000	1,000	,199	,609(**)	,332	-,010	,151	,511(**)	,480(**)	,754(**)	,941(**)	-,106	,806(**)	,001
		Sig. (bilatérale)	,000	,000	,000	,999	.	,291	,000	,073	,958	,427	,004	,007	,000	,000	,577	,000	,995
	R6	Coefficient de corrélation	-,090	,122	,019	-,031	,199	1,000	,379(*)	,137	,012	,161	-,160	-,137	-,181	-,243	,072	-,001	-,412(*)
		Sig. (bilatérale)	,638	,520	,919	,869	,291	.	,039	,471	,951	,395	,397	,471	,338	,195	,706	,995	,024

			R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17
R7	Coefficient de corrélation		,175	,577(**)	,639(**)	,466(**)	,609(**)	,379(*)	1,000	-,018	,203	,176	-,687(**)	-,557(**)	-,683(**)	-,665(**)	-,498(**)	-,475(**)	-,325
	Sig. (bilatérale)		,355	,001	,000	,009	,000	,039	.	,925	,283	,351	,000	,001	,000	,000	,005	,008	,080
R8	Coefficient de corrélation		,342	,402(*)	,270	-,321	,332	,137	-,018	1,000	-,681(**)	-,001	-,228	-,458(*)	,281	-,139	,039	-,312	,280
	Sig. (bilatérale)		,064	,028	,149	,083	,073	,471	,925	.	,000	,997	,225	,011	,133	,462	,838	,094	,134
R9	Coefficient de corrélation		-,181	-,183	-,152	,130	-,010	,012	,203	-,681(**)	1,000	,002	,119	,300	-,359	-,102	,190	,149	-,431(*)
	Sig. (bilatérale)		,338	,333	,423	,495	,958	,951	,283	,000	.	,993	,529	,108	,051	,591	,315	,431	,017
R10	Coefficient de corrélation		,211	,273	,238	-,144	,151	,161	,176	-,001	,002	1,000	-,199	-,191	-,087	-,068	-,156	-,002	,097
	Sig. (bilatérale)		,263	,144	,206	,448	,427	,395	,351	,997	,993	.	,291	,312	,649	,722	,409	,990	,609
R11	Coefficient de corrélation		-,355	-,669(**)	-,695(**)	-,151	-,511(**)	-,160	-,687(**)	-,228	,119	-,199	1,000	-,947(**)	-,421(*)	-,464(**)	-,407(*)	-,604(**)	-,063
	Sig. (bilatérale)		,054	,000	,000	,426	,004	,397	,000	,225	,529	,291	.	,000	,021	,010	,025	,000	,743
R12	Coefficient de corrélation		-,362(*)	-,646(**)	-,639(**)	-,016	-,480(**)	-,137	-,557(**)	-,458(*)	,300	-,191	-,947(**)	1,000	,226	-,375(*)	,340	-,576(**)	-,129
	Sig. (bilatérale)		,050	,000	,000	,934	,007	,471	,001	,011	,108	,312	,000	.	,230	,041	,066	,001	,496

			R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17
R13	Coefficient de corrélation		-,393(*)	-,643(**)	-,681(**)	-,313	-,754(**)	-,181	-,683(**)	,281	-,359	-,087	-,421(*)	,226	1,000	-,891(**)	,196	-,667(**)	,218
	Sig. (bilatérale)		,032	,000	,000	,093	,000	,338	,000	,133	,051	,649	,021	,230	.	,000	,298	,000	,248
R14	Coefficient de corrélation		-,543(**)	-,824(**)	-,789(**)	-,152	-,941(**)	-,243	-,665(**)	-,139	-,102	-,068	-,464(**)	-,375(*)	-,891(**)	1,000	,122	-,812(**)	,138
	Sig. (bilatérale)		,002	,000	,000	,421	,000	,195	,000	,462	,591	,722	,010	,041	,000	.	,520	,000	,468
R15	Coefficient de corrélation		,003	-,208	-,357	-,630(**)	-,106	,072	-,498(**)	,039	,190	-,156	-,407(*)	,340	,196	,122	1,000	,152	-,040
	Sig. (bilatérale)		,986	,270	,053	,000	,577	,706	,005	,838	,315	,409	,025	,066	,298	,520	.	,421	,835
R16	Coefficient de corrélation		-,616(**)	-,876(**)	-,860(**)	,002	-,806(**)	-,001	-,475(**)	-,312	,149	-,002	-,604(**)	-,576(**)	-,667(**)	-,812(**)	,152	1,000	-,175
	Sig. (bilatérale)		,000	,000	,000	,992	,000	,995	,008	,094	,431	,990	,000	,001	,000	,000	,421	.	,356
R17	Coefficient de corrélation		-,622(**)	,248	,218	-,410(*)	,001	-,412(*)	-,325	,280	-,431(*)	,097	-,063	-,129	,218	,138	-,040	-,175	1,000
	Sig. (bilatérale)		,000	,187	,248	,024	,995	,024	,080	,134	,017	,609	,743	,496	,248	,468	,835	,356	.

** La corrélation est significative au niveau 0,01 (bilatéral).

* La corrélation est significative au niveau 0,05 (bilatéral).

Test-t

Statistiques de groupe

	DTNG	N	Moyenne	Ecart-type	Erreur standard moyenne
R1	1	22	7,5801	10,6674	2,2743
	2	8	21,1959	13,9863	4,9449
R2	1	22	-1,8649	16,4467	3,5064
	2	8	15,0628	12,0242	4,2512
R3	1	22	-9,0592	19,9608	4,2556
	2	8	11,7847	7,10536	2,5121
R4	1	22	-7,1943	10,05615	2,1439
	2	8	-3,2781	7,0519	2,4932
R5	1	22	15,5901	13,3153	2,8388
	2	8	23,2918	6,6288	2,3436
R6	1	22	8,0848	13,369	2,8503
	2	8	-6,4107	15,9568	5,6416
R7	1	22	-4,3424	25,337	5,4018
	2	8	7,4336	5,17964	1,8312
R8	1	22	53,3647	9,9584	2,1231
	2	8	52,4834	10,0896	3,5672

	DTNG	N	Moyenne	Ecart-type	Erreur standard moyenne
R9	1	22	27,0373	16,1573	3,4447
	2	8	17,2554	7,9772	2,8203
R10	1	22	20,4815	5,8006	1,2366
	2	8	21,5268	8,3234	2,9427
R11	1	22	7,4234	3,9028	0,832
	2	8	4,1643	2,2667	0,8014
R12	1	22	14,9281	10,1546	2,1649
	2	8	8,267	5,4461	1,9255
R13	1	22	33,888	12,1918	2,5993
	2	8	25,5434	7,9109	2,7969
R14	1	22	64,7942	25,777	5,4956
	2	8	48,1909	8,8993	3,1463
R15	1	22	0,8995	2,5334	0,5401
	2	8	0,0359	0,022	0,0077
R16	1	22	23,7051	12,3626	2,6357
	2	8	12,6061	2,8514	1,0081
R17	1	22	43,2525	25,0314	5,3367
	2	8	76,3275	33,0622	11,6892

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***** ANALYSE FACTORIELLE DISCRIMINANTE *****

1. PPB / 2. PCI / 3. PVA / 4. PCFF / 5. PRI / 6. PILP / 7. PRS /
8. PENE / 9. d /

NOMBRE DE VARIABLES QUANTITATIVES : 8
NOMBRE DE GROUPES : 2

 GROUPE No 1 (1) 28 OBSERVATION(S)
 GROUPE No 2 (2) 28 OBSERVATION(S)

NOMBRE D'AXES DEMANDES : 1

STATISTIQUES ELEMENTAIRES
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POPULATION TOTALE

EFFECTIF TOTAL : 56

VARIABLES	MOYENNES	ECARTS-TYPES DES SERIES
PPB	50.000	34.026
PCI	50.000	35.515
PVA	50.000	33.376
PCFF	50.000	13.817
PRI	50.000	36.335
PILP	50.000	29.871
PRS	50.000	20.088
PENE	50.000	47.480

CORRELATIONS TOTALES

	PPB	PCI	PVA	PCFF	PRI	PILP	PRS	PENE
PPB	1.000							
PCI	0.994	1.000						
PVA	0.999	0.988	1.000					
PCFF	-0.447	-0.493	-0.420	1.000				
PRI	0.999	0.988	0.999	-0.445	1.000			
PILP	0.956	0.926	0.967	-0.282	0.964	1.000		
PRS	0.981	0.966	0.984	-0.441	0.985	0.949	1.000	
PENE	0.994	0.994	0.989	-0.525	0.992	0.925	0.973	1.000

ETUDE PAR GROUPE

GROUPE	EFFECTIF	VARIABLES	MOYENNES	ECARTS-TYPES DES SERIES
1 (1)	28	PPB	83.533	5.775
		PCI	85.260	4.251
		PVA	82.607	7.122
		PCFF	42.344	11.502
		PRI	85.633	7.106
		PILP	76.949	12.884
		PRS	69.232	5.800
		PENE	97.322	3.869

2 (2)	28	PPB	16.467	5.774
		PCI	14.740	4.250
		PVA	17.392	7.122
		PCFF	57.656	11.502
		PRI	14.367	7.106
		PILP	23.051	12.884
		PRS	30.767	5.800
		PENE	2.678	3.868

DIAGONALISATION

1re Colonne : Num,ro des axes discriminants
 2e Colonne : Valeur propre (variance sur l'axe discriminant)
 3e Colonne : Contribution ... l'inertie (pourcentage expliqu, par l'axe discriminant)
 4e Colonne : Pseudo F
 5e Colonne : Statistique de WILKS
 6e Colonne : d.d.l.
 7e Colonne : Probabilit, (en %)
 8e Colonne : Corr,lation

Axe	Valeur propre	Inertie	Pseudo F	WILKS	ddl	Proba%	Corr,l
1	9997.3408	100.0%	539856.44	460.51	8	0.00	0.9999

VECTEURS PROPRES

(COEFFICIENTS DES VARIABLES CENTREES REDUITES DANS L'EQUATION LINEAIRE DES AXES DISCRIMINANTS)

VARIABLES	AXE 1
PPB	2.8716
PCI	-0.6279
PVA	-0.6899
PCFF	-0.0279
PRI	-2.6317
PILP	0.3037
PRS	0.0422
PENE	1.7237

ETUDE DES VARIABLES

Pour chaque AXE :

1RE COLONNE : CORRELATIONS INTER-CLASSES ENTRE LES VARIABLES ET LES AXES DISCRIMINANTS

2E COLONNE : CORRELATIONS CARRES

VARIABLES	AXES DISCRIMINANTS	
	AXE 1	
PPB **	0.9878	0.9757 *
PCI **	0.9878	0.9757 *
PVA **	0.9878	0.9757 *
PCFF **	-0.9878	0.9757 *
PRI **	0.9878	0.9757 *
PILP **	0.9878	0.9757 *

PRS ** 0.9878 0.9757 *
 PENE ** 0.9878 0.9757 *

ATTENTION : Toute repr,esentation plane est une image d,form,e et contract,e du nuage des points repr,esentant les observations. les contributions vous permettront d'en juger

ETUDE DES CENTRES DE GRAVITE DES GROUPES

Pour chaque AXE :
 1RE COLONNE : COORDONNEES DES INDIVIDUS SUR LES AXES DISCRIMINANTS
 2E COLONNE : COSINUS CARRES (QUALITE DE LA REPRESENTATION)

GROUPE		AXE	1	
1(1)	*	0.9995	0.9761	*
2(2)	*	-0.9995	0.9758	*

DISTANCES (D) de MAHALANOBIS ENTRE LES GROUPES

GROUPE		1	2
No			
1		0.0000	
2		1.9990	0.0000

ETUDE DES INDIVIDUS

LES 2 CHIFFRES de la COLONNE GROUPES SONT :
 1) LE NO DU GROUPE AUQUEL APPARTIENT L'INDIVIDU
 2) LE NO DU GROUPE AUQUEL IL EST AFFECTE PAR L'ANALYSE
 (1 INDIVIDU EST AFFECTE AU GROUPE DONT LE CENTRE DE GRAVITE EST LE PLUS PROCHE)

Pour chaque AXE :
 1RE COLONNE : COORDONNEES DES INDIVIDUS SUR LES AXES DISCRIMINANTS
 2E COLONNE : COSINUS CARRES (QUALITE DE LA REPRESENTATION)

INDIV.	GROUPES		AXE	1	
No	No				
001 **	1(1)	1	*	1.0009	0.0892 *
002 **	1(1)	1	*	0.9509	0.2219 *
003 **	1(1)	1	*	1.0009	0.2246 *
004 **	1(1)	1	*	1.0385	0.0771 *
005 **	1(1)	1	*	1.0743	0.1183 *
006 **	1(1)	1	*	1.0105	0.1850 *
007 **	1(1)	1	*	0.9833	0.3238 *
008 **	1(1)	1	*	0.9564	0.2127 *
009 **	1(1)	1	*	0.9315	0.2228 *
010 **	1(1)	1	*	0.9498	0.1596 *
011 **	1(1)	1	*	1.0149	0.1594 *
012 **	1(1)	1	*	0.9895	0.0867 *
013 **	1(1)	1	*	0.9848	0.0867 *
014 **	1(1)	1	*	0.9994	0.1153 *
015 **	1(1)	1	*	0.9925	0.0747 *
016 **	1(1)	1	*	1.0304	0.1519 *
017 **	1(1)	1	*	1.0328	0.0545 *
018 **	1(1)	1	*	0.9591	0.1184 *
019 **	1(1)	1	*	1.0412	0.0531 *
020 **	1(1)	1	*	1.0378	0.1945 *

021	**	1(1)	1	*	1.0238	0.3845	*
022	**	1(1)	1	*	1.0209	0.1245	*
023	**	1(1)	1	*	1.0111	0.2153	*
024	**	1(1)	1	*	0.9922	0.1427	*
025	**	1(1)	1	*	0.9828	0.2321	*
026	**	1(1)	1	*	0.9876	0.1359	*
027	**	1(1)	1	*	0.9929	0.1375	*
028	**	1(1)	1	*	0.9955	0.1367	*
029	**	2(2)	2	*	-1.0009	0.0892	*
030	**	2(2)	2	*	-0.9509	0.2218	*
031	**	2(2)	2	*	-1.0009	0.2246	*
032	**	2(2)	2	*	-1.0385	0.0771	*
033	**	2(2)	2	*	-1.0743	0.1183	*
034	**	2(2)	2	*	-1.0105	0.1850	*
035	**	2(2)	2	*	-0.9833	0.3238	*
036	**	2(2)	2	*	-0.9564	0.2128	*
037	**	2(2)	2	*	-0.9315	0.2229	*
038	**	2(2)	2	*	-0.9498	0.1596	*
039	**	2(2)	2	*	-1.0149	0.1594	*
040	**	2(2)	2	*	-0.9895	0.0867	*
041	**	2(2)	2	*	-0.9848	0.0867	*
042	**	2(2)	2	*	-0.9994	0.1153	*
043	**	2(2)	2	*	-0.9924	0.0747	*
044	**	2(2)	2	*	-1.0304	0.1519	*
045	**	2(2)	2	*	-1.0328	0.0545	*
046	**	2(2)	2	*	-0.9591	0.1183	*
047	**	2(2)	2	*	-1.0412	0.0531	*
048	**	2(2)	2	*	-1.0378	0.1944	*
049	**	2(2)	2	*	-1.0238	0.3845	*
050	**	2(2)	2	*	-1.0209	0.1245	*
051	**	2(2)	2	*	-1.0111	0.2152	*
052	**	2(2)	2	*	-0.9922	0.1427	*
053	**	2(2)	2	*	-0.9828	0.2321	*
054	**	2(2)	2	*	-0.9876	0.1358	*
055	**	2(2)	2	*	-0.9929	0.1375	*
056	**	2(2)	2	*	-0.9955	0.1367	*

TABLEAU D'APPARTENANCE

EN LIGNE : GROUPE D'APPARTENANCE
 EN COLONNE : GROUPE D'AFFECTATION

GROUPES	1(1)	2(2)
No		
1(1)	28 *	*
2(2)	*	28 *

POURCENTAGE DE BIEN CLASSES : 100.0

الجدول رقم (1) حساب الإنتاج وحساب الاستغلال لقطاع الفنادق والمقاهي والمطاعم الخاصة								
السنة	PB	CI	VA	CFF	RI	ILP	RS	ENE
1974	861,5	335,9	525,6	17,8	507,8	40,0	185,3	282,5
75	1082,1	418,8	663,3	22,4	640,9	50,1	215,3	375,5
76	1178,5	456,2	722,3	24,4	697,9	55,2	264,3	378,4
77	1281,6	486,2	795,4	26,6	768,8	61,0	316,9	390,9
78	1818,7	834,4	984,3	37,7	946,6	83,9	367,9	494,8
79	1930,0	768,0	1162,0	40,0	1122,0	90,0	419,3	612,7
80	2219,3	845,4	1373,9	47,3	1326,6	106,4	495,8	724,4
81	2414,1	955,1	1459,0	50,2	1408,8	113,0	526,5	769,3
82	2580,5	1045,5	1535,0	52,8	1482,2	118,9	553,9	809,4
83	2865,3	1140,2	1725,1	59,3	1665,8	133,6	622,5	909,7
84	3151,8	1254,2	1897,6	65,2	1832,4	146,9	684,7	1000,8
85	3909,3	1333,1	2576,2	70,6	2505,6	242,2	740,8	1522,6
86	4457,2	1346,1	3111,1	80,5	3030,6	289,7	743,0	1997,9
87	4991,4	1437,5	3553,9	85,0	3468,9	423,5	819,6	2225,8
88	5728,9	1623,4	4105,5	98,3	4007,2	559,1	952,5	2495,6
89	6636,5	1851,8	4784,7	114,7	4670,0	642,7	1196,0	2831,3
90	9531,3	2929,2	6602,1	85,6	6516,5	762,5	1508,0	4246,0
91	12083,1	2857,3	9225,8	337,7	8888,1	966,6	1668,5	6253,0
92	17025,8	3939,0	13086,8	471,9	12614,9	1362,1	1637,6	9615,2
93	20853,3	6119,5	14733,8	605,9	14127,9	1668,3	2269,5	10190,1
94	26389,2	7697,8	18691,4	753,5	17937,9	2111,4	3600,9	12225,6
95	34606,4	10553,1	24053,3	1258,0	22795,3	2669,2	4392,0	15734,1
96	41352,7	12482,7	28870,0	1335,0	27535,0	3171,3	5053,7	19310,0
97	47065,0	14395,5	32669,5	1790,6	30878,9	3568,3	6050,9	21259,7
98	49447,4	14964,2	34483,2	1701,8	32781,4	3828,2	6528,1	22425,1
99	52695,9	14795,5	37900,4	1259,6	36640,8	4108,8	7140,8	25391,2
2000	55246,0	14978,7	40267,3	1319,1	38948,2	4307,6	7571,0	27069,6
01	59392,6	15844,4	43548,2	1417,4	42130,8	4630,9	8180,4	29319,5

Rétrospective des comptes économiques de 1963 à 2001, Série E: Statistiques Economiques; O.N.S;
N° 111/2003; Algérie.

الجدول رقم (2) حساب الإنتاج وحساب الاستغلال لقطاع الفنادق والمقاهي والمطاعم العمومية								
السنة	PB	CI	VA	CFF	RI	ILP	RS	ENE
1974	141,8	55,9	85,9	16,6	69,3	16,0	54,3	-1,0
75	205,5	75,8	129,7	29,3	100,4	17,4	72,4	10,6
76	235,4	86,9	148,5	36,9	111,6	20,4	87,9	3,3
77	380,8	137,8	243,0	59,9	183,1	34,0	147,7	1,4
78	452,0	173,1	278,9	73,8	205,1	53,9	154,2	-3,0
79	589,0	171,3	417,7	82,4	335,3	48,5	238,8	48,0
80	683,8	203,5	480,3	94,7	385,6	55,8	274,6	55,2
81	823,6	283,4	540,2	106,5	433,7	67,2	308,8	57,7
82	917,2	298,7	618,5	115,0	503,5	74,8	341,6	87,1
83	1025,0	298,1	726,9	135,2	591,7	87,9	401,5	102,3
84	1034,2	303,8	730,4	133,9	596,5	84,4	425,1	87,0
85	1052,5	178,7	873,8	132,8	741,0	171,3	459,8	109,9
86	1000,5	177,1	823,4	116,5	706,9	164,0	452,8	90,1
87	1150,2	193,0	957,2	127,0	830,2	194,5	509,0	126,5
88	1385,7	280,7	1105,0	146,6	958,4	156,5	587,6	214,3
89	1016,9	176,2	840,7	152,0	688,7	164,2	443,4	81,1
90	1342,0	278,3	1063,7	271,0	792,7	196,7	536,4	59,6
91	1643,4	408,8	1234,6	185,3	1049,3	237,3	670,4	141,6
92	1760,0	532,0	1228,0	194,7	1033,3	158,8	898,9	-24,4
93	2441,1	752,0	1689,1	628,5	1060,6	135,5	1040,8	-115,7
94	2933,1	952,0	1981,1	767,8	1213,3	192,7	1159,9	-139,3
95	3752,6	1007,9	2744,7	897,0	1847,7	172,9	1500,2	174,6
96	4455,5	1437,3	3018,2	1229,3	1788,9	222,7	1708,4	-142,2
97	5186,1	1639,5	3546,6	1121,5	2425,1	303,1	1908,0	214,0
98	6502,1	2189,8	4312,3	1418,0	2894,3	317,2	2279,2	297,9
99	7097,3	2894,3	4203,0	2126,2	2076,8	321,4	2417,5	-662,1
2000	7440,7	2930,1	4510,6	2281,7	2228,9	337,0	2594,5	-702,6
01	7999,3	3099,5	4899,8	2478,6	2421,2	362,3	2818,3	-759,4

Rétrospective des comptes économiques de 1963 à 2001, Série E: Statistiques Economiques; O.N.S.; N° 111/2003; Algérie.

فهرس المحتويات

01	
02	:
03	:
03	:
04	:
06	:
06	:
07	:
09	:
12	:
13	:
13	1-1
17	2-1
19	3-1
19	1-3-1
20	2-3-1
20	3-3-1
21	4-3-1
21	:
23	1-2
24	2-2
26	3-2
28	4-2
29	5-2
30	:
30	1-3
30	2-3
30	3-3
31	4-3
31	:
33	

34		:
35		:
35		1-1
36	6	1-1-1
36	5	2-1-1
37	4	3-1-1
38	3	4-1-1
39	2	5-1-1
40	1	6-1-1
41		7-1-1
42		2-1
42	6	1-2-1
43	5	2-2-1
44	4	3-2-1
45	3	4-2-1
46	2	5-2-1
47	1	6-2-1
48		7-2-1
49		3-1
49		1-3-1
50		2-3-1
51		3-3-1
52		4-3-1
53		5-3-1
54		6-3-1
55		:
55		1-2
55		1-1-2
56		2-1-2
57		3-1-2
58		4-1-2
59		5-1-2
60		2-2
60		1-2-2
61		2-2-2

62		3-2-2
62		4-2-2
63		3-2
64		1-3-2
65		2-3-2
66		3-3-2
67		4-3-2
68		5-3-2
69		6-3-2
70		7-3-2
71		4-2
71		1-4-2
72		2-4-2
73		3-4-2
74		4-4-2
74		5-4-2
75		6-4-2
76		:
77		1-3
78		2-3
79		3-3
80		
84		:
85	Coob-Douglas	:
85		1-1
85		2-1
86		3-1
86		4-1
86		5-1
87		6-1
87		:
90	CA	1-2
91	VA	2-2
92	L	3-2

93		K	4-2
94	CA/L		5-2
95	CA/K		6-2
96	VA/L		7-2
97	VA/K		8-2
98	L/K		9-2
99			:
100			1-3
102			2-3
103			3-3
105			4-3
106			5-3
108			6-3
111			7-3
112			8-3
113			9-3
114			10-3
116			11-3
117			
119			:
122			:
122		Box	1-1
123			2-1
124			3-1
125			4-1
125			5-1
126			6-1
127			7-1
128			8-1
128			9-1
130			10-1
130			11-1
135			12-1
138			:

138		Box	1-2
139			2-2
139			3-2
140			4-2
141			5-2
141			6-2
142			7-2
142			:
142		Box	1-3
143			2-3
144			3-3
145			4-3
146			5-3
146			6-3
147			7-3
148			
150	[2001-1974]		:
152			:
152		PTB	1-1
152		PIB	2-1
153		PIB	3-1
153		PNB	4-1
153		VA	5-1
153		CI	6-1
154		SubE	7-1
154		RS	8-1
154	ILP		9-1
154		EBE	10-1
154		CFF	11-1
156			:
160			1-2
160			2-2
161			3-2
162			4-2

162	5-2
163	6-2
164	7-2
164	8-2
165	:
167	1-3
169	2-3
170	3-3
170	-1
171	-2
171	-3
171	-4
172	-5
172	-6
173	-7
173	-8
174	
175	
176	
182	
183	
185	
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214	