

RÉSISTANCE A L'AVANCEMENT DE SOCS DE CHARRUE

On souhaite étudier la résistance à l'avancement de socs de charrue en fonction de la vitesse du tracteur. Pour cela on a mesuré pour quatre vitesses différentes (10, 15, 20 et 25 km/h) les résistances sur neuf parcelles d'un même type de sol.

vitesse	10 km/h	15 km/h	20 km/h	25 km/h
résistance	26	61	86	76
	36	50	78	64
	62	111	164	140
	45	57	67	65
	33	52	61	56
	78	109	128	121
	49	56	60	67
	43	47	56	60
	92	103	116	127

Model: MODEL1
Dependent Variable: RESIST

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	6795.75556	6795.75556	7.378	0.0103
Error	34	31316.13333	921.06275		
C Total	35	38111.88889			
Root MSE	30.34902	R-square	0.1783		
Dep Mean	75.05556	Adj R-sq	0.1541		
C.V.	40.43540				

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	32.044444	16.62284042	1.928	0.0623
VITESSE	1	2.457778	0.90483282	2.716	0.0103

no change

The SAS System

17:57 Tuesday, May 30, 2000

Model: MODEL1

Dependent Variable: RESIST

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	8164.75556	4082.37778	4.499	0.0187
Error	33	29947.13333	907.48889		
C Total	35	38111.88889			

Root MSE	30.12456	R-square	0.2142
Dep Mean	75.05556	Adj R-sq	0.1666
C.V.	40.13634		

The SAS System

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Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	-35.788889	57.64041685	-0.621	0.5389
VITESS	1	11.091111	7.08621092	1.565	0.1271
VIT2	1	-0.246667	0.20083037	-1.228	0.2280

Etude de la resistance a l'avancement de socs de charrue

General Linear Models Procedure

The X'X Matrix

	INTERCEPT	VITES	VITES*VITES	RESIST
INTERCEPT	36	630	12150	2702
VITES	630	12150	252000	50050
VITES*VITES	12150	252000	5501250	1003150
RESIST	2702	50050	1003150	240912

Dependent Variable: RESIST

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	8164.75555556	4082.37777778	4.50	0.0187
Error	33	29947.13333333	907.48888889		
Corrected Total	35	38111.88888889			

R-Square	C.V.	Root MSE	RESIST Mean
0.214231	40.13634	30.12455624	75.05555556

Source	DF	Type I SS	Mean Square	F Value	Pr > F
VITES	1	6795.75555556	6795.75555556	7.49	0.0099
VITES*VITES	1	1369.00000000	1369.00000000	1.51	0.2280

Source	DF	Type II SS	Mean Square	F Value	Pr > F
VITES	1	2223.12190986	2223.12190986	2.45	0.1271
VITES*VITES	1	1369.00000000	1369.00000000	1.51	0.2280

Source	DF	Type III SS	Mean Square	F Value	Pr > F
VITES	1	2223.12190986	2223.12190986	2.45	0.1271
VITES*VITES	1	1369.00000000	1369.00000000	1.51	0.2280

Parameter	Estimate	T for H0: Parameter=0	Pr > T	Std Error of Estimate
INTERCEPT	-35.78888889	-0.62	0.5389	57.64041685
VITES	11.09111111	1.57	0.1271	7.08621092
VITES*VITES	-0.24666667	-1.23	0.2280	0.20083037

LES PROCESSIONNAIRES DU PIN

On souhaite connaître l'influence de certaines caractéristiques de peuplements forestiers sur le développement de la processionnaire. L'unité, qui représente ici l'observation, est une parcelle forestière, c'est-à-dire une surface de 10 hectares d'un seul tenant. Les valeurs obtenues sont les moyennes de mesures faites sur des placettes échantillon de 5 ares. La variable à expliquer (variable *nbnids*) est le nombre de nids de processionnaires par arbre d'une placette.

On a mesuré dix variables explicatives:

alti ☞ altitude (en m)

pente ☞ pente (en °)

nbre ☞ nombre de pins dans une placette

haut ☞ hauteur de l'arbre échantillonné au centre de la placette

diam ☞ diamètre de cet arbre

dens ☞ note de densité du peuplement

orient ☞ orientation de la placette ☼ 1 ⇔ orientation vers le sud ☼ 2 ⇔ autre

hdom ☞ hauteur (en m) des arbres dominants

nbstr ☞ nombre de strates de végétation

mel ☞ mélange du peuplement ☼ 1 ⇔ pas mélangé ☼ 2 ⇔ mélangé

<i>alti</i>	<i>pente</i>	<i>nbre</i>	<i>haut</i>	<i>diam</i>	<i>dens</i>	<i>orient</i>	<i>hdom</i>	<i>nbstr</i>	<i>mel</i>	<i>nbnids</i>
1200	22	1	4.0	14.8	1.0	1.1	5.9	1.4	1.4	2.37
1342	28	8	4.1	18.0	1.5	1.5	6.4	1.7	1.7	1.47
1231	28	5	2.4	7.8	1.3	1.6	4.3	1.5	1.4	1.13
1254	28	18	3.0	9.2	2.3	1.7	6.9	2.3	1.6	0.85
1357	32	7	3.7	10.7	1.4	1.7	6.6	1.8	1.3	0.24
1250	27	1	4.4	14.8	1.0	1.7	5.8	1.3	1.4	1.49
1422	37	22	3.0	8.1	2.7	1.9	8.3	2.5	2.0	0.30
1309	46	7	5.7	19.6	1.5	1.3	7.8	1.8	1.6	0.07
1127	24	2	3.5	12.6	1.0	1.7	4.9	1.5	2.0	3.00
1075	34	9	4.3	12.0	1.6	1.8	6.8	2.0	2.0	1.21
1166	24	17	5.5	16.7	2.4	1.5	11.5	2.9	1.7	0.38
1182	41	32	5.4	21.6	3.3	1.4	11.3	2.8	2.0	0.70
1179	15	0	3.2	10.5	1.0	1.7	4.0	1.1	1.6	2.64
1256	21	0	5.1	19.5	1.0	1.8	5.8	1.1	1.4	2.05
1251	26	2	4.2	16.4	1.1	1.7	6.2	1.3	1.8	1.75
1536	38	31	5.7	17.8	3.1	1.7	11.4	2.8	1.9	0.06
1554	27	20	5.6	20.2	2.8	1.9	9.2	2.7	1.3	0.13
1305	30	6	3.8	15.7	1.4	1.2	7.2	2.1	1.9	1.00
1316	34	8	3.1	11.4	1.5	1.8	5.0	1.6	2.0	0.41
1427	39	19	4.6	15.2	2.4	1.6	9.1	2.4	1.9	0.72
1575	20	32	5.2	18.9	3.0	1.7	9.4	2.5	1.8	0.67
1397	26	16	4.2	14.8	2.2	1.6	7.7	2.2	1.8	0.12
1377	29	4	5.3	19.8	1.2	1.8	6.8	1.6	1.9	0.97
1574	24	23	5.2	17.8	2.4	1.8	7.8	2.2	2.0	0.07
1396	45	13	4.7	15.2	1.7	1.6	7.8	2.1	1.4	0.10
1393	27	5	4.7	18.3	1.2	1.7	7.5	1.7	2.0	0.68
1433	23	18	6.5	21.0	2.7	1.8	13.7	2.7	1.3	0.13
1349	24	1	2.7	5.8	1.0	1.7	3.6	1.3	1.8	0.20
1208	23	2	3.5	11.5	1.1	1.7	5.4	1.3	2.0	1.09
1198	28	15	3.9	11.3	2.0	1.6	7.4	2.8	2.0	0.18
1228	31	6	5.4	21.8	1.3	1.7	7.0	1.5	1.9	0.35
1229	21	11	5.8	16.7	1.7	1.8	10.0	2.3	2.0	0.21
1310	36	17	5.2	17.8	2.3	1.9	10.3	2.6	2.0	0.03

Backward Elimination Procedure for Dependent Variable NBNIDS

Step 0 All Variables Entered R-square = 0.68091935 C(p) = 11.00000000

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	10	14.16322567	1.41632257	4.69	0.0012
Error	22	6.63692584	0.30167845		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	8.56184874	2.09694992	5.02925051	16.67	0.0005
ALTI	-0.00295628	0.00103834	2.44545348	8.11	0.0094
PENTE	-0.03482086	0.01451039	1.73726013	5.76	0.0253
NBRE	0.03538525	0.06658637	0.08519580	0.28	0.6005
HAUT	-0.50156373	0.37870108	0.52918003	1.75	0.1990
DIAM	0.10873871	0.06949494	0.73859481	2.45	0.1319
DENS	-0.03271541	1.04491464	0.00029572	0.00	0.9753
ORIENT	-0.20395868	0.66959841	0.02798980	0.09	0.7635
HDOM	0.02818019	0.15700728	0.00971835	0.03	0.8592
NBSTR	-0.86240937	0.57213305	0.68545214	2.27	0.1459
MEL	-0.44812420	0.51376438	0.22951607	0.76	0.3925

Bounds on condition number: 59.59901, 1604.293

Step 1 Variable DENS Removed R-square = 0.68090513 C(p) = 9.00098026

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	9	14.16292995	1.57365888	5.45	0.0005
Error	23	6.63722157	0.28857485		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	8.53414991	1.85944279	6.07873729	21.06	0.0001
ALTI	-0.00295274	0.00100950	2.46887539	8.56	0.0076
PENTE	-0.03479201	0.01416311	1.74140619	6.03	0.0220
NBRE	0.03346703	0.02550608	0.49682717	1.72	0.2024
HAUT	-0.49638547	0.33319539	0.64046979	2.22	0.1499
DIAM	0.10804781	0.06445124	0.81101304	2.81	0.1072
ORIENT	-0.21243737	0.59894662	0.03630313	0.13	0.7261
HDOM	0.02608173	0.13886501	0.01017995	0.04	0.8527
NBSTR	-0.86802316	0.53138067	0.77003347	2.67	0.1160
MEL	-0.44013046	0.43604346	0.29400978	1.02	0.3233

Bounds on condition number: 13.33517, 504.574

Processionnaires
du pin

Step 2 Variable HDOM Removed R-square = 0.68041572 C(p) = 7.03472465

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	8	14.15275000	1.76909375	6.39	0.0002
Error	24	6.64740152	0.27697506		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	8.53610693	1.82165905	6.08171648	21.96	0.0001
ALTI	-0.00298154	0.00097752	2.57671712	9.30	0.0055
PENTE	-0.03487051	0.01386949	1.75079855	6.32	0.0190
NBRE	0.03414436	0.02473717	0.52768948	1.91	0.1802
HAUT	-0.46464465	0.28132746	0.75554145	2.73	0.1116
DIAM	0.10721470	0.06299288	0.80235488	2.90	0.1017
ORIENT	-0.21378940	0.58674290	0.03677201	0.13	0.7188
NBSTR	-0.80722344	0.41284185	1.05891421	3.82	0.0623
MEL	-0.45135215	0.42316065	0.31510925	1.14	0.2968

Bounds on condition number: 9.904727, 294.6887

Step 3 Variable ORIENT Removed R-square = 0.67864784 C(p) = 5.15661604

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	7	14.11597799	2.01656828	7.54	0.0001
Error	25	6.68417353	0.26736694		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	8.34211333	1.71163540	6.35093046	23.75	0.0001
ALTI	-0.00308171	0.00092166	2.98917663	11.18	0.0026
PENTE	-0.03388265	0.01336392	1.71867885	6.43	0.0179
NBRE	0.03337163	0.02421485	0.50780760	1.90	0.1804
HAUT	-0.50333429	0.25596065	1.03388998	3.87	0.0604
DIAM	0.11639198	0.05672808	1.12553155	4.21	0.0508
NBSTR	-0.77948518	0.39866230	1.02214638	3.82	0.0618
MEL	-0.49177181	0.40121613	0.40167815	1.50	0.2317

Bounds on condition number: 8.493714, 224.9429

Step 4 Variable MEL Removed R-square = 0.65933654 C(p) = 4.48809382

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	6	13.71429984	2.28571664	8.39	0.0001
Error	26	7.08585167	0.27253276		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
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INTERCEP	7.05027445	1.36162103	7.30664917	26.81	0.0001
ALTI	-0.00278926	0.00089880	2.62465883	9.63	0.0046
PENTE	-0.03481657	0.01347046	1.82064842	6.68	0.0157
NBRE	0.02718148	0.02391003	0.35221238	1.29	0.2660
HAUT	-0.44985101	0.25463878	0.85056403	3.12	0.0890
DIAM	0.10865995	0.05691826	0.99324039	3.64	0.0674
NBSTR	-0.76979003	0.40241593	0.99727043	3.66	0.0668

Bounds on condition number: 8.246873, 181.2668

Step 5 Variable NBRE Removed R-square = 0.64240337 C(p) = 3.65560309

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	5	13.36208746	2.67241749	9.70	0.0001
Error	27	7.43806406	0.27548385		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	5.99817892	1.00415096	9.82962549	35.68	0.0001
ALTI	-0.00229153	0.00078919	2.32266350	8.43	0.0073
PENTE	-0.03380896	0.01351384	1.72425793	6.26	0.0187
HAUT	-0.52159560	0.24802635	1.21833956	4.42	0.0449
DIAM	0.12414516	0.05556272	1.37527239	4.99	0.0339
NBSTR	-0.38493506	0.21873470	0.85317027	3.10	0.0898

Bounds on condition number: 7.740311, 92.49267

Step 6 Variable NBSTR Removed R-square = 0.60138587 C(p) = 4.48368137

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	4	12.50891719	3.12722930	10.56	0.0001
Error	28	8.29123432	0.29611551		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	6.31202219	1.02452350	11.23969026	37.96	0.0001
ALTI	-0.00265377	0.00078988	3.34241819	11.29	0.0023
PENTE	-0.04105878	0.01334387	2.80355902	9.47	0.0046
HAUT	-0.74722029	0.22012673	3.41203055	11.52	0.0021
DIAM	0.16444221	0.05248641	2.90665843	9.82	0.0040

Bounds on condition number: 5.672093, 53.3289

All variables left in the model are significant at the 0.0500 level.

Summary of Backward Elimination Procedure for Dependent Variable NBNIDS

Step	Variable Removed	Number In	Partial R**2	Model R**2	C(p)	F	Prob>F
1	DENS	9	0.0000	0.6809	9.0010	0.0010	0.9753
2	HDOM	8	0.0005	0.6804	7.0347	0.0353	0.8527
3	ORIENT	7	0.0018	0.6786	5.1566	0.1328	0.7188
4	MEL	6	0.0193	0.6593	4.4881	1.5023	0.2317
5	NBRE	5	0.0169	0.6424	3.6556	1.2924	0.2660
6	NBSTR	4	0.0410	0.6014	4.4837	3.0970	0.0898

Forward Selection Procedure for Dependent Variable NBNIDS

Step 1 Variable NBSTR Entered R-square = 0.40433270 C(p) = 12.07012007

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	1	8.41018146	8.41018146	21.04	0.0001
Error	31	12.38997005	0.39967645		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	2.60470845	0.40617120	16.43647007	41.12	0.0001
NBSTR	-0.90497521	0.19728237	8.41018146	21.04	0.0001

Bounds on condition number: 1, 1

Step 2 Variable ALTI Entered R-square = 0.50732076 C(p) = 6.96929032

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	2	10.55234875	5.27617438	15.45	0.0001
Error	30	10.24780276	0.34159343		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	5.08258216	1.05833436	7.87830015	23.06	0.0001
ALTI	-0.00215254	0.00085957	2.14216729	6.27	0.0179
NBSTR	-0.72663592	0.19579554	4.70476181	13.77	0.0008

Bounds on condition number: 1.152466, 4.609864

Step 3 Variable PENTE Entered R-square = 0.57593407 C(p) = 4.23853430

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	3	11.97951589	3.99317196	13.13	0.0001
Error	29	8.82063563	0.30415985		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	5.71116949	1.03996987	9.17298039	30.16	0.0001
ALTI	-0.00214842	0.00081110	2.13396087	7.02	0.0129
PENTE	-0.03058244	0.01411841	1.42716713	4.69	0.0387
NBSTR	-0.59856683	0.19398556	2.89593191	9.52	0.0044

Bounds on condition number: 1.270483, 10.62483

No other variable met the 0.0500 significance level for entry into the model.

Summary of Forward Selection Procedure for Dependent Variable NBNIDS

Step	Variable Entered	Number In	Partial R**2	Model R**2	C(p)	F	Prob>F
1	NBSTR	1	0.4043	0.4043	12.0701	21.0425	0.0001
2	ALTI	2	0.1030	0.5073	6.9693	6.2711	0.0179
3	PENTE	3	0.0686	0.5759	4.2385	4.6922	0.0387

Stepwise Procedure for Dependent Variable NBNIDS

Step 1 Variable NBSTR Entered R-square = 0.40433270 C(p) = 12.07012007

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	1	8.41018146	8.41018146	21.04	0.0001
Error	31	12.38997005	0.39967645		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	2.60470845	0.40617120	16.43647007	41.12	0.0001
NBSTR	-0.90497521	0.19728237	8.41018146	21.04	0.0001

Bounds on condition number: 1, 1

Step 2 Variable ALTI Entered R-square = 0.50732076 C(p) = 6.96929032

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	2	10.55234875	5.27617438	15.45	0.0001
Error	30	10.24780276	0.34159343		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	5.08258216	1.05833436	7.87830015	23.06	0.0001
ALTI	-0.00215254	0.00085957	2.14216729	6.27	0.0179
NBSTR	-0.72663592	0.19579554	4.70476181	13.77	0.0008

Bounds on condition number: 1.152466, 4.609864

Step 3 Variable PENTE Entered R-square = 0.57593407 C(p) = 4.23853430

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	3	11.97951589	3.99317196	13.13	0.0001
Error	29	8.82063563	0.30415985		
Total	32	20.80015152			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	5.71116949	1.03996987	9.17298039	30.16	0.0001
ALTI	-0.00214842	0.00081110	2.13396087	7.02	0.0129
PENTE	-0.03058244	0.01411841	1.42716713	4.69	0.0387
NBSTR	-0.59856683	0.19398556	2.89593191	9.52	0.0044

Bounds on condition number: 1.270483, 10.62483

All variables left in the model are significant at the 0.0500 level.
No other variable met the 0.0500 significance level for entry into the model.

*Procedimento
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Summary of Stepwise Procedure for Dependent Variable NBNIDS

Step	Variable		Number In	Partial R**2	Model R**2	C(p)	F	Prob>F
	Entered	Removed						
1	NBSTR		1	0.4043	0.4043	12.0701	21.0425	0.0001
2	ALTI		2	0.1030	0.5073	6.9693	6.2711	0.0179
3	PENTE		3	0.0686	0.5759	4.2385	4.6922	0.0387

ETUDE DE LA CROISSANCE D'HUÎTRES

L'expérience suivante a été mise en place pour étudier des facteurs pouvant jouer sur la croissance des huîtres:

☞ 20 sacs de 10 huîtres

sont placés de façon aléatoire dans le canal de refroidissement d'une centrale électrique

☞ à 5 emplacements différents (codés de 1 à 5) correspondant à des conditions différentes de température et d'oxygénation.

Les huîtres sont pesées par sac, au début de l'expérience (*poids initial*) et au bout d'un mois (*poids final*).

Les résultats obtenus sont les suivants:

emplacement	poids initial	poids final
1	27.2	32.6
1	32.0	36.6
1	33.0	37.7
1	26.8	31.0
2	28.6	33.0
2	26.8	31.7
2	26.5	30.7
2	26.8	30.4
3	28.6	35.2
3	22.4	29.1
3	23.2	28.9
3	24.4	30.2
4	29.3	35.0
4	21.8	27.0
4	30.3	36.4
4	24.3	30.5
5	20.4	24.6
5	19.6	23.4
5	25.1	30.3
5	18.1	21.8

The GLM Procedure
Class Level Information

Class	Levels	Values
empl	5	1 2 3 4 5

Number of Observations Read 20
Number of Observations Used 20

The GLM Procedure

Dependent Variable: poif

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	197.2470000	49.3117500	4.70	0.0117
Error	15	157.3025000	10.4868333		
Corrected Total	19	354.5495000			

R-Square 0.556331
Coeff Var 10.51238
Root MSE 3.238338
poif Mean 30.80500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
empl	4	197.2470000	49.3117500	4.70	0.0117

Source	DF	Type III SS	Mean Square	F Value	Pr > F
empl	4	197.2470000	49.3117500	4.70	0.0117

Modele avec interaction emplacement - poids initial

The GLM Procedure

Dependent Variable: poif

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	351.7219949	39.0802217	138.21	<.0001
Error	10	2.8275051	0.2827505		
Corrected Total	19	354.5495000			

R-Square	Coeff Var	Root MSE	poif Mean
0.992025	1.726158	0.531743	30.80500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
empl	4	197.2470000	49.3117500	174.40	<.0001
poiini	1	153.5802986	153.5802986	543.17	<.0001
poiini*empl	4	0.8946964	0.2236741	0.79	0.5569

Source	DF	Type III SS	Mean Square	F Value	Pr > F
empl	4	1.15010947	0.28752737	1.02	0.4439
poiini	1	59.17298622	59.17298622	209.28	<.0001
poiini*empl	4	0.89469635	0.22367409	0.79	0.5569

Modele sans interaction

The GLM Procedure

Dependent Variable: poif

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	350.8272986	70.1654597	263.91	<.0001
Error	14	3.7222014	0.2658715		
Corrected Total	19	354.5495000			

R-Square	Coeff Var	Root MSE	poif Mean
0.989502	1.673843	0.515627	30.80500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
empl	4	197.2470000	49.3117500	185.47	<.0001
poiini	1	153.5802986	153.5802986	577.65	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
empl	4	13.2297182	3.3074295	12.44	0.0002
poiini	1	153.5802986	153.5802986	577.65	<.0001