

Annexes

# La résilience des exploitations agricoles

(en France et entre 2000 et 2010)

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## ANNEXE 1

Ministère de l'agriculture..., Données brutes 2000-2009 du RICA et documents d'accompagnement (version 2014).

[http://agreste.agriculture.gouv.fr/\\_rica-france-microdonnees/article/rica-france-microdonnees](http://agreste.agriculture.gouv.fr/_rica-france-microdonnees/article/rica-france-microdonnees)

## ANNEXE 2

SSP – SDSSR - BSPCA

### **RICA France : Présentation des fichiers détails mis en ligne :**

*Les fichiers détails disponibles sous Agreste présentent, sous un format anonymisé les données individuelles de l'enquête RICA pour chaque exercice comptable.*

### **Présentation générale de l'enquête RICA.**

#### **Origine**

Mis en œuvre en France depuis 1968, le réseau d'information comptable agricole est une enquête réalisée dans les États membres de l'Union européenne selon des règles et des principes communs. Il est régi en France par le décret n°2010-78 du 23 février 2010 relatif à la création d'un réseau de données dénommé réseau d'information comptable agricole – RICA France. Les données de base sont recueillies à partir d'une fiche d'enquête, définie au niveau européen, comprenant la comptabilité agricole de l'exploitation et des informations technico-économiques. Cette fiche est déclinée au niveau national pour être conforme aux normes comptables françaises et répondre à des besoins particuliers. Un retraitement de certaines données est effectué afin de cerner la réalité économique de l'exploitation au plus près ou rendre les exploitations comparables entre elles : amortissements linéaires, évaluation des stocks à la valeur à la clôture de l'exercice, formes sociétaires, etc...

#### **Objectifs**

Les données collectées permettent notamment l'analyse de la diversité des revenus et celle de leur formation, de dresser des diagnostics économiques et financiers, et de simuler l'impact des politiques publiques.

#### **Notion de typologie des exploitations agricoles : Otex, Cdex, PBS**

La très grande diversité des exploitations agricoles rend indispensable leur classification. La statistique agricole européenne, et française en particulier, utilise depuis 1978 une typologie fondée sur l'orientation technico-économique des exploitations (Otex) et la classe de dimension économique des exploitations (Cdex). Les Otex constituent un classement des exploitations selon leur production principale (par exemple « grandes cultures », « maraîchage », « bovins lait »,...). Les Cdex constituent un classement des exploitations selon leur taille économique.

La détermination de l'Otex et de la Cdex d'une exploitation se fait à partir de données physiques : surfaces des différentes productions végétales et effectifs des différentes catégories d'animaux. À chaque hectare de culture et à chaque tête d'animal est appliqué un coefficient de « production brute standard (PBS), » indicateur normatif unitaire. Ces coefficients sont établis par région. Ils représentent la valeur de la production potentielle par hectare ou par tête d'animal présent hors subventions et sont exprimés en euros. Les

coefficients actuellement en vigueur ont été calculés en moyenne sur la période 2005 à 2009. L'application d'un coefficient à une donnée physique (hectare ou tête) permet d'obtenir la production brute standard (PBS) de la grandeur considérée.

La somme des PBS de toutes les productions végétales et animales donne la PBS totale de l'exploitation et permet de la classer dans sa Cdex. Les parts relatives de PBS partielles (c'est-à-dire des PBS des différentes productions végétales et animales) permettent de classer l'exploitation selon sa production dominante, et ainsi de déterminer son Otex.

Les tableaux ci-dessous fournissent les nomenclatures relatives à l'OTEX et à la CDEX

### **Classe de dimension économique (CDEX) : nomenclature détaillée**

| Code | Signification                               |
|------|---|
| 1    | PBS inférieure à 2 000 euros                |
| 2    | PBS de 2 000 à moins de 4 000 euros         |
| 3    | PBS de 4 000 à moins de 8 000 euros         |
| 4    | PBS de 8 000 à moins de 15 000 euros        |
| 5    | PBS de 15 000 à moins de 25 000 euros       |
| 6    | PBS de 25 000 à moins de 50 000 euros       |
| 7    | PBS de 50 000 à moins de 100 000 euros      |
| 8    | PBS de 100 000 à moins de 250 000 euros     |
| 9    | PBS de 250 000 à moins de 500 000 euros     |
| 10   | PBS de 500 000 à moins de 750 000 euros     |
| 11   | PBS de 750 000 à moins de 1 000 000 euros   |
| 12   | PBS de 1 000 000 à moins de 1 500 000 euros |
| 13   | PBS de 1 500 000 à moins de 3 000 000 euros |
| 14   | PBS de 3 000 000 euros ou plus              |

### **Orientation technico-économique (OTEX) : nomenclature française de diffusion détaillée**

| Code | Signification                                |
|------|--|
| 1500 | Céréales et oléoprotéagineux                 |
| 1600 | Cultures générales (autres grandes cultures) |
| 2800 | Maraîchage                                   |
| 2900 | Fleurs et horticulture diverse               |
| 3500 | Viticulture                                  |
| 3900 | Fruits et autres cultures permanentes        |
| 4500 | Bovins lait                                  |
| 4600 | Bovins viande                                |
| 4700 | Bovins mixtes                                |
| 4813 | Ovins et caprins                             |
| 4840 | Autres herbivores                            |
| 5100 | Porcins                                      |
| 5200 | Volailles                                    |
| 5374 | Granivores mixtes                            |
| 6184 | Polyculture et polyélevage                   |

### **Champ de l'enquête**

Sur le territoire métropolitain, l'échantillon Rica est constitué par sélection d'exploitations agricoles dont la PBS est supérieure ou égale à 25 000 euros, soit les modalités 6 à 14 de la Cdex. Pour les trois départements d'outre-mer pour lesquels le RICA est en cours de mise en place (Guadeloupe, Martinique, La Réunion), le seuil d'appartenance à l'échantillon est abaissé à 15 000 euros (Cdex 5 à 14).

Le champ de l'enquête RICA est décrit, pour l'année 2010, dans le tableau suivant pour la France métropolitaine.

France métropolitaine :

| champ de l'enquête RICA en 2010 |  | Exploitations agricoles |            | SAU          |            | PBS totale  |            |
|---------------------------------|--|-------------------------|------------|--------------|------------|-------------|------------|
| CDEX                            | Intitulé                                 | Effectif                | Proportion | Surface (ha) | Proportion | Valeur (K€) | Proportion |
|                                 | Ensemble                                 | 489 977                 |            | 26 963 252   |            | 51 256 612  |            |
| 1 à 5                           | <i>Petites exploitations</i>             | 177 811                 | 36,3%      | 1 864 783    | 6,9%       | 1 437 096   | 2,8%       |
| Champ RICA                      | <i>Moyennes et grandes exploitations</i> | 312 166                 | 63,7%      | 25 098 468   | 93,1%      | 49 819 516  | 97,2%      |
| <i>dont</i>                     |  |                         |            |              |            |             |            |
| 6                               | 25 000 à moins de 50 000 euros           | 62 428                  | 12,7%      | 2 411 557    | 8,9%       | 2 304 214   | 4,5%       |
| 7                               | 50 000 à moins de 100 000 euros          | 88 106                  | 18,0%      | 5 571 845    | 20,7%      | 6 451 676   | 12,6%      |
| 8                               | 100 000 à moins de 250 000 euros         | 113 382                 | 23,1%      | 11 156 482   | 41,4%      | 17 864 239  | 34,9%      |
| 9                               | 250 000 à moins de 500 000 euros         | 36 636                  | 7,5%       | 4 595 846    | 17,0%      | 12 376 232  | 24,1%      |
| 10                              | 500 000 à moins de 750 000 euros         | 7 105                   | 2,4%       | 850 977      | 5,1%       | 4 255 696   | 21,1%      |
| 11                              | 750 000 à moins de 1 000 000 euros       | 2 248                   |            | 255 977      |            | 1 926 789   |            |
| 12                              | 1 000 000 à moins de 1 500 000 euros     | 1 411                   |            | 147 786      |            | 1 685 798   |            |
| 13                              | 1 500 000 à moins de 3 000 000 euros     | 663                     |            | 72 555       |            | 1 313 845   |            |
| 14                              | 3 000 000 euros et plus                  | 187                     |            | 35 443       |            | 1 641 028   |            |

Source : recensement général agricole 2010.

### Recrutement des exploitations

Le recrutement des exploitations agricoles est effectué par les services régionaux de l'information statistique et économique (SRISE) auprès d'offices comptables (centres de gestion des réseaux CER France, associations de gestion et de comptabilité - AGC, ou experts-comptables) et avec le consentement de l'exploitant.

Le recrutement des exploitations agricoles s'effectue selon trois modes ou sous-échantillon :

- Sous-échantillon I : comptabilités d'exploitants imposés au « forfait » (article 64 du Code général des impôts) tenues spécifiquement pour le RICA. C'était, à l'origine du RICA, le seul mode de recrutement des exploitations.
- Sous-échantillon II : comptabilités d'exploitants imposés au « réel » (article 69 du Code général des impôts) et donc tenus d'avoir une comptabilité destinée à calculer le revenu fiscal. Ce mode de collecte existe depuis 1987. Les plus grandes exploitations se trouvent dans ce sous-échantillon. Plus de 80 % des exploitations de l'échantillon relèvent désormais de ce sous-échantillon.
- Sous-échantillon III : comptabilités d'exploitants en plan d'amélioration matérielle ou plan d'investissement. Ce mode existe depuis 1976 et disparaît dans le RICA à partir de l'exercice comptable 2012. Les exploitants du sous-échantillon III sont dans une phase de transformation de leur activité. Ils sont plutôt jeunes et plus endettés que la moyenne. Ces exploitations peuvent être imposées au forfait ou au réel.

## Plan de sélection

La méthode de sondage utilisée est proche de celle des quotas. Dans ce type de méthode, l'univers connu, à partir de recensements ou d'enquêtes lourdes, est découpé en strates fondées sur des caractères faciles à observer et bien corrélés avec les variables étudiées. Pour le Rica, ces strates résultent du croisement de la région et deux critères de la typologie des exploitations agricoles (Otex et Cdex). Compte-tenu du nombre restreint d'exploitations dans les plus grandes classes de dimension économique (Cdex), les classes de Cdex 10 à 14 sont regroupées en classe 10.

La répartition des exploitations agricoles dans « l'univers » selon ces critères est connue par le recensement agricole et les enquêtes sur la structure des exploitations agricoles. Pour chacune des strates, un nombre d'exploitations à sélectionner est fixé. Afin d'améliorer la précision des résultats, on cherche à recruter relativement à la population de l'univers, une proportion plus importante de grandes exploitations que de petites. Les SRISE sont chargés, avec les offices comptables, de sélectionner les exploitations en respectant ces quotas.

## Anonymisation et brouillage des données

### Anonymisation :

Afin de respecter les règles du secret statistique et de garantir l'anonymat des exploitations enquêtées, toutes les données à caractère personnel ou individuel relatives à l'exploitant et à son exploitation (nom, prénom, sexe, année de naissance, adresse, numéro exploitation...) sont supprimées des fichiers mis en ligne.

Au niveau des circonscriptions administratives seule la région du siège de l'exploitation apparaît dans les fichiers mis à disposition : il n'est donc pas possible d'effectuer des requêtes par commune, canton ou même département.

### Brouillage :

Pour éviter que des données physiques ne permettent indirectement de lever le secret statistique et d'identifier indirectement les exploitations enquêtées, les données physiques (main d'œuvre, âge de l'exploitant, superficies, effectifs d'animaux, droits à prime, quotas de production) - ont été substituées par les tranches de valeur à laquelle les données individuelles appartiennent.

Ces classes sont définies comme suit :

- **Age de l'exploitant ('TRA05'), 14 classes:**

|                           |                        |                    |
|---------------------------|------------------------|--------------------|
| Moins de 21 ans           | De 21 à 80 ans (inclu) | Supérieur à 80 ans |
| Tranche 'Moins de 21 ans' | Tranches de 5 ans      | Une tranche        |

- **Pour le temps de travail de la main d'œuvre permanente non salariée ('TOUTA'), 7 classes :**

|       |                      |                        |                        |                      |                      |                       |
|-------|----------------------|------------------------|------------------------|----------------------|----------------------|-----------------------|
| 0 UTA | Entre 0 et 1 (exclu) | Entre 1 et 1,5 (exclu) | Entre 1,5 et 2 (exclu) | Entre 2 et 3 (exclu) | Entre 3 et 5 (exclu) | Supérieur ou égal à 5 |
|-------|----------------------|------------------------|------------------------|----------------------|----------------------|-----------------------|

- **Pour les effectifs de main d'œuvre permanente salariée hors chef d'exploitation ('EFF10'), 6 classes (exprimées en UTA) :**

|           |                                  |                      |                      |                       |                        |
|-----------|----------------------------------|----------------------|----------------------|-----------------------|------------------------|
| 0 salarié | Non nul et inférieur à 3 (exclu) | Entre 3 et 5 (exclu) | Entre 5 et 7 (exclu) | Entre 7 et 10 (exclu) | Supérieur ou égal à 10 |
|-----------|----------------------------------|----------------------|----------------------|-----------------------|------------------------|

- **Pour le temps de travail de la main d'œuvre non permanente salariée ('TVL11'), 7 classes (exprimées en heures) :**

|     |                                    |  |                              |                              |                              |                             |
|-----|------------------------------------|--|------------------------------|------------------------------|------------------------------|-----------------------------|
| 0 h | Supérieur à 0 et inférieur à 900 h | Supérieur ou égal à 900 et inférieur à 1 | Supérieur ou égal à 1 800 et | Supérieur ou égal à 2 700 et | Supérieur ou égal à 3 600 et | Supérieur ou égal à 5 200 h |
|     |                                    | 800 h                                    | inférieur à 2 700 h          | inférieur à 3 600 h          | inférieur à 5 200 h          |                             |

- **Pour les surfaces : Toutes variables : 31 classes**

|               |                              |                        |                         |                     |
|---------------|------------------------------|------------------------|-------------------------|---------------------|
| Surface nulle | Non nul et inférieur à 50 ha | De 50 à 200 ha (exclu) | De 200 à 400 ha (exclu) | Au dessus de 400 ha |
| Tranche '0'   | 10 tranches de 5 ha          | 15 tranches de 10 ha   | 4 tranches de 50 ha     | Une seule tranche   |

Sauf pour :

- les vergers : « abricotier » soit 'SUT3ABRI' ; « agrumes » soit 'SUT3AGRU' ; « cerisiers » - 'SUT3CERI' ; « fruits à coque » - 'SUT3COQUE' ; « oliviers » - 'SUT3OLIV' ; « pêchers » - 'SUT3PECH' ; « petits fruits » - 'SUT3PETF' ; « poiriers » - 'SUT3POIR' ; « pommiers » - 'SUT3POMM' ; « pruniers » - 'SUT3PRUN' ; « autres cultures permanentes » - 'SUT3ACPE' ;
- les productions maraichères : « légumes frais de plein champ » - 'SUT3LEGF' ; « légumes frais de plein-air » - 'SUT3LEGF3' ; « légumes frais sous abri » - 'SUT3LEGF4' ;
- l'horticulture : « fleurs et plantes ornementales de plein air » - 'SUT3FLEU' ; « fleurs et plantes ornementales sous-abri » - 'SUT3FLEU4' ;
- les vignobles : « Vignes AOC » - 'SUT3VAOC' ; « Vignes AOVDQS » - 'SUT3VAOVDQS' ; « Vignes IGP » - 'SUT3VIGP' ; « Autres vignes – hors IGP » - 'SUT3VRES' ;
- les « pépinières » - 'SUT3PEPI' et cultures de semences : « semences et plants horticoles » - 'SUT3SEME' ; « semences d'herbes » 'SUT3SEMH'. **pour lesquelles les 34 tranches suivantes sont utilisées :**

|               |                             |                     |                      |                       |                        |                         |                     |
|---------------|-----------------------------|---------------------|----------------------|-----------------------|------------------------|-------------------------|---------------------|
| Surface nulle | Non nul et inférieur à 1 ha | De 1 à 7 ha (exclu) | De 7 à 10 ha (exclu) | De 10 à 50 ha (exclu) | De 50 à 200 ha (exclu) | De 200 à 400 ha (exclu) | Au dessus de 400 ha |
| Tranche '0'   | Une seule tranche           | 3 tranches de 2 ha  | Une tranche          | 8 tranches de 5 ha    | 15 tranches de 10 ha   | 4 tranches de 50 ha     | Une seule tranche   |

- **Pour les effectifs moyens de ruminants, équidés et de porcins :**

Toutes variables, 47 classes :

|                   |                     |                      |                        |
|-------------------|---------------------|----------------------|------------------------|
| Absence d'animaux | De 1 à 150 têtes    | De 151 à 300 têtes   | Au dessus de 300 têtes |
| Tranche '0'       | Tranches de 5 têtes | Tranches de 10 têtes | Une seule tranche      |

Sauf pour les effectifs moyens de « brebis laitières », ('EFM6BLAI'), « autres brebis » ('EFM6ABRE'), « autres ovins » ('EFM6OVIN'), « chèvres » ('EFM6CHEV'), « autres caprins » ('EFM6CAPR'), « porcs à l'engrais » ('EFM6PENG'), « porcs à l'engrais en intégration » ('EFM6PENG9), pour lesquels on applique les 51 classes suivantes :

|              |                     |                      |                        |                        |
|--------------|---------------------|----------------------|------------------------|------------------------|
| Aucun animal | De 1 à 300 têtes    | De 151 à 300 têtes   | Entre 301 et 500 têtes | Au dessus de 500 têtes |
| Tranche '0'  | Tranches de 5 têtes | Tranches de 10 têtes | Tranches de 50 têtes   | Une seule tranche      |

- **Pour les effectifs moyens d'espèces avicoles et cunicole :**

|                   |                       |                          |                           |
|-------------------|-----------------------|--------------------------|---------------------------|
| Absence d'animaux | De 1 à 15 000 têtes   | De 15 001 à 30 000 têtes | Au dessus de 30 000 têtes |
| Tranche '0'       | Tranches de 500 têtes | Tranches de 1 000 têtes  | Une seule tranche         |

- **Pour les effectifs primés :**

Toutes variables, 47 classes (en nombre de têtes primées) :

|                        |                     |                      |                        |
|------------------------|---------------------|----------------------|------------------------|
| Absence d'animal primé | De 1 à 150 têtes    | De 151 à 300 têtes   | Au dessus de 300 têtes |
| Tranche '0'            | Tranches de 5 têtes | Tranches de 10 têtes | Une seule tranche      |

Sauf pour les effectifs primés de « prime à la brebis et paiement supplémentaire » ('SBVPBST'),

|              |                     |                      |                        |                        |
|--------------|---------------------|----------------------|------------------------|------------------------|
| Aucun animal | De 1 à 150 têtes    | De 151 à 300 têtes   | Entre 301 et 500 têtes | Au dessus de 500 têtes |
| Tranche '0'  | Tranches de 5 têtes | Tranches de 10 têtes | Tranches de 50 têtes   | Une seule tranche      |

- **Pour évaluer le nombre d'UGB :**

Toutes variables :

|             |                                |  |  |                      |
|-------------|--------------------------------|--|--|----------------------|
| Aucun UGB   | Non nul et inférieur à 150 UGB | Supérieur ou égal à 150 et inférieur à 300 UGB | Supérieur ou égal à 300 et inférieur à 400 UGB | Au dessus de 400 UGB |
| Tranche '0' | Tranches de 5 UGB              | Tranches de 10 UGB                             | Tranches de 50 UGB                             | Une seule tranche    |

Sauf « UGB porcins » 'UGBPO' et « UGB total » 'UGBTO' :

|             |                                |  |  |                      |
|-------------|--------------------------------|--|--|----------------------|
| Aucun UGB   | Non nul et inférieur à 150 UGB | Supérieur ou égal à 150 et inférieur à 300 UGB | Supérieur ou égal à 300 et inférieur à 500 UGB | Au dessus de 500 UGB |
| Tranche '0' | Tranches de 5 UGB              | Tranches de 10 UGB                             | Tranches de 50 UGB                             | Une seule tranche    |

- **Pour les quotas laitiers :**

|                          |  |   |
|--------------------------|--|---|
| Absence de quota laitier | Quota laitier non nul et inférieur à 1 000 000 l | Quota laitier supérieur ou égal à 1 000 000 l |
| Tranche '0'              | Tranches de 50 000 litres                        | Une seule tranche                             |

## Valorisation des données individuelles et pondération

### Principe :

Les taux de sondage (la proportion d'exploitations sélectionnées dans l'univers) diffèrent notablement selon les strates, notamment selon la dimension économique. Afin d'obtenir des résultats agrégés pertinents, il est nécessaire de les pondérer en utilisant un poids d'extrapolation affecté à chacune des exploitations de l'échantillon. Pour calculer ces poids, on procède à un rapprochement de l'échantillon RICA avec un univers de référence.

Les univers de référence sont :

- les recensements généraux de l'agriculture pour les années et exercices 1988, 2000 et 2010 ;
- des univers interpolés entre les recensements de l'agriculture de 1988 et 2000 pour les exercices RICA de 1989 à 1999 ;
- des univers interpolés entre les recensements de l'agriculture de 2000 et 2010 pour

les exercices RICA de 2001 à 2009 ;

Pour la métropole, le calcul des poids est réalisé pour chacune des strates résultant du croisement des trois critères région (22 modalités), Otex (15 modalités) et Cdex (5 modalités, les Cdex 10 à 15 étant confondues). Pour les DOM , le calcul est effectué sur la base de strates adaptées au cas de chacun d'entre eux.

Pour déterminer le coefficient de pondération des exploitations d'une strate donnée, on effectue dans un premier temps le rapport entre le nombre d'exploitations de l'univers et le nombre d'exploitations pour la strate considérée. On obtient alors, au niveau de l'ensemble de l'échantillon, un jeu de coefficients intermédiaires. La somme de ces coefficients intermédiaires donne un nombre total d'exploitations inférieur au nombre total fourni par l'univers, dans la mesure où certaines strates ne sont pas représentées dans l'échantillon. On procède alors à une « dilatation » de ces coefficients par une procédure de calage sur marges pour obtenir les coefficients d'extrapolation finaux. Le calage sur marge assure que le nombre des exploitations extrapolé à partir du coefficient final est égal, pour chacune des régions, Otex et Cdex, à celui de l'univers de référence.

#### **Application pratique aux fichiers de microdonnées :**

Pour toute exploitation à des fins de calcul de résultats agrégées sur plusieurs strates, les données individuelles doivent être pondérées par leur coefficient d'extrapolation. La variable à utiliser est comme coefficient d'extrapolation est 'EXTR2'.



## ANNEXE 3

## Lexique

*Les termes en gras italique sont définis par ailleurs dans le lexique.*

*Les termes en italique désignent des variables explicitement recueillies dans le RICA.*

### **Actif circulant :**

*Stocks et en-cours + valeurs réalisables + valeurs disponibles.*

### **Actif immobilisé :**

*Immobilisations incorporelles + immobilisations corporelles + immobilisations financières.*

### **Actif total :**

*Actif immobilisé + actif circulant + régularisation de l'actif.*

### **Aides aux jachères :**

Subvention versée pour compenser la mise en jachère d'une partie de la superficie en céréales, oléagineux et protéagineux (Scop).

### **Amortissements :**

*Voir dotations aux amortissements.*

### **Autoconsommation :**

Ensemble des produits de l'exploitation consommés par l'exploitant ou les membres de sa famille.

### **Autofinancement :**

*Capacité d'autofinancement - prélèvements privés.*

### **Besoin en fonds de roulement :**

*Voir Fonds de roulement (besoin en).*

### **Bovins :**

Bovins non laitiers, génisses d'élevage de 2 ans et plus, vaches laitières.

### **Bovins moins 1 an :**

Veaux de batterie, autres veaux de boucherie, autres bovins de moins d'1 an.

### **Bovins non laitiers :**

Bovins de moins d'1 an, bovins de 1 à 2 ans, bovins mâles de 2 ans et plus, génisses viande de 2 ans et plus, autres vaches.

### **Brebis :**

Femelles d'un an et plus, ayant déjà mis bas. Les agnelles, jeunes femelles de remplacement, saillies mais n'ayant pas encore mis bas, ne sont pas comptabilisées dans les effectifs de brebis.

### **Capacité d'autofinancement :**

*Résultat de l'exercice + dotations aux amortissements – quote-part des subventions d'investissement affectées au compte de résultat – plus-values sur cessions d'immobilisations + moins-values sur cessions d'immobilisations.*

### **Capital d'exploitation :**

Partie de l'*actif immobilisé* comprenant les bâtiments (installations spécialisées et constructions), le matériel, l'outillage, les plantations, les autres immobilisations corporelles et les animaux reproducteurs.

### **Capitaux permanents :**

*Capitaux propres + dettes à long ou moyen terme.*

### **Capitaux propres :**

*Situation nette + subventions d'investissement.*

### **Charges à l'hectare :**

Ensemble des charges d'exploitation et des charges financières rapportées à la SAU.

### **Charges d'approvisionnement :**

*Engrais et amendements + semences et plants + produits phytosanitaires + aliments du bétail + produits vétérinaires + combustibles, carburants et lubrifiants + fournitures et emballages.*

### **Charges courantes :**

*Charges d'exploitation + charges financières*

### **Charges exceptionnelles :**

*Valeur comptable des éléments de l'actif cédés + charges exceptionnelles sur opération de gestion + autres charges exceptionnelles.*

### **Charges d'exploitation :**

*Charges d'approvisionnement + autres charges d'exploitation.*

### **Charges d'exploitation autres (charges d'exploitation sans les charges d'approvisionnement) :**

*Travaux par tiers, eau, gaz, électricité, eau d'irrigation, petit matériel, autres fournitures (y compris carburant à la pompe), redevances de crédit-bail, loyers et fermages, loyers du matériel, loyers des animaux, entretien des bâtiments, entretien du matériel, assurances, honoraires vétérinaires, autres honoraires, transports et déplacements, frais divers de gestion, autres travaux à façon et services extérieurs, impôts et taxes, charges de personnel, dotations aux amortissements.*

### **Charges financières :**

*Intérêts + frais financiers.*

### **Charges de personnel :**

*Rémunération du personnel salarié (salaire versé et part ouvrière) + charges sociales du personnel salarié (part patronale).*

**Chiffre d'affaires :**

Somme des *produits sur ventes, travaux à façon, activités annexes, produits résiduels, pensions d'animaux, terres louées prêtes à semer, agritourisme, autres locations.*

**Classe de dimension économique des exploitations (Cdex) :**

Classement des exploitations selon leur taille, depuis 2010, en fonction de leur production brute standard (PBS) totale.

**Consommations intermédiaires :**

*Charges d'approvisionnement, travaux par tiers, eau, gaz, électricité, eau d'irrigation, petit matériel, autres fournitures (y compris carburant à la pompe), redevances de crédit-bail, loyers du matériel, loyers des animaux, entretien des bâtiments, entretien du matériel, honoraires vétérinaires, autres honoraires, transports et déplacements, frais divers de gestion, autres travaux à façon et services extérieurs.*

**Découverts et intérêts :**

*Comptes de banques ou chèques postaux si soldes créditeurs + intérêts courus à payer + concours bancaires courants (crédits de campagne, emprunts de trésorerie à court terme liés au cycle de production).*

**Dettes à court terme :**

*Dettes à moins de deux ans, à savoir : emprunts à court terme, comptes financiers débiteurs à la banque, comptes de tiers (fournisseurs, personnel, organismes sociaux et État).*

**Dettes financières à court terme :**

*Emprunts bancaires à court terme + comptes financiers (banques, chèques postaux, intérêts à payer, concours bancaires).*

**Dettes financières à long ou moyen terme :**

*Emprunts à plus de 2 ans.*

**Dettes non financières :**

*Avances et acomptes reçus des clients + dettes d'exploitation (fournisseurs, dettes sociales, État (TVA), dettes sur immobilisations, autres dettes) + produits constatés d'avance.*

**Dettes totales :**

*Dettes financières à long ou moyen terme + dettes financières à court terme + dettes non financières.*

**Dotations aux amortissements :**

Constatation comptable de la dépréciation annuelle et irréversible de la valeur des actifs immobilisés, résultant de l'usage, du temps, d'un changement technique ou de toute autre cause.

Le RICA retient la règle de l'amortissement linéaire des immobilisations.

**Effectifs animaux exprimés en UGB (unité-gros-bétail) :**

Résultat de la multiplication des effectifs moyens par un coefficient de conversion correspondant à chaque type d'animal. Voir la définition de UGB (unité-gros-bétail).

**Excédent brut (ou insuffisance brute) d'exploitation (EBE) :**

*Valeur ajoutée produite + remboursement forfaitaire de TVA + subventions d'exploitation + indemnités d'assurances – impôts et taxes – charges de personnel.*

**Fonds de roulement (besoin en) :**

*Actif cyclique (stocks et en-cours, avances et acomptes versés aux fournisseurs, créances, valeurs mobilières de placement, charges constatées d'avance) – dettes non financières.*

Dans une application plus rigoureuse du concept, les biens vivants et en-cours à cycle long serait à exclure du poste « actif cyclique », qui deviendrait donc « actif à cycle court », mais la nomenclature utilisée par le RICA ne le permet pas.

**Fonds de roulement net :**

*Capitaux propres + dettes financières (sauf concours bancaires courants et découverts bancaires) – actifs immobilisés – charges à répartir.*

**Fournitures :**

Depuis 2002, les charges de fournitures des tableaux standard correspondent à l'addition des charges d'emballage, de produits d'entretien, de fournitures d'atelier, de fournitures de bureau, de denrées pour le personnel, de matériaux divers, d'autres fournitures consommables et de matières premières.

**Immobilisations corporelles :**

*Terrains et aménagements fonciers (foncier) + bois et aménagements forestier + plantation + constructions + installations techniques + matériel et outillage + animaux reproducteurs + autres immobilisations corporelles.*

**Immobilisations financières :**

Participation à des organismes professionnels agricoles + part dans les établissements de crédit + autres immobilisations financières.

**Immobilisations incorporelles :**

*Frais d'établissement + TVA non récupérable sur les biens constituant des immobilisations + autres immobilisations incorporelles.*

**Indemnités d'assurance :**

Indemnités perçues au cours de l'exercice.

**Indépendance financière :**

*Ratio rapportant les capitaux propres aux capitaux permanents.*

**Intraconsommation :**

Ensemble des produits de l'exploitation utilisés comme *consommations intermédiaires*.

**Investissement :**

Différence entre acquisitions et cessions d'immobilisations (*bâtiments, installations spécialisées, matériel et outillage, plantations et autres immobilisations corporelles, augmentée de la différence entre stocks de fin et de début d'exercice*) pour les animaux reproducteurs

1. Voir la définition des soldes intermédiaires de gestion en annexe 3.

**Investissement net :**

*Investissement – dotations aux amortissements.*

**Investissement total :**

Différence entre les *acquisitions* et les *cessions* d'immobilisations réalisées au cours de l'exercice (y compris les *immobilisations foncières, incorporelles et financières*), augmentée de la différence entre les *stocks de début et de fin d'exercice* pour les animaux reproducteurs.

**Nombre d'exploitations représentées :**

À l'aide d'un jeu de coefficients d'extrapolation, calculés pour chaque combinaison des trois critères région, OTEX (orientation technico-économique), et CDEX dimension économique, et appliqués aux effectifs d'exploitations interrogées par le RICA, on détermine le nombre des exploitations représentées par cette enquête. En métropole, le champ couvert par le RICA est celui des exploitations dont la production brute standard est supérieure ou égale à 25 000 euros.

**Orientation technico-économique des exploitations (OTEX) :**

Classement des exploitations selon leur(s) production(s) principale(s) en fonction des *PBS* relatifs des différentes spéculations pratiquées.

**Passif total :**

*Capitaux propres + dettes totales + régularisation du passif.*

**Poids des charges courantes :**

*Charges courantes/produit courant.*

**Prélèvements privés :**

Solde des versements et des prélèvements, en espèces ou en nature, effectués par l'exploitant au cours de l'exercice.

**Primes bovines :**

Prime vaches allaitantes, primes abattage, autres primes bovines.

**Primes compensatoires :**

Subventions versées aux producteurs de céréales, oléagineux et de protéagineux.

**Production brute :**

*Produit brut + intraconsommations.*

**Production brute standard (PBS) :**

Dans chaque exploitation, pour chaque spéculation, une PBS est calculée en multipliant le nombre d'hectares de surface ou le nombre de têtes de bétail par le coefficient correspondant au produit et à la région considérés. La PBS totale est obtenue en effectuant la somme des PBS des diverses spéculations et caractérise la dimension (et la classe de dimension CDEX) de l'exploitation. Les contributions relatives des diverses spéculations permettent de calculer l'OTEX (orientation technico-économique). Les PBS s'expriment en euros. Dans cette publication, le calcul des OTEX et CDEX repose sur les coefficients de PBS « 2007 ».

**Production de l'exercice****(nette des achats d'animaux) :**

Somme des *produits bruts élémentaires* (animaux, produits animaux, végétaux, produits végétaux, produits horticoles) et des produits issus de la *production immobilisée, des travaux à façon, de la vente de produits résiduels, des pensions d'animaux, des terres louées prêtes à semer, des autres locations, de l'agritourisme et des produits d'activités annexes.*

**Production immobilisée :**

Travaux effectués par et pour l'entreprise durant l'exercice et dont le montant doit être affecté à un poste d'*immobilisation*. Il s'agit de la contrepartie de montants enregistrés en *charges d'exploitation* qui doivent, en définitive, être inscrits en *immobilisations*.

**Produits bruts élémentaires :**

## • Animaux

Somme des *ventes, variations de stocks, autoconsommation d'animaux*, diminuée des *achats d'animaux*.

## • Produits animaux

Somme des *ventes, variations de stocks, autoconsommation de produits animaux*.

## • Végétaux

Somme des *ventes, variations de stocks, autoconsommation de végétaux*.

## • Produits végétaux

Somme des *ventes variations de stocks, autoconsommation de végétaux transformés*.

## • Produits horticoles

Somme des *ventes, variations de stocks, autoconsommation de produits horticoles*.

**Produit courant :**

*Somme de la production de l'exercice (nette des achats d'animaux), des subventions d'exploitation, et des produits divers non exceptionnels.*

Par différence entre le produit courant et les charges courantes, on obtient le **résultat courant avant impôts**.

**Produits divers non exceptionnels :**

Rabais, remises et ristournes obtenus, ventes de produits résiduels, travaux à façon, produits des activités annexes, pensions d'animaux, terres louées prêtes à semer, agritourisme, autres locations, production immobilisée, subventions d'exploitation, indemnités d'assurance, remboursement forfaitaire de TVA, autres produits de gestion courante, produits financiers, transferts de charges.

**Produits exceptionnels :**

*Produits exceptionnels de gestion + produits de cession des éléments d'actif + quote-part des subventions d'investissement + autres produits exceptionnels*

**Remboursement d'emprunts à LMT****(long ou moyen terme) :**

Montant des remboursements de capital sur les prêts à plus de deux ans (non compris les charges financières).

1. Voir la définition des soldes intermédiaires de gestion en annexe 3.

### Remboursement forfaitaire de TVA :

Montant dû par l'État aux exploitations agricoles soumises au régime du remboursement forfaitaire en compensation de la TVA qu'elles ne peuvent pas récupérer.

### Résultat courant avant impôts (RCAI) :

*Résultat d'exploitation + résultat financier.* Dans le RICA, le RCAI est calculé avant déduction des cotisations sociales de l'exploitant.

### Résultat exceptionnel :

*Produits exceptionnels – charges exceptionnelles.*

### Résultat de l'exercice :

*Résultat courant avant impôts + résultat exceptionnel.*

### Résultat d'exploitation :

*Excédent brut (ou insuffisance brute) d'exploitation + transferts de charges + autres produits de gestion courante – dotations aux amortissements – autres charges de gestion courantes.*

### Résultat financier :

Produits financiers – *charges financières*

### SAU (superficie agricole utilisée) :

Terres labourables, terres en maraîchage ou sous-verre, terres florales, cultures permanentes, prairies et pâturages (y compris landes et parcours productifs). Les jardins familiaux ne sont pas compris dans la SAU.

### SAU en faire-valoir direct :

Superficies mises en valeur par le propriétaire, l'usufruitier ou par l'intermédiaire d'un salarié.

### SAU en fermage :

Terres mises en valeur par une autre personne que leur propriétaire ou usufruitier, moyennant un contrat de location. La caractéristique du fermage est que la redevance est fixée d'avance et indépendante des résultats de l'exercice.

### SAU en métayage :

Terres mises en valeur par l'association entre le bailleur et le preneur (métayer) sur la base d'un contrat de métayage. La caractéristique du métayage est que la production annuelle est répartie entre le bailleur et le métayer selon une clé fixée à l'avance.

### SFP (surface fourragère principale) :

Cultures fourragères et prairies.

### Situation nette :

*Capital individuel initial + variations de capital initial.*

### Stocks et en-cours :

*Approvisionnements, stocks de produits, animaux circulants (non reproducteurs), avances aux cultures, autres en-cours, c'est-à-dire biens en cours de formation au travers d'un processus de production, et non susceptibles d'être commercialisés en l'état.*

### Subventions d'exploitation :

Sommes accordées à l'entreprise à titre gratuit par l'Union européenne, l'État, certaines collectivités publiques, ou éventuellement d'autres tiers, pour lui permettre de compenser l'insuffisance de certains produits normaux ou de faire face à certaines charges normales de l'exercice.

À partir de 1993, la règle du moment d'enregistrement des subventions a été révisée. Le principe général n'est plus celui de l'encaissement mais celui des droits et obligations, c'est-à-dire celui de l'enregistrement au moment où les créances attachées aux opérations sont certaines. Ce principe n'exclut pas des enregistrements selon le principe de l'encaissement dans le cas où le montant de la créance ne peut pas être estimé à la clôture de l'exercice.

La réforme de la politique agricole commune (PAC) a introduit le principe du découplage des aides directes qui s'applique en France depuis 2006. Deux types d'aides sont en vigueur : des aides couplées à la production et l'aide découplée, fondée sur un dispositif de droits à paiement unique.

Dans cette publication, les subventions d'exploitation sont éclatées en sept rubriques.

#### Aides nationales et communautaires

- **Droits à paiement unique (DPU).**
- **Aides aux productions animales** (bovines et ovines) : maîtrise de la production laitière, aides aux produits laitiers (y compris paiements supplémentaires), prime au maintien du troupeau de vaches allaitantes, prime à l'abattage et primes aux bovins mâles (aides supprimées en 2010), paiements à l'extensification, aides aux veaux sous la mère et aux veaux biologiques, autres primes bovines, primes à la brebis et à la chèvre, autres aides ovines, autres aides animales.
- **Aides aux productions végétales** (compensatoires) : aides aux terres arables (céréales, oléagineux, protéagineux, - aides supprimées en 2010), chanvre, lin, aide à la culture du riz, aides aux cultures énergétiques (aides supprimées en 2010), aides à la surface pour les fruits à coque, aides à la diversité de l'assolement, aides aux légumineuses à grain, aides aux légumineuses fourragères, aides au secteur du vin et des fruits et légumes, autres aides aux plantes industrielles et autres aides au secteur végétal.
- **Autres aides nationales et communautaires** : aides directes pour compenser un handicap géographique (ICHN), aides directes pour compenser un accident climatique, aides agro-environnementales (prime herbagère agroenvironnementale PHAE par exemple), soutien à l'agriculture biologique, autres aides de l'État, à l'exclusion des subventions d'investissement telles que la Dotation d'installation des jeunes agriculteurs DJA.

#### Aides locales et régionales

Celles-ci sont réparties entre les secteurs animal, végétal et les autres aides.

### Subventions d'investissement (notamment subventions d'équipement) :

Sommes perçues en vue d'acquiescer ou de créer des immobilisations. Ces sommes sont échelonnées sur plusieurs années (ou « amorties »). La Dotation d'installation des jeunes agriculteurs (DJJA) est considérée comme une subvention d'équipement.

**STH (surface toujours en herbe) :**

Prairies permanentes.

**Tableau de financement :**

Le tableau de financement décrit les flux de ressources et d'emplois affectant le patrimoine au cours de l'exercice. Les principaux flux de ressources durables sont la *capacité d'autofinancement* et les nouvelles *dettes financières* (nouveaux emprunts à court, moyen ou long termes). Les emplois stables les plus importants sont les *prélèvements privés, le remboursement des dettes financières et les acquisitions d'immobilisations*. Par différence entre les flux de ressources durables et les flux d'emplois stables, on en déduit la variation du *fonds de roulement*. En rapprochant la variation du fonds de roulement et la variation du *besoin en fonds de roulement*, on détermine la variation de *trésorerie nette*.

**Taux d'endettement :**

*Ratio rapportant l'ensemble des dettes au total du passif.*

**Taux d'intérêt apparent :**

*Charges financières/dettes totales.*

**Trésorerie nette :**

*Disponibilités (banques, chèques postaux, intérêts à recevoir, caisse) – crédits de trésorerie (concours bancaires courants, découverts bancaires).*

**UGB (unité-gros-bétail) :**

Unité employée pour pouvoir comparer ou agréger des effectifs animaux d'espèces ou de catégories différentes.

Par définition, 1 vache laitière = 1 UGB. Les équivalences entre animaux sont basées sur leurs besoins alimentaires, on a par exemple 1 veau de boucherie = 0,45 UGB, 1 brebis-mère nourrice = 0,18 UGB, 1 truie = 0,5 UGB. Les coefficients utilisés depuis 1995 diffèrent pour quelques catégories de ceux utilisés précédemment. Ils ont en effet été recalés sur les coefficients de l'enquête structures.

**UTA (unité-travail-année) :**

Travail agricole effectué par une personne employée à plein temps pendant une année. Une UTA = 1 600 heures.

**UTANS :**

Travail effectué par une personne non salariée employée à plein temps pendant une année.

**Valeur ajoutée avec fermages non déduits (VAHF) :**

*Valeur ajoutée produite + loyers et fermages.*

**Valeur ajoutée produite :**

*Production de l'exercice nette des achats d'animaux – consommations intermédiaires – loyers et fermages – primes d'assurance – rabais et ristournes.*

**Valeurs disponibles :**

*Banques + chèques postaux + intérêts à recevoir + caisse et titres de placement.*

**Valeurs réalisables :**

*Avances et acomptes versés + clients + créances sociales + État + autres créances.*

**Variations de stocks approvisionnements :**

*Variation d'inventaire (stock fin – stock début) des biens d'approvisionnements.*

**Variations de stocks de produits :**

Variation d'inventaire (stock fin – stock début) des biens produits par l'exploitation : végétaux (en magasin et en terre), végétaux transformés, animaux (y compris animaux reproducteurs) et produits animaux (tels que lait, œufs...).

## ANNEXE 4

Dictionnaire des variables de l'enquête RICA, extrait pour l'étude toutes OTEX

| Variable | Libellé   | Type | Longueur |
|----------|---|------|----------|
| IDNUM    | Numéro de l'exploitation                                      | num  | 5        |
| MILEX    | Millésime de l'exercice                                       | num  | 4        |
| OTEFDD   | Orientation technico-économique en 16 postes (typologie 2007) | char | 4        |
| FJURI    | Code Forme juridique de l'exploitation                        | char | 1        |
| UTATO    | Nombre d'UTA total (en UTA)                                   | num  | 0        |
| UGBTO    | UGB total (tranche)   | char | 2        |
| SAFVD    | SAU en faire-valoir direct (tranche)                          | char | 2        |
| SAUTI    | SAU totale (tranche)  | char | 2        |
| CHARA    | Charge réelle d'approvisionnements (en euros)                 | num  | 0        |
| CONS5    | Actif : constructions (clôture) (en euros)                    | num  | 0        |
| ISPE5    | Actif : installations spécialisées (clôture) (en euros)       | num  | 0        |
| ENTBT    | Charges d'entretien des bâtiments (en euros)                  | num  | 0        |
| CHRCA    | Charge réelle de carburants et lubrifiants stockés (en euros) | num  | 0        |
| DISPO    | Disponibilités et titres (en euros)                           | num  | 0        |

## ANNEXE 5

Modalités des variables pour l'étude toutes OTEX

| VARIABLE | MOD  | LIBMOD   |
|----------|------|--|
| FJURI    | 0    | Exploitation individuelle  |
| FJURI    | 1    | Autre forme juridique (groupement de fait association etc.)  |
| FJURI    | 2    | GAEC   |
| FJURI    | 3    | EARL   |
| FJURI    | 4    | Autre société civile (SCEA)  |
| FJURI    | 5    | SA, SARL, EURL   |
| OTEFDD   | 1500 | Exploitations spécialisées en céréaliculture et en culture de plantes oléagineuses et protéagineuses |
| OTEFDD   | 1600 | Exploitations spécialisées en autres grandes cultures  |
| OTEFDD   | 2800 | Exploitations spécialisées en culture de légumes et champignons                                      |
| OTEFDD   | 2900 | Exploitations spécialisées en culture de fleurs et horticulture diverse                              |
| OTEFDD   | 3500 | Exploitations spécialisées en viticulture  |
| OTEFDD   | 3900 | Exploitations spécialisées en cultures fruitières et autres cultures permanentes                     |
| OTEFDD   | 4500 | Exploitations bovines spécialisées, orientation lait   |
| OTEFDD   | 4600 | Exploitations bovines spécialisées, orientation élevage et viande                                    |
| OTEFDD   | 4700 | Exploitations bovines lait, élevage et viande combinés   |
| OTEFDD   | 4813 | Exploitations spécialisées ovines et caprines  |
| OTEFDD   | 4840 | Exploitations avec ovins, caprins et autres herbivores   |
| OTEFDD   | 5100 | Exploitations porcines spécialisées  |
| OTEFDD   | 5200 | Exploitations avicoles spécialisées  |
| OTEFDD   | 5374 | Exploitations avec diverses combinaisons de granivores   |
| OTEFDD   | 6184 | Exploitations de polyculture et polyélevage  |
| OTEFDD   | 9000 | Exploitations non classées   |
| SAFVD    | 0    | Surface nulle  |
| SAFVD    | 1    | Surface non nulle et inférieure à 5 ha   |
| SAFVD    | 2    | Surface égale ou supérieure à 5 ha et inférieure à 10 ha   |
| SAFVD    | 3    | Surface égale ou supérieure à 10 ha et inférieure à 15 ha  |
| SAFVD    | 4    | Surface égale ou supérieure à 15 ha et inférieure à 20 ha  |
| SAFVD    | 5    | Surface égale ou supérieure à 20 ha et inférieure à 25 ha  |
| SAFVD    | 6    | Surface égale ou supérieure à 25 ha et inférieure à 30 ha  |
| SAFVD    | 7    | Surface égale ou supérieure à 30 ha et inférieure à 35 ha  |
| SAFVD    | 8    | Surface égale ou supérieure à 35 ha et inférieure à 40 ha  |
| SAFVD    | 9    | Surface égale ou supérieure à 40 ha et inférieure à 45 ha  |
| SAFVD    | 10   | Surface égale ou supérieure à 45 ha et inférieure à 50 ha  |
| SAFVD    | 11   | Surface égale ou supérieure à 50 ha et inférieure à 60 ha  |

|       |   |
|-------|---|
| SAFVD | 12 Surface égale ou supérieure à 60 ha et inférieure à 70 ha              |
| SAFVD | 13 Surface égale ou supérieure à 70 ha et inférieure à 80 ha              |
| SAFVD | 14 Surface égale ou supérieure à 80 ha et inférieure à 90 ha              |
| SAFVD | 15 Surface égale ou supérieure à 90 ha et inférieure à 100 ha             |
| SAFVD | 16 Surface égale ou supérieure à 100 ha et inférieure à 110 ha            |
| SAFVD | 17 Surface égale ou supérieure à 110 ha et inférieure à 120 ha            |
| SAFVD | 18 Surface égale ou supérieure à 120 ha et inférieure à 130 ha            |
| SAFVD | 19 Surface égale ou supérieure à 130 ha et inférieure à 140 ha            |
| SAFVD | 20 Surface égale ou supérieure à 140 ha et inférieure à 150 ha            |
| SAFVD | 21 Surface égale ou supérieure à 150 ha et inférieure à 160 ha            |
| SAFVD | 22 Surface égale ou supérieure à 160 ha et inférieure à 170 ha            |
| SAFVD | 23 Surface égale ou supérieure à 170 ha et inférieure à 180 ha            |
| SAFVD | 24 Surface égale ou supérieure à 180 ha et inférieure à 190 ha            |
| SAFVD | 25 Surface égale ou supérieure à 190 ha et inférieure à 200 ha            |
| SAFVD | 26 Surface égale ou supérieure à 200 ha et inférieure à 250 ha            |
| SAFVD | 27 Surface égale ou supérieure à 250 ha et inférieure à 300 ha            |
| SAFVD | 28 Surface égale ou supérieure à 300 ha et inférieure à 350 ha            |
| SAFVD | 29 Surface égale ou supérieure à 350 ha et inférieure à 400 ha            |
| SAFVD | 30 Surface égale ou supérieure 400 ha (médiane de classe en ha, voir fvd) |
| SAUTI | 0 Surface nulle   |
| SAUTI | 1 Surface non nulle et inférieure à 5 ha                                  |
| SAUTI | 2 Surface égale ou supérieure à 5 ha et inférieure à 10 ha                |
| SAUTI | 3 Surface égale ou supérieure à 10 ha et inférieure à 15 ha               |
| SAUTI | 4 Surface égale ou supérieure à 15 ha et inférieure à 20 ha               |
| SAUTI | 5 Surface égale ou supérieure à 20 ha et inférieure à 25 ha               |
| SAUTI | 6 Surface égale ou supérieure à 25 ha et inférieure à 30 ha               |
| SAUTI | 7 Surface égale ou supérieure à 30 ha et inférieure à 35 ha               |
| SAUTI | 8 Surface égale ou supérieure à 35 ha et inférieure à 40 ha               |
| SAUTI | 9 Surface égale ou supérieure à 40 ha et inférieure à 45 ha               |
| SAUTI | 10 Surface égale ou supérieure à 45 ha et inférieure à 50 ha              |
| SAUTI | 11 Surface égale ou supérieure à 50 ha et inférieure à 60 ha              |
| SAUTI | 12 Surface égale ou supérieure à 60 ha et inférieure à 70 ha              |
| SAUTI | 13 Surface égale ou supérieure à 70 ha et inférieure à 80 ha              |
| SAUTI | 14 Surface égale ou supérieure à 80 ha et inférieure à 90 ha              |
| SAUTI | 15 Surface égale ou supérieure à 90 ha et inférieure à 100 ha             |
| SAUTI | 16 Surface égale ou supérieure à 100 ha et inférieure à 110 ha            |
| SAUTI | 17 Surface égale ou supérieure à 110 ha et inférieure à 120 ha            |
| SAUTI | 18 Surface égale ou supérieure à 120 ha et inférieure à 130 ha            |
| SAUTI | 19 Surface égale ou supérieure à 130 ha et inférieure à 140 ha            |
| SAUTI | 20 Surface égale ou supérieure à 140 ha et inférieure à 150 ha            |
| SAUTI | 21 Surface égale ou supérieure à 150 ha et inférieure à 160 ha            |
| SAUTI | 22 Surface égale ou supérieure à 160 ha et inférieure à 170 ha            |
| SAUTI | 23 Surface égale ou supérieure à 170 ha et inférieure à 180 ha            |
| SAUTI | 24 Surface égale ou supérieure à 180 ha et inférieure à 190 ha            |
| SAUTI | 25 Surface égale ou supérieure à 190 ha et inférieure à 200 ha            |
| SAUTI | 26 Surface égale ou supérieure à 200 ha et inférieure à 250 ha            |
| SAUTI | 27 Surface égale ou supérieure à 250 ha et inférieure à 300 ha            |
| SAUTI | 28 Surface égale ou supérieure à 300 ha et inférieure à 350 ha            |
| SAUTI | 29 Surface égale ou supérieure à 350 ha et inférieure à 400 ha            |
| SAUTI | 30 Surface égale ou supérieure 400 ha (sauti médiane de classe en ha)     |
| UGBTO | 0 Nombre d'UGB nul  |
| UGBTO | 1 Nombre d'UGB non nul et inférieur à 5                                   |
| UGBTO | 2 Nombre d'UGB égal ou supérieur à 5 et inférieur à 10                    |
| UGBTO | 3 Nombre d'UGB égal ou supérieur à 10 et inférieur à 15                   |
| UGBTO | 4 Nombre d'UGB égal ou supérieur à 15 et inférieur à 20                   |
| UGBTO | 5 Nombre d'UGB égal ou supérieur à 20 et inférieur à 25                   |
| UGBTO | 6 Nombre d'UGB égal ou supérieur à 25 et inférieur à 30                   |
| UGBTO | 7 Nombre d'UGB égal ou supérieur à 30 et inférieur à 35                   |

|       |  |
|-------|--|
| UGBTO | 8 Nombre d'UGB égal ou supérieur à 35 et inférieur à 40  |
| UGBTO | 9 Nombre d'UGB égal ou supérieur à 40 et inférieur à 45  |
| UGBTO | 10 Nombre d'UGB égal ou supérieur à 45 et inférieur à 50   |
| UGBTO | 11 Nombre d'UGB égal ou supérieur à 50 et inférieur à 55   |
| UGBTO | 12 Nombre d'UGB égal ou supérieur à 55 et inférieur à 60   |
| UGBTO | 13 Nombre d'UGB égal ou supérieur à 60 et inférieur à 65   |
| UGBTO | 14 Nombre d'UGB égal ou supérieur à 65 et inférieur à 70   |
| UGBTO | 15 Nombre d'UGB égal ou supérieur à 70 et inférieur à 75   |
| UGBTO | 16 Nombre d'UGB égal ou supérieur à 75 et inférieur à 80   |
| UGBTO | 17 Nombre d'UGB égal ou supérieur à 80 et inférieur à 85   |
| UGBTO | 18 Nombre d'UGB égal ou supérieur à 85 et inférieur à 90   |
| UGBTO | 19 Nombre d'UGB égal ou supérieur à 90 et inférieur à 95   |
| UGBTO | 20 Nombre d'UGB égal ou supérieur à 95 et inférieur à 100  |
| UGBTO | 21 Nombre d'UGB égal ou supérieur à 100 et inférieur à 105   |
| UGBTO | 22 Nombre d'UGB égal ou supérieur à 105 et inférieur à 110   |
| UGBTO | 23 Nombre d'UGB égal ou supérieur à 110 et inférieur à 115   |
| UGBTO | 24 Nombre d'UGB égal ou supérieur à 115 et inférieur à 120   |
| UGBTO | 25 Nombre d'UGB égal ou supérieur à 120 et inférieur à 125   |
| UGBTO | 26 Nombre d'UGB égal ou supérieur à 125 et inférieur à 130   |
| UGBTO | 27 Nombre d'UGB égal ou supérieur à 130 et inférieur à 135   |
| UGBTO | 28 Nombre d'UGB égal ou supérieur à 135 et inférieur à 140   |
| UGBTO | 29 Nombre d'UGB égal ou supérieur à 140 et inférieur à 145   |
| UGBTO | 30 Nombre d'UGB égal ou supérieur à 145 et inférieur à 150   |
| UGBTO | 31 Nombre d'UGB égal ou supérieur à 150 et inférieur à 160   |
| UGBTO | 32 Nombre d'UGB égal ou supérieur à 160 et inférieur à 170   |
| UGBTO | 33 Nombre d'UGB égal ou supérieur à 170 et inférieur à 180   |
| UGBTO | 34 Nombre d'UGB égal ou supérieur à 180 et inférieur à 190   |
| UGBTO | 35 Nombre d'UGB égal ou supérieur à 190 et inférieur à 200   |
| UGBTO | 36 Nombre d'UGB égal ou supérieur à 200 et inférieur à 210   |
| UGBTO | 37 Nombre d'UGB égal ou supérieur à 210 et inférieur à 220   |
| UGBTO | 38 Nombre d'UGB égal ou supérieur à 220 et inférieur à 230   |
| UGBTO | 39 Nombre d'UGB égal ou supérieur à 230 et inférieur à 240   |
| UGBTO | 40 Nombre d'UGB égal ou supérieur à 240 et inférieur à 250   |
| UGBTO | 41 Nombre d'UGB égal ou supérieur à 250 et inférieur à 260   |
| UGBTO | 42 Nombre d'UGB égal ou supérieur à 260 et inférieur à 270   |
| UGBTO | 43 Nombre d'UGB égal ou supérieur à 270 et inférieur à 280   |
| UGBTO | 44 Nombre d'UGB égal ou supérieur à 280 et inférieur à 290   |
| UGBTO | 45 Nombre d'UGB égal ou supérieur à 290 et inférieur à 300   |
| UGBTO | 46 Nombre d'UGB égal ou supérieur à 300 et inférieur à 350   |
| UGBTO | 47 Nombre d'UGB égal ou supérieur à 350 et inférieur à 400   |
| UGBTO | 48 Nombre d'UGB égal ou supérieur à 400 et inférieur à 450   |
| UGBTO | 49 Nombre d'UGB égal ou supérieur à 450 et inférieur à 500   |
| UGBTO | 50 Nombre d'UGB égal ou supérieur à 500 (ugbto, médiane de classe, en UGB)   |
| fvd   | SAFVD/SAUTI en %   |
| UTATO | UTA (=1600h) en UTA  |
| chara | en UC, 1UC = 1Euro x IPAMPA(2005)  |
| cons  | cons = ((CONS5 + ISPE5 + ENTBT) x IPAMPA(2005))/159 - tel que 200 x IPAMPA(2005) [4 Constructeurs] - en m <sup>2</sup> de structure couverte posée, dallée, bardée, équipée. |
| pmda  | pmda = ((CHRCOA x IPAMPA(2005))/8,45) x 151 - tel que 12,07 x IPAMPA(2005) [pour 700h et 151ch en moyenne, Trame sur 17 modèles] en ch pour 700h                             |
| DISPO | En Euro  |



## ANNEXE 6

Tableau des exploitations présentes 10 années réduit et traité, extrait

| IDNUM | OTEFDD | MILEX | fjuri | fvd   | UTATO | sauti | chara | cons   | pmda   | ugbto | DISPO |
|-------|--------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| 2234  | 6184   | 2000  | 0     | 7,14  | 1,5   | 105   | 57428 | 80,27  | 85354  | 27,5  | 0     |
| 2234  | 6184   | 2001  | 0     | 7,14  | 2     | 105   | 57983 | 65,19  | 89127  | 32,5  | 3617  |
| 2234  | 6184   | 2002  | 0     | 7,14  | 3     | 105   | 59576 | 58,84  | 73752  | 32,5  | 0     |
| 2234  | 6184   | 2003  | 0     | 7,14  | 2,45  | 105   | 63899 | 52,18  | 78243  | 32,5  | 6618  |
| 2234  | 6184   | 2004  | 0     | 7,14  | 2     | 105   | 70104 | 35,6   | 102947 | 27,5  | 13472 |
| 2234  | 6184   | 2005  | 0     | 7,14  | 2     | 105   | 68311 | 28,55  | 76822  | 27,5  | 5084  |
| 2234  | 6184   | 2006  | 0     | 7,14  | 2     | 105   | 67741 | 18,53  | 77761  | 27,5  | 11671 |
| 2234  | 6184   | 2007  | 0     | 11,9  | 2     | 105   | 74713 | 10,26  | 123040 | 32,5  | 5165  |
| 2234  | 6184   | 2008  | 0     | 11,9  | 2     | 105   | 79588 | 3,15   | 116388 | 32,5  | 6186  |
| 2234  | 6184   | 2009  | 0     | 15,22 | 2     | 115   | 86974 | 4,8    | 119577 | 32,5  | 743   |
| 2456  | 4500   | 2000  | 0     | 42,86 | 1,23  | 17,5  | 11168 | 63,6   | 5576   | 22,5  | 5589  |
| 2456  | 4500   | 2001  | 0     | 42,86 | 1,23  | 17,5  | 12379 | 54,43  | 15823  | 22,5  | 6008  |
| 2456  | 4500   | 2002  | 0     | 60    | 1     | 12,5  | 15519 | 43,93  | 7410   | 22,5  | 6509  |
| 2456  | 4500   | 2003  | 0     | 42,86 | 1     | 17,5  | 13128 | 49,1   | 9299   | 27,5  | 205   |
| 2456  | 4500   | 2004  | 0     | 42,86 | 1     | 17,5  | 14521 | 40,3   | 7626   | 22,5  | 5167  |
| 2456  | 4500   | 2005  | 0     | 42,86 | 1     | 17,5  | 13747 | 29,14  | 9453   | 22,5  | 244   |
| 2456  | 4500   | 2006  | 0     | 42,86 | 1     | 17,5  | 11743 | 25,9   | 9342   | 17,5  | 1793  |
| 2456  | 4500   | 2007  | 0     | 42,86 | 1     | 17,5  | 10902 | 18,73  | 6398   | 17,5  | 4     |
| 2456  | 4500   | 2008  | 0     | 60    | 1     | 12,5  | 12065 | 10,82  | 7158   | 22,5  | 1957  |
| 2456  | 4500   | 2009  | 0     | 33,33 | 1     | 22,5  | 16578 | 8,46   | 8072   | 22,5  | 2614  |
| 3413  | 1500   | 2000  | 0     | 41,18 | 1     | 42,5  | 17189 | 4,85   | 6414   | 2,5   | 4835  |
| 3413  | 1500   | 2001  | 0     | 41,18 | 1     | 42,5  | 22315 | 0,36   | 14297  | 2,5   | 757   |
| 3413  | 1500   | 2002  | 0     | 41,18 | 1     | 42,5  | 19829 | 0      | 4474   | 2,5   | 13311 |
| 3413  | 1600   | 2003  | 0     | 46,67 | 1     | 37,5  | 15334 | 10,63  | 11956  | 2,5   | 6384  |
| 3413  | 1600   | 2004  | 0     | 46,67 | 1     | 37,5  | 11574 | 32,11  | 15890  | 2,5   | 5392  |
| 3413  | 1600   | 2005  | 0     | 46,67 | 1     | 37,5  | 15006 | 17,89  | 27520  | 2,5   | 4529  |
| 3413  | 1600   | 2006  | 0     | 46,67 | 1     | 37,5  | 15847 | 4,32   | 34332  | 2,5   | 1126  |
| 3413  | 1600   | 2007  | 0     | 46,67 | 1     | 37,5  | 17180 | 1,29   | 22856  | 2,5   | 10508 |
| 3413  | 1600   | 2008  | 0     | 46,67 | 1     | 37,5  | 18035 | 6,65   | 10233  | 2,5   | 10640 |
| 3413  | 1600   | 2009  | 0     | 63,64 | 1     | 27,5  | 15107 | 24,41  | 36629  | 2,5   | 3072  |
| 3568  | 4500   | 2000  | 0     | 33,33 | 1,45  | 37,5  | 11903 | 229,68 | 14191  | 27,5  | 2835  |
| 3568  | 4500   | 2001  | 0     | 33,33 | 1,45  | 37,5  | 10921 | 205,09 | 16340  | 32,5  | 3378  |
| 3568  | 4500   | 2002  | 0     | 33,33 | 1,25  | 37,5  | 8068  | 333,54 | 20576  | 32,5  | 7420  |
| 3568  | 4500   | 2003  | 0     | 29,41 | 1,2   | 42,5  | 9833  | 398,77 | 9096   | 32,5  | 1731  |
| 3568  | 4500   | 2004  | 0     | 29,41 | 1,1   | 42,5  | 8479  | 344,08 | 13207  | 32,5  | 9096  |
| 3568  | 4500   | 2005  | 0     | 26,32 | 1,1   | 47,5  | 10023 | 292,79 | 15332  | 32,5  | 7590  |
| 3568  | 4500   | 2006  | 0     | 26,32 | 1     | 47,5  | 8725  | 235,85 | 15059  | 32,5  | 6102  |
| 3568  | 4500   | 2007  | 0     | 26,32 | 1     | 47,5  | 11267 | 188,3  | 10175  | 32,5  | 7494  |
| 3568  | 4500   | 2008  | 0     | 26,32 | 1     | 47,5  | 12223 | 142,63 | 19407  | 32,5  | 6811  |
| 3568  | 4500   | 2009  | 0     | 26,32 | 1     | 47,5  | 11335 | 113,41 | 16421  | 32,5  | 6074  |
| 3758  | 6184   | 2000  | 2     | 0     | 1,63  | 37,5  | 17942 | 50,03  | 25091  | 32,5  | 15147 |
| 3758  | 6184   | 2001  | 3     | 0     | 1,57  | 37,5  | 17324 | 37,73  | 22961  | 32,5  | 10301 |
| 3758  | 6184   | 2002  | 3     | 0     | 1,19  | 37,5  | 15494 | 38,21  | 22743  | 32,5  | 7911  |
| 3758  | 6184   | 2003  | 3     | 0     | 1,03  | 37,5  | 16321 | 33,16  | 24160  | 32,5  | 5144  |
| 3758  | 6184   | 2004  | 3     | 0     | 1     | 37,5  | 16878 | 26,38  | 23474  | 27,5  | 6616  |
| 3758  | 6184   | 2005  | 3     | 0     | 1     | 37,5  | 18384 | 21,03  | 22462  | 27,5  | 11418 |
| 3758  | 6184   | 2006  | 3     | 0     | 1     | 37,5  | 17602 | 15,5   | 22033  | 32,5  | 9464  |
| 3758  | 4500   | 2007  | 3     | 0     | 1     | 37,5  | 13312 | 21,94  | 23296  | 37,5  | 23201 |
| 3758  | 4500   | 2008  | 3     | 0     | 1     | 37,5  | 13894 | 9,87   | 24064  | 37,5  | 7126  |

...

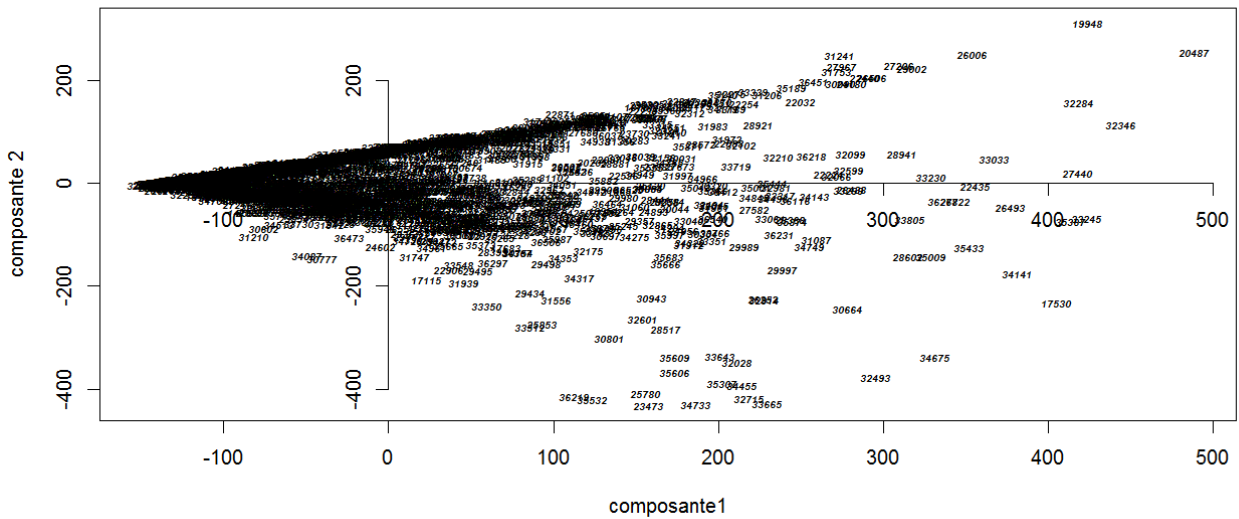
...

...

## ANNEXE 7

Cohérences positionnements et artefacts des exploitations toutes OTEX, résultats quasi exhaustifs  
Exploitations « stables », en réorganisation et en rupture.

```
> explo2000<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2000.csv', header=T, dec=',', sep=';')
> rownames(explo2000)<-explo2000[,1]
> explo2000<-explo2000[,4:12]
> #Etude sommaire
> summary(explo2000)
  fjuri    fvd  UTATO   sauti   chara    cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.750 Min. : 0.00 Min. : 1162 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:32.50 1st Qu.: 20940 1st Qu.: 47.09 1st Qu.: 29839
Median :0.000 Median : 3.85 Median :1.810 Median :75.00 Median : 38225 Median :187.44 Median :59824
Mean :1.138 Mean :20.94 Mean :2.222 Mean :90.19 Mean : 52446 Mean :348.57 Mean :79344
3rd Qu.:3.000 3rd Qu.:33.33 3rd Qu.:2.500 3rd Qu.:125.00 3rd Qu.: 66170 3rd Qu.:447.58 3rd Qu.:106882
Max. :3.000 Max. :100.00 Max. :20.000 Max. :400.00 Max. :1274575 Max. :4020.83 Max. :685854
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1168
Median :12.50 Median : 7273
Mean :52.46 Mean :17900
3rd Qu.:82.50 3rd Qu.:19084
Max. :500.00 Max. :464453
> cor(explo2000)
  fjuri    fvd  UTATO   sauti   chara    cons   pmda   ugpto    DISPO
fjuri 1.0000000 -0.48205072 0.25121626 0.29118490 0.2614950 0.22968962 0.3117705 0.13334143 0.18438633
fvd -0.4820507 1.00000000 -0.01825993 -0.33963937 -0.1150977 -0.07965773 -0.2742800 -0.15816828 -0.07311314
UTATO 0.2512163 -0.01825993 1.00000000 -0.04975560 0.5179614 0.34058451 0.2281375 -0.05118648 0.36469094
sauti 0.2911849 -0.33963937 -0.04975560 1.00000000 0.2812514 0.11620595 0.6922563 0.25536396 0.02557139
chara 0.2614950 -0.11509769 0.51796139 0.28125144 1.00000000 0.37871148 0.4194144 0.24731481 0.30969616
cons 0.2296896 -0.07965773 0.34058451 0.11620595 0.3787115 1.00000000 0.1962162 0.37738610 0.09040970
pmda 0.3117705 -0.27428002 0.22813746 0.69225627 0.4194144 0.19621619 1.00000000 0.16679104 0.11299957
ugpto 0.1333414 -0.15816828 -0.05118648 0.25536396 0.2473148 0.37738610 0.1667910 1.00000000 -0.05354185
DISPO 0.1843863 -0.07311314 0.36469094 0.02557139 0.3096962 0.09040970 0.1129996 -0.05354185 1.00000000
> explo2000<-explo2000[-1377,]
> #ACP (dizaines m² centaines h, milliers ch, €)
> explo2000[,3]<-explo2000[,3]*16
> explo2000[,5]<-explo2000[,5]/1000
> explo2000[,6]<-explo2000[,6]/10
> explo2000[,7]<-explo2000[,7]/1000
> explo2000[,9]<-explo2000[,9]/1000
> explo2000acp<-princomp(explo2000)
> summary(explo2000acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 105.2504759 74.7926874 54.4464737 37.72104610 35.4798791 31.36874205 27.74225153 19.35514297
Proportion of Variance 0.4531273 0.2288181 0.1212583 0.05820222 0.0514916 0.04025004 0.03148151 0.01532374
Cumulative Proportion 0.4531273 0.6819455 0.8032038 0.86140602 0.9128976 0.95314766 0.98462917 0.99995292
      Comp.9
Standard deviation 1.0728877967
Proportion of Variance 0.0000470848
Cumulative Proportion 1.0000000000
> #Représentation graphique
> plot(explo2000acp$scores[,1],explo2000acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2000)[[1]]
> text(explo2000acp$scores[,1],explo2000acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)
```



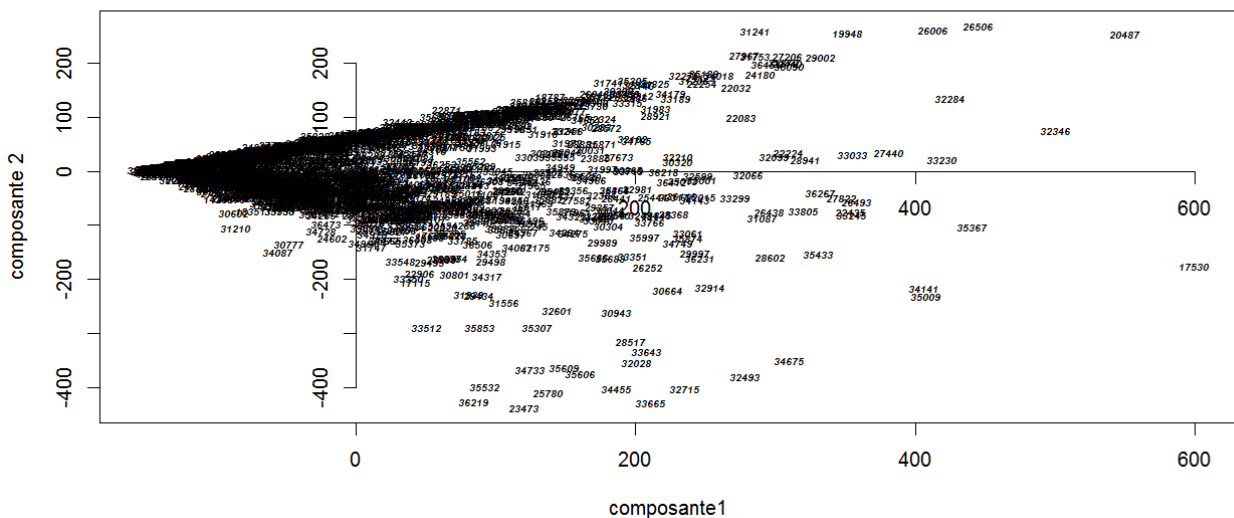
```
> explo2001<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2001.csv', header=T, dec=',', sep=',')
> rownames(explo2001)<-explo2001[,1]
> explo2001<-explo2001[,4:12]
> #Etude sommaire
> summary(explo2001)
  fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.750 Min. : 0.00 Min. : 704 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:32.50 1st Qu.: 20626 1st Qu.: 42.64 1st Qu.: 33712
Median :0.000 Median : 3.85 Median :1.820 Median : 75.00 Median : 38386 Median :175.93 Median : 65897
Mean :1.138 Mean :21.24 Mean :2.171 Mean :90.92 Mean : 53204 Mean :347.29 Mean :87001
3rd Qu.:3.000 3rd Qu.:33.33 3rd Qu.:2.465 3rd Qu.:125.00 3rd Qu.: 68203 3rd Qu.:458.42 3rd Qu.:118855
Max. :3.000 Max. :100.00 Max. :19.530 Max. :400.00 Max. :1297640 Max. :4341.56 Max. :683390
  ugpto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1307
Median : 7.50 Median : 8048
Mean : 52.96 Mean : 18709
3rd Qu.: 82.50 3rd Qu.: 21456
Max. :500.00 Max. :451891
> cor(explo2001)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.0000000 -0.4892454 0.26274028 0.29368062 0.2617693 0.23891394 0.3125800 0.13701717 0.17699549
fvd -0.4892454 1.0000000 -0.03685145 -0.34049362 -0.1319734 -0.09260813 -0.2857965 -0.15180296 -0.09650800
UTATO 0.2627403 -0.03685145 1.0000000 -0.04895340 0.4996716 0.34802159 0.2056481 -0.03646962 0.36474375
sauti 0.2936806 -0.34049362 -0.04895340 1.0000000 0.3031182 0.13760600 0.7076060 0.27145428 0.08193157
chara 0.2617693 -0.13197339 0.49967158 0.30311820 1.0000000 0.38983729 0.4308385 0.24965093 0.33689715
cons 0.2389139 -0.09260813 0.34802159 0.13760600 0.3898373 1.0000000 0.1975464 0.39060911 0.10784714
pmda 0.3125800 -0.28579650 0.20564810 0.70760602 0.4308385 0.19754642 1.0000000 0.14249057 0.17444795
ugpto 0.1370172 -0.15180296 -0.03646962 0.27145428 0.2496509 0.39060911 0.1424906 1.0000000 -0.01782992
DISPO 0.1769955 -0.09650800 0.36474375 0.08193157 0.3368972 0.10784714 0.1744480 -0.01782992 1.00000000
> explo2001<-explo2001[-1377,]
> #ACP (dizaines m² certaines h, milliers ch, €)
> explo2001[,3]<-explo2001[,3]*16
> explo2001[,5]<-explo2001[,5]/1000
> explo2001[,6]<-explo2001[,6]/10
> explo2001[,7]<-explo2001[,7]/1000
> explo2001[,9]<-explo2001[,9]/1000
> explo2001acp<-princomp(explo2001)
> summary(explo2001acp)
Importance of components:
  Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
```

Standard deviation 108.6894479 76.1858373 53.7792710 37.3502007 34.26717569 32.06437188 27.99549808 19.25159436  
 Proportion of Variance 0.4676201 0.2297560 0.1144849 0.0552210 0.04648096 0.04069714 0.03102379 0.01467073  
 Cumulative Proportion 0.4676201 0.6973762 0.8118611 0.8670821 0.91356302 0.95426016 0.98528395 0.99995468

Comp.9

Standard deviation 1.069947e+00  
 Proportion of Variance 4.531511e-05  
 Cumulative Proportion 1.000000e+00

```
> #Représentation graphique
> plot(explo2001acp$scores[,1],explo2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2001)[[1]]
> text(explo2001acp$scores[,1],explo2001acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)
```



```
> explo2002<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2002.csv', header=T, dec=',', sep=';')
```

```
> rownames(explo2002)<-explo2002[,1]
```

```
> explo2002<-explo2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(explo2002)
```

|          | fjuri  | fvd           | UTATO         | sauti          | chara          | cons           | pmda           | ugbto | DISPO |
|----------|--------|---------------|---------------|----------------|----------------|----------------|----------------|-------|-------|
| Min.     | :0.000 | Min. : 0.00   | Min. :0.780   | Min. : 0.00    | Min. : 694     | Min. : 0.00    | Min. : 0       |       |       |
| 1st Qu.: | 0.000  | 1st Qu.: 0.00 | 1st Qu.:1.000 | 1st Qu.:32.50  | 1st Qu.: 21259 | 1st Qu.: 40.12 | 1st Qu.: 28476 |       |       |
| Median:  | 0.000  | Median : 3.85 | Median :2.000 | Median :75.00  | Median : 38862 | Median :174.43 | Median :57091  |       |       |
| Mean :   | 1.138  | Mean :21.89   | Mean :2.437   | Mean :91.89    | Mean : 53225   | Mean :348.53   | Mean :76581    |       |       |
| 3rd Qu.: | 3.000  | 3rd Qu.:33.33 | 3rd Qu.:2.800 | 3rd Qu.:135.00 | 3rd Qu.: 67949 | 3rd Qu.:463.43 | 3rd Qu.:105897 |       |       |
| Max. :   | 3.000  | Max. :100.00  | Max. :30.060  | Max. :400.00   | Max. :1315025  | Max. :4020.19  | Max. :848505   |       |       |

```
> cor(explo2002)
```

|       | fjuri      | fvd         | UTATO       | sauti       | chara      | cons        | pmda       | ugbto       | DISPO       |
|-------|------------|-------------|-------------|-------------|------------|-------------|------------|-------------|-------------|
| fjuri | 1.0000000  | -0.49793369 | 0.22117150  | 0.28861198  | 0.2679868  | 0.24457267  | 0.2932891  | 0.13190862  | 0.16368071  |
| fvd   | -0.4979337 | 1.0000000   | -0.02667413 | -0.34817447 | -0.1192389 | -0.09852485 | -0.2854259 | -0.14685030 | -0.10054004 |
| UTATO | 0.2211715  | -0.02667413 | 1.0000000   | -0.06909580 | 0.4853969  | 0.29660271  | 0.1414542  | -0.07848698 | 0.29603838  |
| sauti | 0.2886120  | -0.34817447 | -0.06909580 | 1.0000000   | 0.2767920  | 0.13777710  | 0.6782793  | 0.27332810  | 0.06959989  |
| chara | 0.2679868  | -0.11923894 | 0.48539691  | 0.27679202  | 1.0000000  | 0.37881441  | 0.4011638  | 0.23438148  | 0.35722167  |
| cons  | 0.2445727  | -0.09852485 | 0.29660271  | 0.13777710  | 0.3788144  | 1.0000000   | 0.1845350  | 0.38653740  | 0.09644360  |
| pmda  | 0.2932891  | -0.28542585 | 0.14145425  | 0.67827935  | 0.4011638  | 0.18453505  | 1.0000000  | 0.18338285  | 0.15636590  |

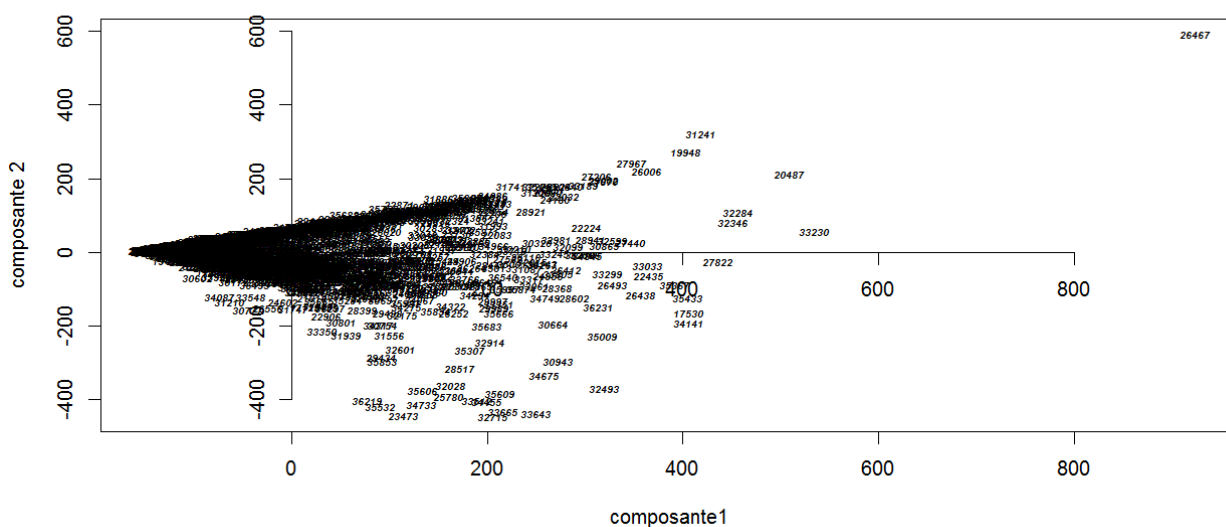




```

> explo2004<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2004.csv', header=T, dec=',', sep=',')
> rownames(explo2004)<-explo2004[,1]
> explo2004<-explo2004[,4:12]
> #Etude sommaire
> summary(explo2004)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :0.950 Min. : 0.00 Min. : 1055 Min. : 0.00 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:32.50 1st Qu.: 21162 1st Qu.: 38.12 1st Qu.: 28991
Median :0.000 Median : 4.05 Median :2.000 Median :75.00 Median : 39068 Median :162.60 Median : 61836
Mean :1.138 Mean :22.71 Mean :2.415 Mean :93.45 Mean : 52514 Mean :334.67 Mean : 83616
3rd Qu.:3.000 3rd Qu.:36.67 3rd Qu.:2.815 3rd Qu.:135.00 3rd Qu.: 68540 3rd Qu.:446.39 3rd Qu.:112437
Max. :3.000 Max. :100.00 Max. :31.000 Max. :400.00 Max. :1069892 Max. :6034.74 Max. :1482112
  ugpto    DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 1024
Median : 2.50 Median : 7791
Mean :52.97 Mean :18874
3rd Qu.:82.50 3rd Qu.:21148
Max. :500.00 Max. :450787
> cor(explo2004)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.51166043 0.23674576 0.28594904 0.2794680 0.24533509 0.2789578 0.13230621 0.18480125
fvd -0.5116604 1.00000000 -0.03451989 -0.36078753 -0.1385899 -0.07806072 -0.2771187 -0.14127830 -0.11265811
UTATO 0.2367458 -0.03451989 1.00000000 -0.07324783 0.4972568 0.28657996 0.1683381 -0.08068126 0.30997941
sauti 0.2859490 -0.36078753 -0.07324783 1.00000000 0.3021121 0.14142862 0.6426737 0.27164462 0.12227732
chara 0.2794680 -0.13858985 0.49725678 0.30211211 1.00000000 0.39904657 0.4098805 0.28293288 0.28709785
cons 0.2453351 -0.07806072 0.28657996 0.14142862 0.3990466 1.00000000 0.1734513 0.36436622 0.10537257
pmda 0.2789578 -0.27711870 0.16833814 0.64267374 0.4098805 0.17345126 1.0000000 0.18102509 0.23173789
ugpto 0.1323062 -0.14127830 -0.08068126 0.27164462 0.2829329 0.36436622 0.1810251 1.0000000 -0.01769175
DISPO 0.1848012 -0.11265811 0.30997941 0.12227732 0.2870979 0.10537257 0.2317379 -0.01769175 1.00000000
> explo2004<-explo2004[-1377,]
> #ACP (dizaines m2 centaines h, milliers ch, €)
> explo2004[,3]<-explo2004[,3]*16
> explo2004[,5]<-explo2004[,5]/1000
> explo2004[,6]<-explo2004[,6]/10
> explo2004[,7]<-explo2004[,7]/1000
> explo2004[,9]<-explo2004[,9]/1000
> explo2004acp<-princomp(explo2004)
> summary(explo2004acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 112.9297029 76.9273357 56.8390556 44.1578195 35.4792076 31.74896933 28.83797225 24.64833117
Proportion of Variance 0.4627639 0.2147358 0.1172295 0.0707552 0.0456763 0.03657652 0.03017676 0.02204541
Cumulative Proportion 0.4627639 0.6774998 0.7947292 0.8654844 0.9111607 0.94773726 0.97791402 0.99995943
      Comp.9
Standard deviation 1.057357e+00
Proportion of Variance 4.056826e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(explo2004acp$scores[,1],explo2004acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2004)[[1]]
> text(explo2004acp$scores[,1],explo2004acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2005<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2005.csv', header=T, dec=',', sep=',')
> rownames(explo2005)<-explo2005[,1]
> explo2005<-explo2005[,4:12]
> #Etude sommaire
> summary(explo2005)
  fhuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 0.00 Min. : 937 Min. : 0.00 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:32.50 1st Qu.: 20656 1st Qu.: 35.89 1st Qu.:31085
Median :0.000 Median : 4.55 Median :2.000 Median :75.00 Median :39124 Median :152.96 Median :64063
Mean :1.138 Mean :23.00 Mean :2.404 Mean :94.66 Mean : 52824 Mean :324.97 Mean :86509
3rd Qu.:3.000 3rd Qu.:37.38 3rd Qu.:2.900 3rd Qu.:135.00 3rd Qu.: 69215 3rd Qu.:450.38 3rd Qu.:116190
Max. :3.000 Max. :100.00 Max. :27.320 Max. :400.00 Max. :1072947 Max. :5734.23 Max. :795564
  ugpto  DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 1152
Median : 7.50 Median : 8191
Mean : 53.65 Mean : 19737
3rd Qu.: 82.50 3rd Qu.: 22376
Max. :500.00 Max. :585354
> cor(explo2005)
   fhuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fhuri 1.0000000 -0.51678786 0.24637094 0.28584794 0.2848385 0.2465553 0.2976425 0.13218415 0.16858796
fvd   -0.5167879 1.00000000 -0.04920486 -0.35679341 -0.1443383 -0.1101398 -0.3051285 -0.13998407 -0.10465034
UTATO 0.2463709 -0.04920486 1.00000000 -0.06942516 0.5078374 0.3106762 0.1235247 -0.08068015 0.32098043
sauti 0.2858479 -0.35679341 -0.06942516 1.00000000 0.3194577 0.1431006 0.7297342 0.27002358 0.09720460
chara 0.2848385 -0.14433834 0.50783737 0.31945770 1.0000000 0.4035823 0.4291285 0.26617598 0.29216360
cons  0.2465553 -0.11013977 0.31067619 0.14310064 0.4035823 1.0000000 0.1896837 0.35874327 0.12981359
pmda  0.2976425 -0.30512847 0.12352466 0.72973416 0.4291285 0.1896837 1.0000000 0.21031103 0.20017601
ugpto 0.1321841 -0.13998407 -0.08068015 0.27002358 0.2661760 0.3587433 0.2103110 1.0000000 -0.01482889
DISPO 0.1685880 -0.10465034 0.32098043 0.09720460 0.2921636 0.1298136 0.2001760 -0.01482889 1.00000000
> explo2005<-explo2005[-1377,]
> #ACP (dizaines m² centaines h, milliers ch, €)
> explo2005[,3]<-explo2005[,3]*16
> explo2005[,5]<-explo2005[,5]/1000
> explo2005[,6]<-explo2005[,6]/10
> explo2005[,7]<-explo2005[,7]/1000
> explo2005[,9]<-explo2005[,9]/1000
> explo2005acp<-princomp(explo2005)
> summary(explo2005acp)
Importance of components:
   Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8

```

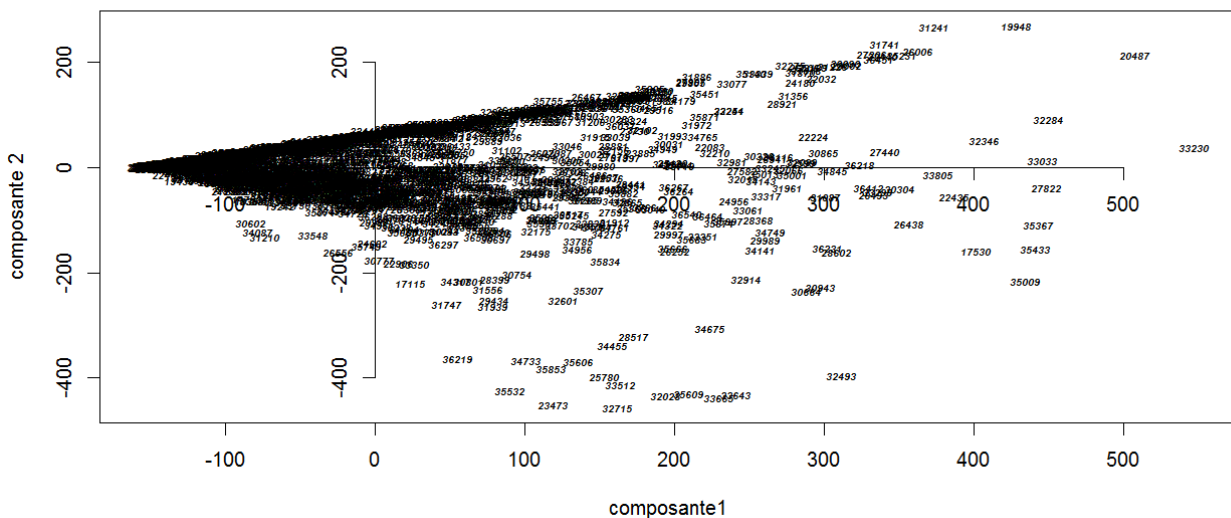


Standard deviation 114.5671482 76.7305459 56.1315013 39.67125928 35.15532503 32.91607997 29.24248685 23.95257425  
 Proportion of Variance 0.4775198 0.2141942 0.1146264 0.05725628 0.04496281 0.03941735 0.03110998 0.02087255  
 Cumulative Proportion 0.4775198 0.6917140 0.8063404 0.86359667 0.90855948 0.94797682 0.97908681 0.99995936

Comp.9

Standard deviation 1.0569010408  
 Proportion of Variance 0.0000406387  
 Cumulative Proportion 1.0000000000

```
> #Représentation graphique
> plot(explo2005acp$scores[,1],explo2005acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2005)[[1]]
> text(explo2005acp$scores[,1],explo2005acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)
```



```
> explo2006<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2006.csv', header=T, dec=',', sep=';')
```

```
> rownames(explo2006)<-explo2006[,1]
```

```
> explo2006<-explo2006[,4:12]
```

```
> #Etude sommaire
```

```
> summary(explo2006)
```

|          | fjuri  | fvd            | UTATO         | sauti          | chara          | cons           | pmda           |
|----------|--------|----------------|---------------|----------------|----------------|----------------|----------------|
| Min.     | :0.000 | Min. : 0.00    | Min. :0.750   | Min. : 0.00    | Min. : 940     | Min. : 0.0     | Min. : 0       |
| 1st Qu.: | 0.000  | 1st Qu.: 0.00  | 1st Qu.:1.000 | 1st Qu.: 37.50 | 1st Qu.: 20490 | 1st Qu.: 30.7  | 1st Qu.: 32127 |
| Median : | 0.000  | Median : 4.55  | Median :2.000 | Median : 75.00 | Median : 38344 | Median :135.7  | Median :63568  |
| Mean :   | 1.138  | Mean : 23.26   | Mean :2.396   | Mean : 95.71   | Mean : 52431   | Mean :307.4    | Mean :86092    |
| 3rd Qu.: | 3.000  | 3rd Qu.: 38.09 | 3rd Qu.:2.725 | 3rd Qu.:135.00 | 3rd Qu.: 68813 | 3rd Qu.: 398.2 | 3rd Qu.:117663 |
| Max. :   | 3.000  | Max. :100.00   | Max. :25.100  | Max. :400.00   | Max. :1023881  | Max. :8488.0   | Max. :605383   |

|          | ugbto  | DISPO          |
|----------|--------|----------------|
| Min. :   | 0.00   | Min. : 0       |
| 1st Qu.: | 0.00   | 1st Qu.: 1722  |
| Median : | 7.50   | Median : 10055 |
| Mean :   | 54.08  | Mean : 22169   |
| 3rd Qu.: | 82.50  | 3rd Qu.: 26364 |
| Max. :   | 500.00 | Max. :698386   |

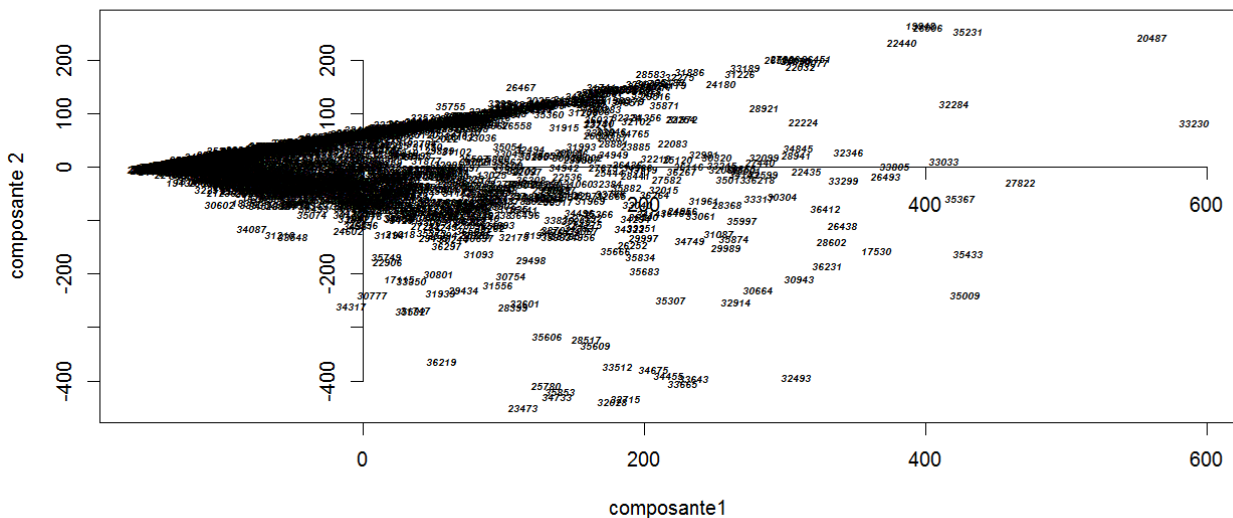
```
> cor(explo2006)
```

|       | fjuri      | fvd         | UTATO       | sauti       | chara      | cons        | pmda       | ugbto       | DISPO       |
|-------|------------|-------------|-------------|-------------|------------|-------------|------------|-------------|-------------|
| fjuri | 1.0000000  | -0.52146455 | 0.24144827  | 0.28737838  | 0.2960446  | 0.23331274  | 0.3269218  | 0.13292708  | 0.16687689  |
| fvd   | -0.5214646 | 1.0000000   | -0.06313163 | -0.36169623 | -0.1621770 | -0.10245268 | -0.3374034 | -0.13529272 | -0.11133530 |
| UTATO | 0.2414483  | -0.06313163 | 1.0000000   | -0.07747087 | 0.4869814  | 0.29994349  | 0.1216484  | -0.08536131 | 0.40952513  |
| sauti | 0.2873784  | -0.36169623 | -0.07747087 | 1.0000000   | 0.3357087  | 0.14333502  | 0.7473962  | 0.27257315  | 0.08059080  |
| chara | 0.2960446  | -0.16217703 | 0.48698136  | 0.33570866  | 1.0000000  | 0.39059166  | 0.4467751  | 0.27386880  | 0.26577089  |
| cons  | 0.2333127  | -0.10245268 | 0.29994349  | 0.14333502  | 0.3905917  | 1.0000000   | 0.1934199  | 0.32232760  | 0.09769383  |
| pmda  | 0.3269218  | -0.33740345 | 0.12164845  | 0.74739623  | 0.4467751  | 0.19341988  | 1.0000000  | 0.20959816  | 0.19905937  |

```

ugbto 0.1329271 -0.13529272 -0.08536131 0.27257315 0.2738688 0.32232760 0.2095982 1.00000000 -0.02903092
DISPO 0.1668769 -0.11133530 0.40952513 0.08059080 0.2657709 0.09769383 0.1990594 -0.02903092 1.00000000
> explo2006<-explo2006[-1377,]
> #ACP (dizaines m² centaines h, milliers ch, €)
> explo2006[,3]<-explo2006[,3]*16
> explo2006[,5]<-explo2006[,5]/1000
> explo2006[,6]<-explo2006[,6]/10
> explo2006[,7]<-explo2006[,7]/1000
> explo2006[,9]<-explo2006[,9]/1000
> explo2006acp<-princomp(explo2006)
> summary(explo2006acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation  113.7367347 76.7764008 57.7097036 40.85388975 36.87764194 33.24429883 29.32202890 23.89600998
Proportion of Variance  0.4665476 0.2125935 0.1201136 0.06019512 0.04904793 0.03985922 0.03100862 0.02059421
Cumulative Proportion  0.4665476 0.6791411 0.7992546 0.85944976 0.90849770 0.94835692 0.97936554 0.99995975
      Comp.9
Standard deviation  1.056402e+00
Proportion of Variance 4.024878e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(explo2006acp$scores[,1],explo2006acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2006)[[1]]
> text(explo2006acp$scores[,1],explo2006acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2007<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2007.csv', header=T, dec=',', sep=';')
> rownames(explo2007)<-explo2007[,1]
> explo2007<-explo2007[,4:12]
> #Etude sommaire
> summary(explo2007)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.990 Min. : 0.00 Min. : 330 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 32.50 1st Qu.: 19766 1st Qu.: 29.12 1st Qu.: 31420
Median :0.000 Median : 4.55 Median :2.000 Median : 75.00 Median : 38783 Median : 124.50 Median : 65134
Mean :1.138 Mean : 23.48 Mean :2.384 Mean : 96.66 Mean : 52987 Mean : 294.19 Mean : 87751
3rd Qu.:3.000 3rd Qu.: 38.24 3rd Qu.:2.750 3rd Qu.:135.00 3rd Qu.: 69372 3rd Qu.: 370.37 3rd Qu.:119841
Max. :3.000 Max. :100.00 Max. :23.940 Max. :400.00 Max. :855554 Max. :7385.43 Max. :631820
      ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1768

```

Median : 2.50 Median : 9575  
 Mean : 55.28 Mean : 24838  
 3rd Qu.: 87.50 3rd Qu.: 29549  
 Max. :500.00 Max. :559443

> cor(explo2007)

```

    fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.52627526 0.25445642 0.2898981 0.3132423 0.2415528 0.3301133 0.14087268 0.18377041
fvd -0.5262753 1.00000000 -0.07286769 -0.3629914 -0.1755598 -0.1165718 -0.3392574 -0.13708590 -0.12555106
UTATO 0.2544564 -0.07286769 1.00000000 -0.0655363 0.4922299 0.3263292 0.1437003 -0.07493104 0.38518724
sauti 0.2898981 -0.36299136 -0.06553630 1.0000000 0.3485718 0.1810858 0.7760556 0.29057023 0.16378051
chara 0.3132423 -0.17555983 0.49222988 0.3485718 1.0000000 0.4324380 0.4812852 0.32503298 0.27526465
cons 0.2415528 -0.11657182 0.32632919 0.1810858 0.4324380 1.0000000 0.2440896 0.35891278 0.11746737
pmda 0.3301133 -0.33925738 0.14370029 0.7760556 0.4812852 0.2440896 1.0000000 0.23251717 0.23901538
ugpto 0.1408727 -0.13708590 -0.07493104 0.2905702 0.3250330 0.3589128 0.2325172 1.0000000 -0.03528986
DISPO 0.1837704 -0.12555106 0.38518724 0.1637805 0.2752646 0.1174674 0.2390154 -0.03528986 1.00000000
  
```

> explo2007<-explo2007[-1377,]  
 > #ACP (dizaines m<sup>2</sup> centaines h, milliers ch, €)

```

> explo2007[,3]<-explo2007[,3]*16
> explo2007[,5]<-explo2007[,5]/1000
> explo2007[,6]<-explo2007[,6]/10
> explo2007[,7]<-explo2007[,7]/1000
> explo2007[,9]<-explo2007[,9]/1000
> explo2007acp<-princomp(explo2007)
> summary(explo2007acp)
  
```

Importance of components:

|                        | Comp.1      | Comp.2     | Comp.3     | Comp.4      | Comp.5      | Comp.6      | Comp.7      | Comp.8      |
|------------------------|-------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Standard deviation     | 118.1208554 | 78.5153340 | 57.5455714 | 40.04120709 | 36.53337393 | 31.82334907 | 29.52280594 | 23.70498954 |
| Proportion of Variance | 0.4842272   | 0.2139464  | 0.1149264  | 0.05564297  | 0.04632075  | 0.03514696  | 0.03024902  | 0.01950184  |
| Cumulative Proportion  | 0.4842272   | 0.6981736  | 0.8131000  | 0.86874297  | 0.91506372  | 0.95021068  | 0.98045970  | 0.99996154  |

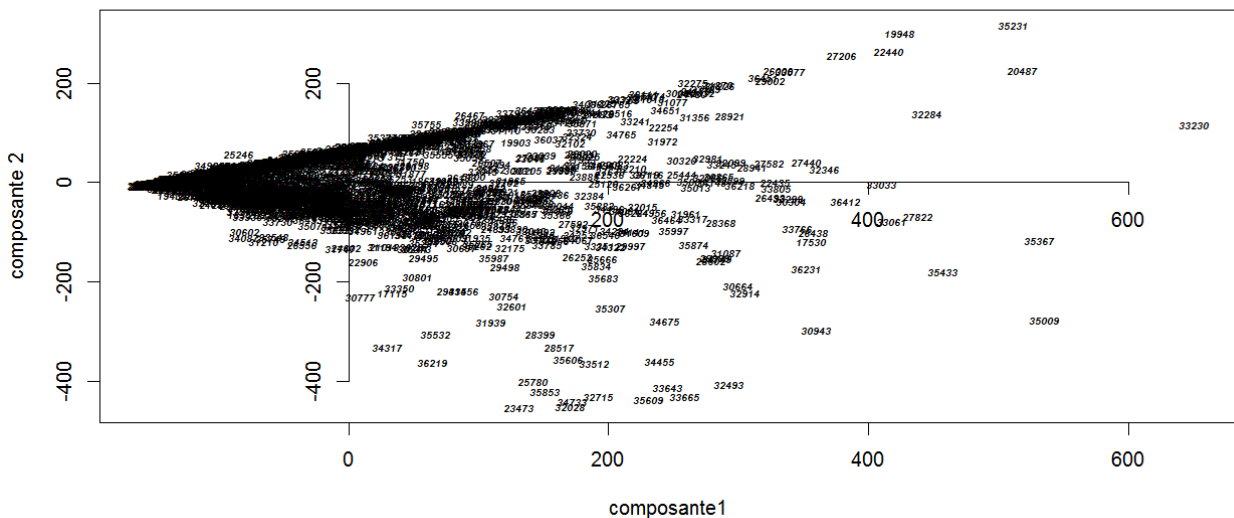
Comp.9

Standard deviation 1.052765e+00  
 Proportion of Variance 3.846439e-05  
 Cumulative Proportion 1.000000e+00

> #Représentation graphique

```

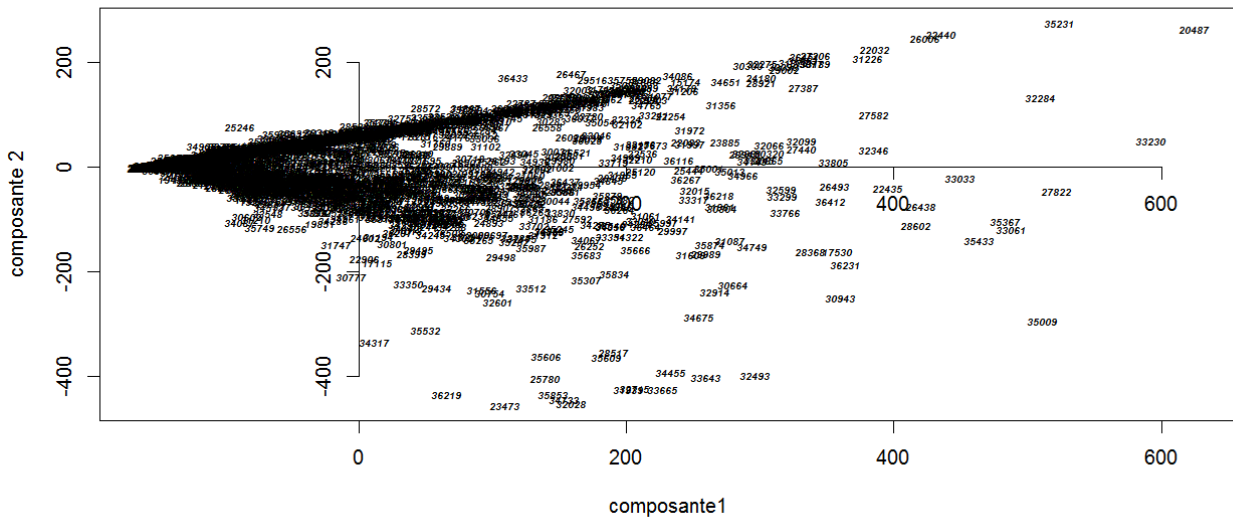
> plot(explo2007acp$scores[,1],explo2007acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2007)[[1]]
> text(explo2007acp$scores[,1],explo2007acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)
  
```



```

> explo2008<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2008.csv', header=T, dec=',', sep=',';)
> rownames(explo2008)<-explo2008[,1]
> explo2008<-explo2008[,4:12]
> #Etude sommaire
> summary(explo2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. : 0.950 Min. : 0.00 Min. : 1038 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 35.00 1st Qu.: 20075 1st Qu.: 28.29 1st Qu.: 31847
Median :0.000 Median : 4.67 Median : 2.000 Median : 75.00 Median : 38844 Median : 120.57 Median : 66309
Mean :1.138 Mean : 23.92 Mean : 2.394 Mean : 97.69 Mean : 53887 Mean : 279.66 Mean : 92439
3rd Qu.:3.000 3rd Qu.: 39.47 3rd Qu.: 2.750 3rd Qu.:135.00 3rd Qu.: 70497 3rd Qu.: 353.11 3rd Qu.:125428
Max. :3.000 Max. :100.00 Max. :24.550 Max. :400.00 Max. :684130 Max. :6736.02 Max. :684613
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1426
Median : 2.50 Median : 8893
Mean : 56.08 Mean : 24196
3rd Qu.: 87.50 3rd Qu.: 28267
Max. :500.00 Max. :831084
> cor(explo2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.53476780 0.26487395 0.29334381 0.3257665 0.2410833 0.3260816 0.14433590 0.16374122
fvd -0.5347678 1.0000000 -0.08189169 -0.36523085 -0.2228262 -0.1141518 -0.3402506 -0.14471280 -0.11581738
UTATO 0.2648740 -0.08189169 1.0000000 -0.04189083 0.4563659 0.3671761 0.1390647 -0.06785885 0.38079949
sauti 0.2933438 -0.36523085 -0.04189083 1.0000000 0.4415060 0.1894866 0.7918632 0.30141089 0.10996907
chara 0.3257665 -0.22282617 0.45636594 0.44150605 1.0000000 0.4104193 0.5656037 0.35516596 0.23859145
cons 0.2410833 -0.11415178 0.36717607 0.18948657 0.4104193 1.0000000 0.2473623 0.33744182 0.11531327
pmda 0.3260816 -0.34025059 0.13906466 0.79186319 0.5656037 0.2473623 1.0000000 0.23483971 0.18517524
ugpto 0.1443359 -0.14471280 -0.06785885 0.30141089 0.3551660 0.3374418 0.2348397 1.0000000 -0.05618478
DISPO 0.1637412 -0.11581738 0.38079949 0.10996907 0.2385914 0.1153133 0.1851752 -0.05618478 1.00000000
> explo2008<-explo2008[-1377,]
> #ACP (dizaines m² centaines h, milliers ch, €)
> explo2008[,3]<-explo2008[,3]*16
> explo2008[,5]<-explo2008[,5]/1000
> explo2008[,6]<-explo2008[,6]/10
> explo2008[,7]<-explo2008[,7]/1000
> explo2008[,9]<-explo2008[,9]/1000
> explo2008acp<-princomp(explo2008)
> summary(explo2008acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 123.8498509 79.5820192 57.7321257 42.87213780 36.52016695 31.31603744 29.69331380 23.60952477
Proportion of Variance 0.5013048 0.2069859 0.1089296 0.06007049 0.04358895 0.03205122 0.02881564 0.01821736
Cumulative Proportion 0.5013048 0.7082907 0.8172203 0.87729083 0.92087978 0.95293100 0.98174664 0.99996399
      Comp.9
Standard deviation 1.049620e+00
Proportion of Variance 3.600602e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(explo2008acp$scores[,1],explo2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2008)[[1]]
> text(explo2008acp$scores[,1],explo2008acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2009<-read.table('C:/Users/Bureau LGH/Desktop/Exploitations 2009.csv', header=T, dec=',', sep=',')
> rownames(explo2009)<-explo2009[,1]
> explo2009<-explo2009[,4:12]
> #Etude sommaire
> summary(explo2009)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 0.0 Min. : 508 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:32.5 1st Qu.:20145 1st Qu.: 26.62 1st Qu.: 34873
Median :0.000 Median : 5.26 Median :2.000 Median :75.0 Median :42714 Median :119.51 Median :73350
Mean :1.138 Mean :24.09 Mean :2.434 Mean :98.0 Mean :59059 Mean :305.33 Mean :96492
3rd Qu.:3.000 3rd Qu.:39.47 3rd Qu.:2.815 3rd Qu.:140.0 3rd Qu.:80638 3rd Qu.:371.42 3rd Qu.:125811
Max. :3.000 Max. :100.00 Max. :31.180 Max. :400.0 Max. :595993 Max. :6244.46 Max. :609674
      ugpto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1266
Median : 2.50 Median : 8527
Mean :56.57 Mean :23639
3rd Qu.:87.50 3rd Qu.:25393
Max. :500.00 Max. :877127
> cor(explo2009)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.0000000 -0.5418947 0.26058365 0.29209816 0.3419897 0.2446795 0.3262540 0.14845559 0.17000013
fvd -0.5418947 1.0000000 -0.10087166 -0.36352602 -0.2498139 -0.1233596 -0.3351404 -0.14862862 -0.10975976
UTATO 0.2605837 -0.1008717 1.00000000 -0.03815030 0.4590633 0.3592112 0.1665257 -0.07467612 0.37424912
sauti 0.2920982 -0.3635260 -0.03815030 1.00000000 0.4962130 0.1878312 0.7662465 0.31256401 0.09292352
chara 0.3419897 -0.2498139 0.45906329 0.49621302 1.0000000 0.4036123 0.6109664 0.26605786 0.24438262
cons 0.2446795 -0.1233596 0.35921122 0.18783121 0.4036123 1.0000000 0.2506487 0.31699636 0.11408050
pmda 0.3262540 -0.3351404 0.16652565 0.76624648 0.6109664 0.2506487 1.0000000 0.21705666 0.17059166
ugpto 0.1484556 -0.1486286 -0.07467612 0.31256401 0.2660579 0.3169964 0.2170567 1.0000000 -0.02550634
DISPO 0.1700001 -0.1097598 0.37424912 0.09292352 0.2443826 0.1140805 0.1705917 -0.02550634 1.00000000
> explo2009<-explo2009[-1377,]
> #ACP (dizaines m² certaines h, milliers ch, €)
> explo2009[,3]<-explo2009[,3]*16
> explo2009[,5]<-explo2009[,5]/1000
> explo2009[,6]<-explo2009[,6]/10
> explo2009[,7]<-explo2009[,7]/1000
> explo2009[,9]<-explo2009[,9]/1000
> explo2009acp<-princomp(explo2009)
> summary(explo2009acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8

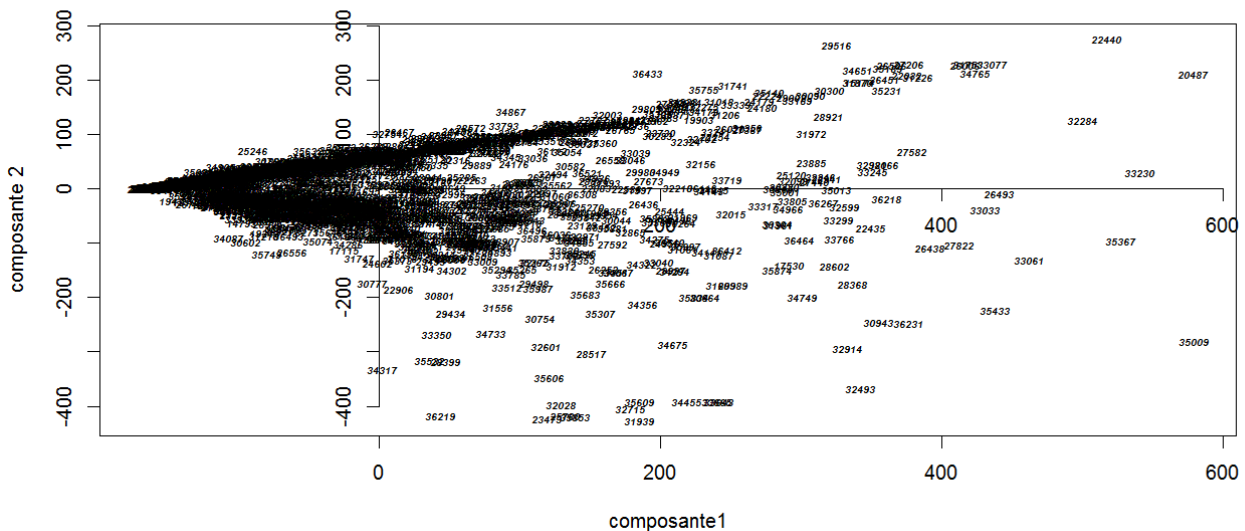
```

Standard deviation 125.8101193 80.4126689 60.8105780 45.84921491 38.9792284 34.35182191 29.86293336 25.44144561  
 Proportion of Variance 0.4895207 0.1999811 0.1143663 0.06501353 0.0469901 0.03649551 0.02758067 0.02001813  
 Cumulative Proportion 0.4895207 0.6895018 0.8038681 0.86888161 0.9158717 0.95236722 0.97994789 0.99996602

Comp.9

Standard deviation 1.048201e+00  
 Proportion of Variance 3.398041e-05  
 Cumulative Proportion 1.000000e+00

```
> #Représentation graphique
> plot(explo2009acp$scores[,1],explo2009acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2009)[[1]]
> text(explo2009acp$scores[,1],explo2009acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)
```

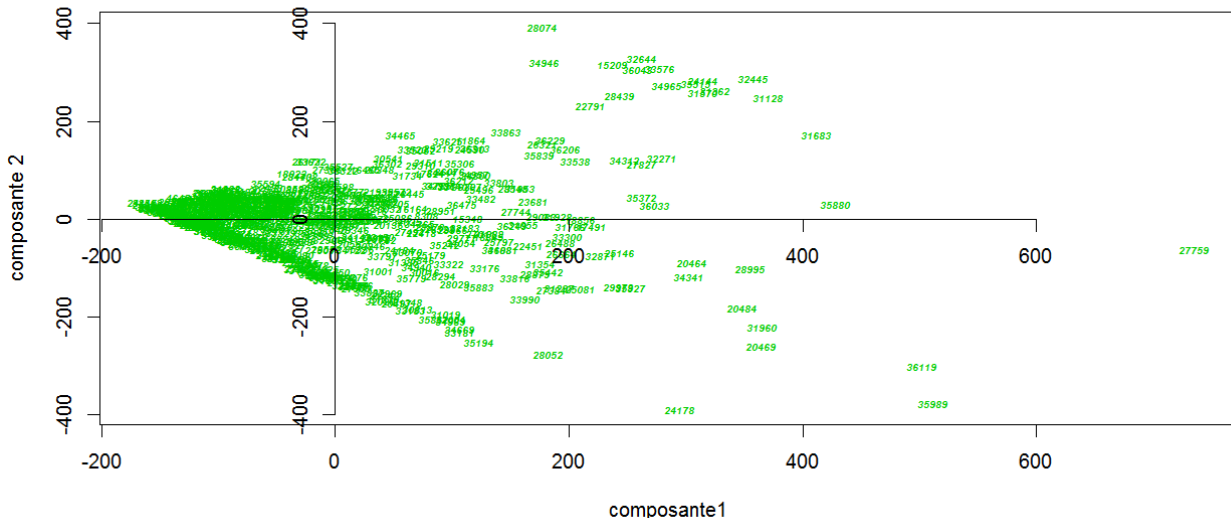


```
> reorg2000<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2000.csv', header=T, dec=',', sep=',')
> rownames(reorg2000)<-reorg2000[,1]
> reorg2000<-reorg2000[,4:12]
> #Etude sommaire
> summary(reorg2000)
  fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.750 Min. : 0.00 Min. : 3489 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.077 1st Qu.:47.50 1st Qu.:26640 1st Qu.: 53.41 1st Qu.:37432
Median :0.000 Median : 2.63 Median :1.785 Median :85.00 Median :47375 Median :191.36 Median :66898
Mean :1.164 Mean :17.74 Mean :2.098 Mean :96.41 Mean :61055 Mean :387.25 Mean :90440
3rd Qu.:2.000 3rd Qu.:28.07 3rd Qu.:2.473 3rd Qu.:125.00 3rd Qu.:80549 3rd Qu.:502.82 3rd Qu.:118149
Max. :3.000 Max. :100.00 Max. :12.840 Max. :400.00 Max. :406037 Max. :5245.58 Max. :584904
  ugpto   DISPO
Min. : 0.0 Min. : 0.0
1st Qu.: 0.0 1st Qu.: 540.8
Median :57.5 Median :5557.5
Mean :84.8 Mean :14119.7
3rd Qu.:118.8 3rd Qu.:17524.2
Max. :500.0 Max. :348836.0
> cor(reorg2000)
  fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.0000000 -0.47822316 0.30407237 0.3473996 0.3251264 0.2235450 0.3026217 0.12941030 0.13004682
fvd -0.4782232 1.0000000 -0.15117364 -0.3318163 -0.2019916 -0.1242615 -0.2391923 -0.08533351 -0.09793285
UTATO 0.3040724 -0.15117364 1.0000000 0.2007330 0.5934737 0.3563850 0.4249302 0.06619394 0.35575873
sauti 0.3473996 -0.33181633 0.20073298 1.0000000 0.4791495 0.2976433 0.7668548 0.20418623 0.10886795
chara 0.3251264 -0.20199155 0.59347371 0.4791495 1.0000000 0.5954254 0.5966454 0.39476153 0.28597232
cons 0.2235450 -0.12426147 0.35638496 0.2976433 0.5954254 1.0000000 0.3690981 0.41146209 0.16044205
```

```

pmda 0.3026217 -0.23919231 0.42493016 0.7668548 0.5966454 0.3690981 1.0000000 0.22188402 0.11962895
ugbto 0.1294103 -0.08533351 0.06619394 0.2041862 0.3947615 0.4114621 0.2218840 1.00000000 -0.05629563
DISPO 0.1300468 -0.09793285 0.35575873 0.1088679 0.2859723 0.1604420 0.1196290 -0.05629563 1.00000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> reorg2000[,3]<-reorg2000[,3]*16
> reorg2000[,5]<-reorg2000[,5]/1000
> reorg2000[,6]<-reorg2000[,6]/10
> reorg2000[,7]<-reorg2000[,7]/1000
> reorg2000[,9]<-reorg2000[,9]/1000
> reorg2000acp<-princomp(reorg2000)
> summary(reorg2000acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 122.3716715 90.1742989 50.76618560 36.70794837 32.39946274 25.03874533 22.62612546 15.783130013
Proportion of Variance 0.5081419 0.2759236 0.08745252 0.04572392 0.03562041 0.02127396 0.01737175 0.008452974
Cumulative Proportion 0.5081419 0.7840655 0.87151802 0.91724194 0.95286234 0.97413630 0.99150806 0.999961031
      Comp.9
Standard deviation 1.071638e+00
Proportion of Variance 3.896904e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2000acp$scores[,1],reorg2000acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2000)[[1]]
> text(reorg2000acp$scores[,1],reorg2000acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2001.csv', header=T, dec=',', sep=';')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)
      fjuri      fvd      UTATO      sauti      CHARA      cons      pmda
Min. :0.000 Min. : 0.00 Min. : 0.750 Min. : 0.00 Min. : 3849 Min. : 0.00 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 47.50 1st Qu.: 25869 1st Qu.: 53.98 1st Qu.: 43716
Median :0.000 Median : 2.38 Median : 1.780 Median : 85.00 Median : 47551 Median : 194.13 Median : 74471
Mean :1.164 Mean :17.65 Mean : 2.083 Mean : 97.67 Mean : 62862 Mean : 391.16 Mean : 96714
3rd Qu.:2.000 3rd Qu.: 28.07 3rd Qu.: 2.397 3rd Qu.:135.00 3rd Qu.: 79700 3rd Qu.: 501.90 3rd Qu.:122368
Max. :3.000 Max. :100.00 Max. :14.000 Max. :400.00 Max. :464294 Max. :5265.49 Max. :670888
      ugbto      DISPO
Min. : 0.00 Min. :  0.0

```

1st Qu.: 0.00 1st Qu.: 619.8  
 Median : 57.50 Median : 6737.5  
 Mean : 84.21 Mean : 15901.3  
 3rd Qu.: 113.75 3rd Qu.: 19372.0  
 Max. : 500.00 Max. : 590934.0

```
> cor(reorg2001)
      fjuri  fvd  UTATO  sauti  CHARA  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.49091468 0.30107373 0.3495833 0.3303728 0.24620457 0.3026512 0.15015170 0.11371933
fvd -0.4909147 1.00000000 -0.15031064 -0.3363867 -0.2200700 -0.15568512 -0.2459000 -0.09816876 -0.07910640
UTATO 0.3010737 -0.15031064 1.00000000 0.1685935 0.6034476 0.33756416 0.4268882 0.07619794 0.37762760
sauti 0.3495833 -0.33638669 0.16859354 1.00000000 0.4610331 0.29226794 0.7485610 0.22187618 0.10895282
CHARA 0.3303728 -0.22006996 0.60344760 0.4610331 1.00000000 0.57637312 0.5983095 0.39178289 0.33141796
cons 0.2462046 -0.15568512 0.33756416 0.2922679 0.5763731 1.00000000 0.3424202 0.41669556 0.09673095
pmda 0.3026512 -0.24590000 0.42688822 0.7485610 0.5983095 0.34242025 1.00000000 0.21132690 0.14358508
ugpto 0.1501517 -0.09816876 0.07619794 0.2218762 0.3917829 0.41669556 0.2113269 1.00000000 -0.05097714
DISPO 0.1137193 -0.07910640 0.37762760 0.1089528 0.3314180 0.09673095 0.1435851 -0.05097714 1.00000000
```

```
> #ACP (dizaines m² centaines h, milliers ch, €)
```

```
> reorg2001[,3]<-reorg2001[,3]*16
> reorg2001[,5]<-reorg2001[,5]/1000
> reorg2001[,6]<-reorg2001[,6]/10
> reorg2001[,7]<-reorg2001[,7]/1000
> reorg2001[,9]<-reorg2001[,9]/1000
> reorg2001acp<-princomp(reorg2001)
> summary(reorg2001acp)
```

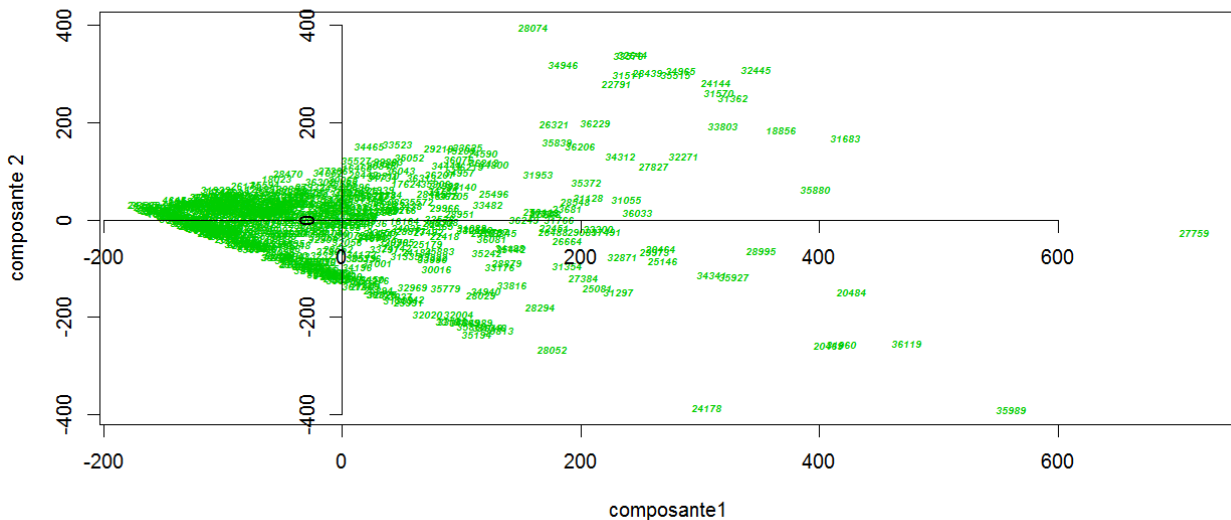
Importance of components:

|                        | Comp.1      | Comp.2     | Comp.3      | Comp.4      | Comp.5      | Comp.6     | Comp.7      | Comp.8       |
|------------------------|-------------|------------|-------------|-------------|-------------|------------|-------------|--------------|
| Standard deviation     | 123.8798763 | 90.2746093 | 53.62093344 | 40.10759181 | 35.71118851 | 27.1229687 | 24.72411489 | 16.690621104 |
| Proportion of Variance | 0.4969394   | 0.2638962  | 0.09310449  | 0.05209008  | 0.04129624  | 0.0238219  | 0.01979445  | 0.009020838  |
| Cumulative Proportion  | 0.4969394   | 0.7608356  | 0.85394005  | 0.90603013  | 0.94732637  | 0.9711483  | 0.99094271  | 0.999963548  |

|                        | Comp.9       |
|------------------------|--------------|
| Standard deviation     | 1.0609877380 |
| Proportion of Variance | 0.0000364521 |
| Cumulative Proportion  | 1.0000000000 |

```
> #Représentation graphique
```

```
> plot(reorg2001acp$scores[,1],reorg2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2001)[[1]]
> text(reorg2001acp$scores[,1],reorg2001acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)
```

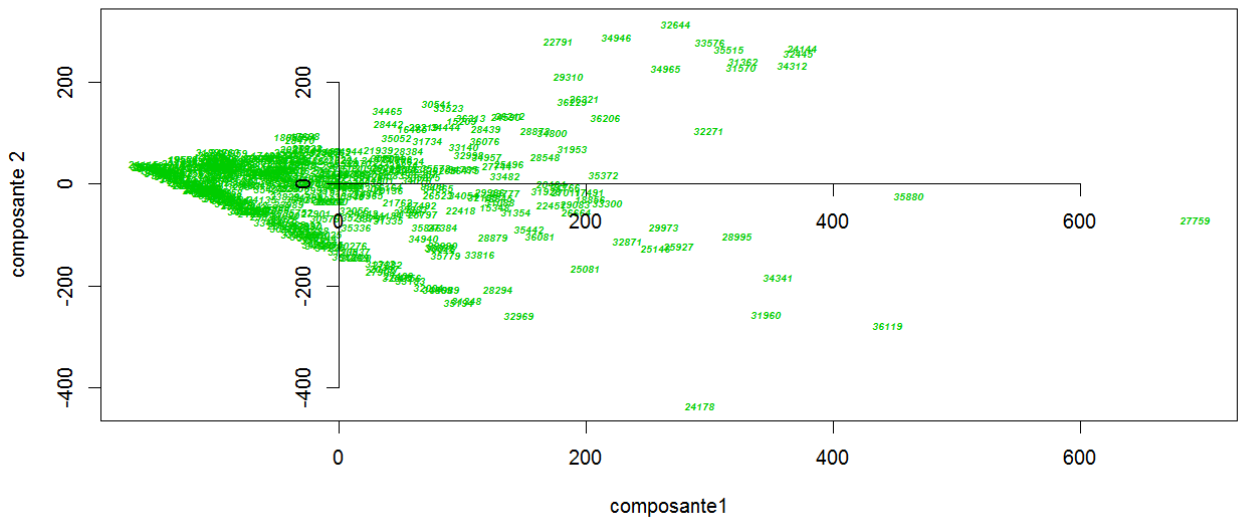




```

> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2002.csv', header=T, dec=',', sep=',')
> rownames(reorg2002)<-reorg2002[,1]
> reorg2002<-reorg2002[,4:12]
> #Etude sommaire
> summary(reorg2002)
  fjuri    fvd    UTATO    sauti    CHARA    cons    pmda
Min. :0.000 Min. : 0.00 Min. : 0.930 Min. : 0.00 Min. : 2603 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 55.00 1st Qu.: 26973 1st Qu.: 46.45 1st Qu.: 36538
Median :0.000 Median : 2.63 Median : 1.940 Median : 85.00 Median : 46723 Median : 174.55 Median : 68112
Mean :1.155 Mean : 18.29 Mean : 2.229 Mean : 96.36 Mean : 61115 Mean : 367.40 Mean : 87091
3rd Qu.:2.000 3rd Qu.: 30.00 3rd Qu.: 2.500 3rd Qu.:125.00 3rd Qu.: 75377 3rd Qu.: 497.57 3rd Qu.:115369
Max. :3.000 Max. :100.00 Max. :20.060 Max. :400.00 Max. :451616 Max. :3128.62 Max. :512160
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 625
Median : 57.50 Median : 6543
Mean : 82.89 Mean : 15642
3rd Qu.:117.50 3rd Qu.: 17772
Max. :500.00 Max. :534780
> cor(reorg2002)
  fjuri    fvd    UTATO    sauti    CHARA    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.51045643 0.28153827 0.33730639 0.3396517 0.2535332 0.3561619 0.15942973 0.09920949
fvd -0.51045643 1.00000000 -0.14027838 -0.34682509 -0.2373506 -0.1981334 -0.2881120 -0.14696373 -0.06425657
UTATO 0.28153827 -0.14027838 1.00000000 0.08374112 0.6127997 0.3277931 0.2830893 0.03233228 0.39807590
sauti 0.33730639 -0.34682509 0.08374112 1.00000000 0.4255768 0.3469273 0.7498260 0.23910556 0.09096179
CHARA 0.33965166 -0.23735060 0.61279966 0.42557676 1.00000000 0.5584028 0.5474163 0.38822028 0.32959199
cons 0.25353316 -0.19813342 0.32779310 0.34692727 0.5584028 1.00000000 0.4075800 0.46424912 0.09190970
pmda 0.35616188 -0.28811203 0.28308932 0.74982596 0.5474163 0.4075800 1.00000000 0.22129061 0.12391988
ugpto 0.15942973 -0.14696373 0.03233228 0.23910556 0.3882203 0.4642491 0.2212906 1.00000000 -0.11628636
DISPO 0.09920949 -0.06425657 0.39807590 0.09096179 0.3295920 0.0919097 0.1239199 -0.11628636 1.00000000
> #ACP (dizaines m² centaines h, milliers ch, €)
> reorg2002[,3]<-reorg2002[,3]*16
> reorg2002[,5]<-reorg2002[,5]/1000
> reorg2002[,6]<-reorg2002[,6]/10
> reorg2002[,7]<-reorg2002[,7]/1000
> reorg2002[,9]<-reorg2002[,9]/1000
> reorg2002acp<-princomp(reorg2002)
> summary(reorg2002acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 118.6560312 85.4034989 53.5236529 36.18066478 34.57773127 27.74218768 24.7048510 20.65369723
Proportion of Variance 0.4931421 0.2554723 0.1003423 0.04585065 0.04187795 0.02695714 0.0213775 0.01494129
Cumulative Proportion 0.4931421 0.7486143 0.8489566 0.89480725 0.93668520 0.96364234 0.9850198 0.99996113
      Comp.9
Standard deviation 1.053434e+00
Proportion of Variance 3.886931e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2002acp$scores[,1],reorg2002acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2002)[[1]]
> text(reorg2002acp$scores[,1],reorg2002acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2003.csv', header=T, dec=',', sep=';')
> rownames(reorg2003)<-reorg2003[,1]
> reorg2003<-reorg2003[,4:12]
> #Etude sommaire
> summary(reorg2003)
      fjuri      fvd      UTATO      sauti      CHARA      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.50 Min. : 1882 Min. : 0.00 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:55.00 1st Qu.:26042 1st Qu.: 37.63 1st Qu.:38322
Median :0.000 Median : 3.85 Median :1.940 Median :85.00 Median :46463 Median :150.89 Median :70993
Mean :1.109 Mean :18.65 Mean :2.208 Mean :98.37 Mean :58249 Mean :329.18 Mean :85111
3rd Qu.:2.000 3rd Qu.:27.27 3rd Qu.:2.500 3rd Qu.:125.00 3rd Qu.:72421 3rd Qu.:439.52 3rd Qu.:116025
Max. :3.000 Max. :100.00 Max. :21.000 Max. :400.00 Max. :486299 Max. :3011.44 Max. :511788
      ugpto      DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 379
Median :57.50 Median : 5400
Mean :78.85 Mean :17975
3rd Qu.:112.50 3rd Qu.:16600
Max. :500.00 Max. :1038114
> cor(reorg2003)
      fjuri      fvd      UTATO      sauti      CHARA      cons      pmda      ugpto      DISPO
fjuri 1.00000000 -0.51904210 0.317135291 0.36382948 0.3125189 0.25041646 0.3681251 0.133174796 0.08733661
fvd -0.51904210 1.00000000 -0.186704384 -0.34884191 -0.2310526 -0.19744090 -0.3170541 -0.109155196 -0.08798278
UTATO 0.31713529 -0.18670438 1.000000000 0.08423954 0.5575563 0.18783296 0.3040397 0.006467173 0.53194361
sauti 0.36382948 -0.34884191 0.084239541 1.000000000 0.4064238 0.34664967 0.7785535 0.196107133 0.03812943
CHARA 0.31251893 -0.23105258 0.557556349 0.40642383 1.0000000 0.53475021 0.5200674 0.307332483 0.45907367
cons 0.25041646 -0.19744090 0.187832964 0.34664967 0.5347502 1.0000000 0.3778669 0.407847547 0.06744033
pmda 0.36812512 -0.31705409 0.304039699 0.77855353 0.5200674 0.37786686 1.0000000 0.158621416 0.14069339
ugpto 0.13317480 -0.10915520 0.006467173 0.19610713 0.3073325 0.40784755 0.1586214 1.000000000 -0.09970072
DISPO 0.08733661 -0.08798278 0.531943607 0.03812943 0.4590737 0.06744033 0.1406934 -0.099700717 1.00000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> reorg2003[,3]<-reorg2003[,3]*16
> reorg2003[,5]<-reorg2003[,5]/1000
> reorg2003[,6]<-reorg2003[,6]/10
> reorg2003[,7]<-reorg2003[,7]/1000
> reorg2003[,9]<-reorg2003[,9]/1000
> reorg2003acp<-princomp(reorg2003)
> summary(reorg2003acp)
Importance of components:

```

```

Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 109.9824283 87.0322343 67.5229359 40.6127795 32.82399057 28.2853446 25.55386118 21.48000746
Proportion of Variance 0.4189511 0.2623475 0.1579135 0.0571271 0.03731638 0.0277102 0.02261673 0.01598032
Cumulative Proportion 0.4189511 0.6812986 0.8392122 0.8963393 0.93365563 0.9613658 0.98398256 0.99996288

```

```

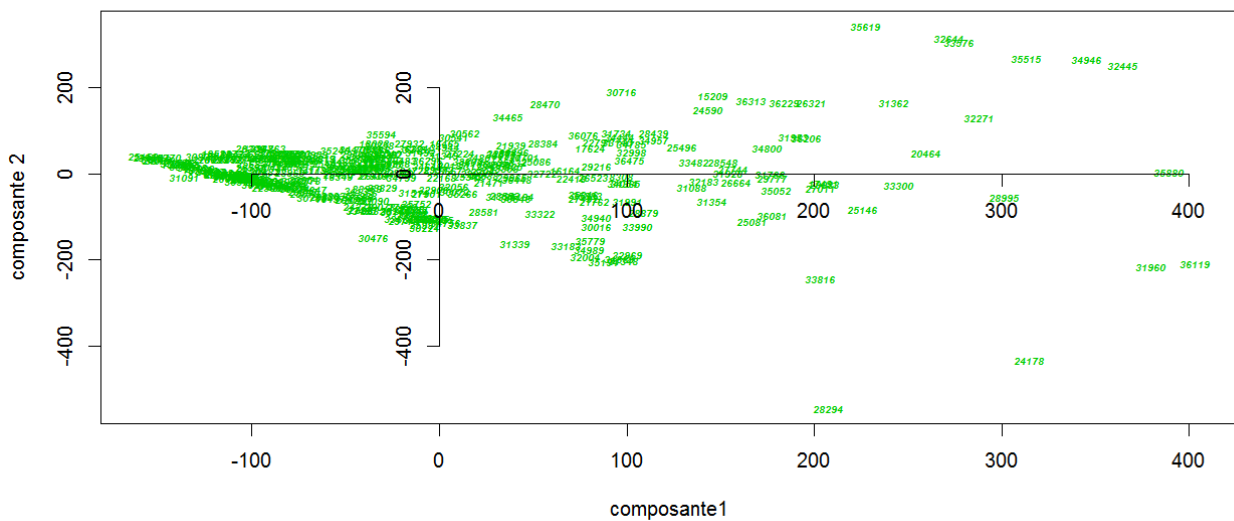
Comp.9
Standard deviation 1.035258e+00
Proportion of Variance 3.712048e-05
Cumulative Proportion 1.000000e+00

```

```

> #Représentation graphique
> plot(reorg2003acp$scores[,1],reorg2003acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2003)[[1]]
> text(reorg2003acp$scores[,1],reorg2003acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

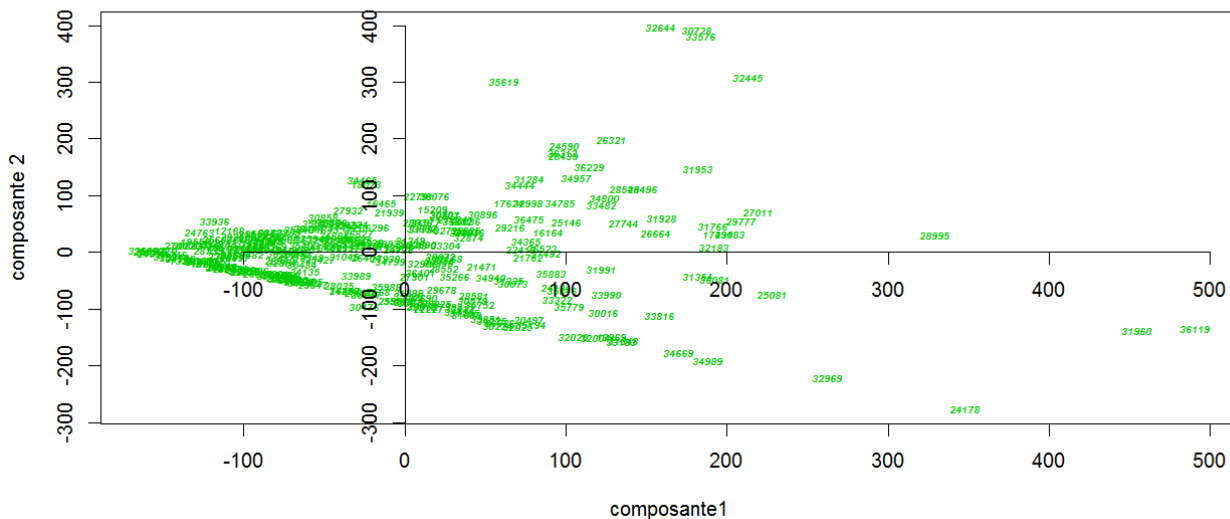
> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2004.csv', header=T, dec=',', sep=',')
> rownames(reorg2004)<-reorg2004[,1]
> reorg2004<-reorg2004[,4:12]
> #Etude sommaire
> summary(reorg2004)
  fjuri   fvd  UTATO   sauti  CHARA   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 3214 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 27887 1st Qu.: 34.33 1st Qu.: 39859
Median :0.000 Median : 4.55 Median :1.940 Median : 85.0 Median : 46538 Median :122.58 Median : 77504
Mean :1.097 Mean :18.82 Mean :2.116 Mean :100.7 Mean : 56739 Mean :290.71 Mean : 92178
3rd Qu.:2.000 3rd Qu.: 26.92 3rd Qu.:2.493 3rd Qu.:127.5 3rd Qu.: 74290 3rd Qu.: 433.06 3rd Qu.:121441
Max. :3.000 Max. :100.00 Max. :20.090 Max. :400.0 Max. :308253 Max. :1925.01 Max. :470919
  ugpto   DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 272.5
Median : 52.50 Median : 6934.5
Mean : 73.05 Mean : 15498.8
3rd Qu.:107.50 3rd Qu.: 17994.2
Max. :500.00 Max. :331432.0
> cor(reorg2004)
  fjuri   fvd  UTATO   sauti  CHARA   cons   pmda   ugpto   DISPO
fjuri 1.0000000 -0.51511200 0.31952347 0.36973792 0.4028909 0.30098733 0.4251735 0.11874476 0.16193126
fvd -0.5151120 1.0000000 -0.16323558 -0.34247245 -0.2604507 -0.20569979 -0.3051187 -0.08351707 -0.11756852
UTATO 0.3195235 -0.16323558 1.0000000 0.10800660 0.5588953 0.26328504 0.3289821 0.01918345 0.42488173
sauti 0.3697379 -0.34247245 0.10800660 1.0000000 0.5481953 0.33383745 0.7528188 0.14858012 0.07964782
CHARA 0.4028909 -0.26045069 0.55889526 0.54819528 1.0000000 0.49958035 0.6521418 0.31159728 0.22227215

```

```

cons 0.3009873 -0.20569979 0.26328504 0.33383745 0.4995804 1.00000000 0.3605419 0.40196763 0.01335369
pmda 0.4251735 -0.30511866 0.32898207 0.75281883 0.6521418 0.36054191 1.00000000 0.12308657 0.14038019
ugbto 0.1187448 -0.08351707 0.01918345 0.14858012 0.3115973 0.40196763 0.1230866 1.00000000 -0.14550323
DISPO 0.1619313 -0.11756852 0.42488173 0.07964782 0.2222721 0.01335369 0.1403802 -0.14550323 1.00000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> reorg2004[,3]<-reorg2004[,3]*16
> reorg2004[,5]<-reorg2004[,5]/1000
> reorg2004[,6]<-reorg2004[,6]/10
> reorg2004[,7]<-reorg2004[,7]/1000
> reorg2004[,9]<-reorg2004[,9]/1000
> reorg2004acp<-princomp(reorg2004)
> summary(reorg2004acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 105.9830651 84.3954910 42.89504041 33.08901935 29.8982205 25.6301076 24.08327413 18.0124661
Proportion of Variance 0.4730196 0.2999471 0.07748549 0.04610776 0.0376441 0.0276635 0.02442515 0.0136632
Cumulative Proportion 0.4730196 0.7729667 0.85045222 0.89655998 0.9342041 0.9618676 0.98629273 0.9999559
      Comp.9
Standard deviation 1.022975e+00
Proportion of Variance 4.406932e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2004acp$scores[,1],reorg2004acp$scores[,2],type="n",xlab="composante 1",ylab="composante 2")
> id<-dimnames(reorg2004)[[1]]
> text(reorg2004acp$scores[,1],reorg2004acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2005.csv', header=T, dec=',', sep=';')
> rownames(reorg2005)<-reorg2005[,1]
> reorg2005<-reorg2005[,4:12]
> #Etude sommaire
> summary(reorg2005)
      fjuri   fvd   UTATO   sauti   CHARA   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.50 Min. : 2663 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.00 1st Qu.: 24337 1st Qu.: 33.31 1st Qu.: 44174
Median :0.000 Median : 4.84 Median :1.800 Median : 85.00 Median : 43401 Median :120.35 Median : 78752
Mean :1.088 Mean :18.60 Mean :2.084 Mean :98.89 Mean :55368 Mean :305.32 Mean :92469
3rd Qu.:2.000 3rd Qu.: 26.92 3rd Qu.:2.570 3rd Qu.:135.00 3rd Qu.: 74566 3rd Qu.: 424.36 3rd Qu.:114992
Max. :3.000 Max. :100.00 Max. :17.000 Max. :400.00 Max. :350301 Max. :3981.17 Max. :536738

```

```

ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 40
Median : 52.50 Median : 5180
Mean : 75.72 Mean : 13163
3rd Qu.:112.50 3rd Qu.: 18334
Max. :500.00 Max. :146645

```

```
> cor(reorg2005)
```

```

      fjuri   fvd  UTATO   sauti  CHARA   cons   pmda   ugbto  DISPO
fjuri 1.00000000 -0.51360148 0.32916993 0.42025199 0.4195055 0.2481093 0.4106880 0.09946978 0.15915054
fvd -0.51360148 1.00000000 -0.21015931 -0.37191489 -0.2606654 -0.1675923 -0.3011454 -0.06420908 -0.11764060
UTATO 0.32916993 -0.21015931 1.00000000 0.14032576 0.6820286 0.4831139 0.2865054 0.09211451 0.27415058
saute 0.42025199 -0.37191489 0.14032576 1.00000000 0.4682465 0.2890343 0.7325447 0.17962100 0.05409141
CHARA 0.41950550 -0.26066544 0.68202862 0.46824649 1.0000000 0.5434479 0.5816440 0.32169381 0.22624956
cons 0.24810931 -0.16759228 0.48311390 0.28903429 0.5434479 1.0000000 0.3372001 0.34493271 -0.01281050
pmda 0.41068798 -0.30114538 0.28650542 0.73254467 0.5816440 0.3372001 1.0000000 0.15433413 0.16571189
ugbto 0.09946978 -0.06420908 0.09211451 0.17962100 0.3216938 0.3449327 0.1543341 1.0000000 -0.06964988
DISPO 0.15915054 -0.11764060 0.27415058 0.05409141 0.2262496 -0.0128105 0.1657119 -0.06964988 1.00000000

```

```
> #ACP (dizaines m² centaines h, milliers ch, €)
```

```
> reorg2005[,3]<-reorg2005[,3]*16
```

```
> reorg2005[,5]<-reorg2005[,5]/1000
```

```
> reorg2005[,6]<-reorg2005[,6]/10
```

```
> reorg2005[,7]<-reorg2005[,7]/1000
```

```
> reorg2005[,9]<-reorg2005[,9]/1000
```

```
> reorg2005acp<-princomp(reorg2005)
```

```
> summary(reorg2005acp)
```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 109.8412068 86.5676352 47.80476559 36.31373919 30.89999189 24.00802714 19.22804590 16.04410342
Proportion of Variance 0.4764592 0.2959418 0.09024799 0.05207593 0.03770612 0.02276188 0.01460042 0.01016544
Cumulative Proportion 0.4764592 0.7724010 0.86264895 0.91472489 0.95243101 0.97519289 0.98979331 0.99995875

```

```
      Comp.9
```

```
Standard deviation 1.022093e+00
```

```
Proportion of Variance 4.125493e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

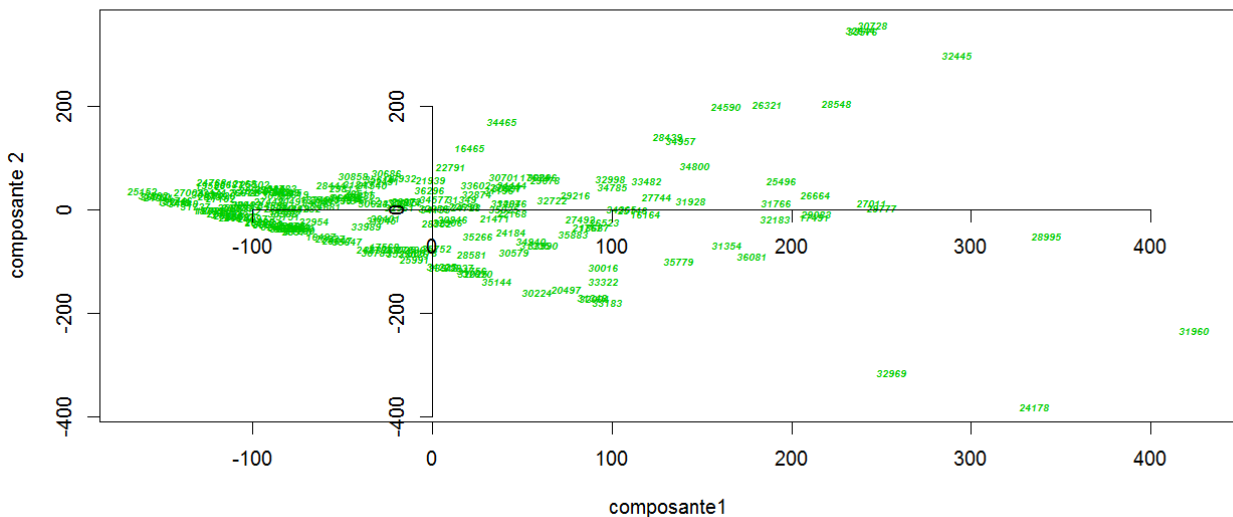
```
> plot(reorg2005acp$scores[,1],reorg2005acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(reorg2005)[[1]]
```

```
> text(reorg2005acp$scores[,1],reorg2005acp$scores[,2],id,cex=0.5,font=4,col=3)
```

```
> axis(1,pos=0)
```

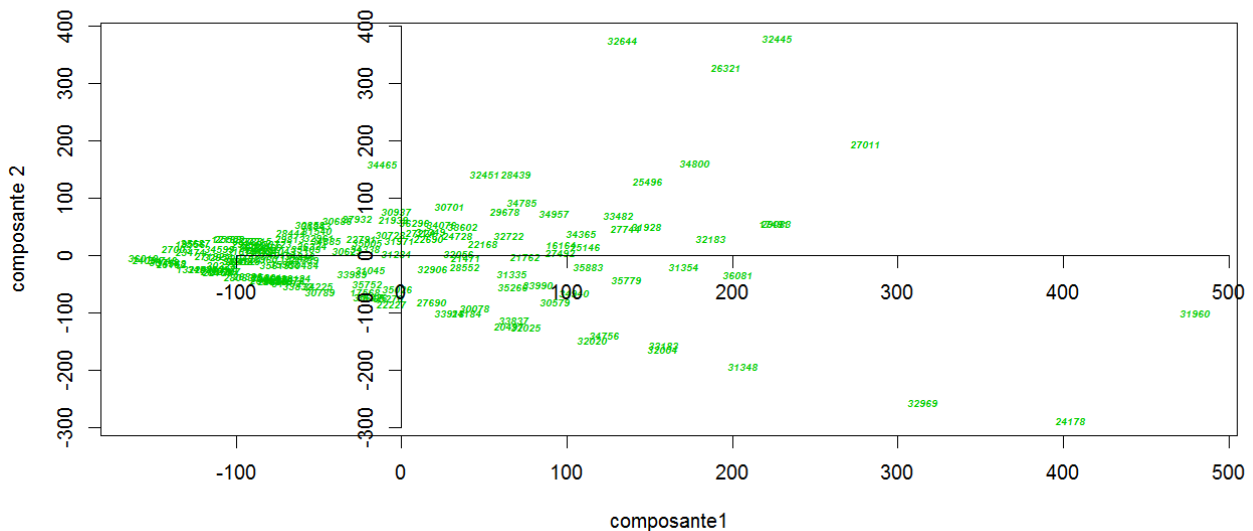
```
> axis(2,pos=0)
```



```

> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2006.csv', header=T, dec=',', sep=',')
> rownames(reorg2006)<-reorg2006[,1]
> reorg2006<-reorg2006[,4:12]
> #Etude sommaire
> summary(reorg2006)
  fjuri    fvd    UTATO    sauti    CHARA    cons    pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 3057 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 23867 1st Qu.: 25.06 1st Qu.: 39775
Median :0.000 Median : 6.20 Median :1.500 Median : 85.0 Median : 41778 Median :104.01 Median : 66884
Mean :1.066 Mean :19.39 Mean :2.000 Mean :100.7 Mean : 55800 Mean :293.71 Mean : 93058
3rd Qu.:3.000 3rd Qu.: 28.41 3rd Qu.:2.115 3rd Qu.:135.0 3rd Qu.: 71979 3rd Qu.: 350.28 3rd Qu.:125279
Max. :3.000 Max. :100.00 Max. :20.380 Max. :400.0 Max. :368315 Max. :3674.12 Max. :522020
  ugpto    DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 38.5
Median : 47.50 Median : 6579.0
Mean : 70.18 Mean :17257.5
3rd Qu.:103.75 3rd Qu.: 22238.5
Max. :500.00 Max. :220025.0
> cor(reorg2006)
  fjuri    fvd    UTATO    sauti    CHARA    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.51034944 0.26282839 0.43205080 0.4114093 0.22076032 0.3938442 0.14170464 0.04474636
fvd -0.51034944 1.00000000 -0.16241187 -0.36281571 -0.2473034 -0.14571246 -0.2613287 -0.11396093 0.02755643
UTATO 0.26282839 -0.16241187 1.00000000 0.05670371 0.7027760 0.40397063 0.2186049 0.03318212 0.03453107
sauti 0.43205080 -0.36281571 0.05670371 1.00000000 0.4542251 0.19741180 0.7603205 0.22172455 0.05134917
CHARA 0.41140926 -0.24730337 0.70277604 0.45422507 1.00000000 0.52856813 0.5958419 0.28051710 0.10080780
cons 0.22076032 -0.14571246 0.40397063 0.19741180 0.5285681 1.00000000 0.2532862 0.33260846 0.04200408
pmda 0.39384422 -0.26132872 0.21860488 0.76032052 0.5958419 0.25328615 1.00000000 0.14167117 0.26160871
ugpto 0.14170464 -0.11396093 0.03318212 0.22172455 0.2805171 0.33260846 0.1416712 1.00000000 -0.05328779
DISPO 0.04474636 0.02755643 0.03453107 0.05134917 0.1008078 0.04200408 0.2616087 -0.05328779 1.00000000
> #ACP (dizaines m² centaines h, milliers ch, €)
> reorg2006[,3]<-reorg2006[,3]*16
> reorg2006[,5]<-reorg2006[,5]/1000
> reorg2006[,6]<-reorg2006[,6]/10
> reorg2006[,7]<-reorg2006[,7]/1000
> reorg2006[,9]<-reorg2006[,9]/1000
> reorg2006acp<-princomp(reorg2006)
> summary(reorg2006acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 113.0696004 84.9483438 54.5341588 37.45649493 33.44774069 25.33865067 23.67470579 16.74087717
Proportion of Variance 0.4738493 0.2674597 0.1102264 0.05199994 0.04146505 0.02379663 0.02077389 0.01038736
Cumulative Proportion 0.4738493 0.7413091 0.8515355 0.90353547 0.94500051 0.96879715 0.98957103 0.99995839
      Comp.9
Standard deviation 1.059564e+00
Proportion of Variance 4.161048e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2006acp$scores[,1],reorg2006acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2006)[[1]]
> text(reorg2006acp$scores[,1],reorg2006acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2007.csv', header=T, dec=',', sep=';')
> rownames(reorg2007)<-reorg2007[,1]
> reorg2007<-reorg2007[,4:12]
> #Etude sommaire
> summary(reorg2007)
  fjuri      fvd   UTATO   sauti   CHARA    cons    pmda
Min. :0.0000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 5393 Min. : 0.00 Min. : 1986
1st Qu.:0.0000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 20038 1st Qu.: 18.38 1st Qu.: 38424
Median :0.0000 Median : 8.82 Median :1.470 Median : 85.0 Median : 34264 Median :100.04 Median : 74682
Mean :0.9123 Mean : 21.17 Mean :1.790 Mean :103.4 Mean : 52988 Mean : 276.25 Mean : 97375
3rd Qu.:2.0000 3rd Qu.: 33.33 3rd Qu.:2.118 3rd Qu.:135.0 3rd Qu.: 66275 3rd Qu.: 399.14 3rd Qu.:129169
Max. :3.0000 Max. :100.00 Max. : 9.250 Max. :400.0 Max. :324342 Max. :3335.87 Max. :541355
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 420
Median : 47.50 Median : 7818
Mean : 67.92 Mean : 27737
3rd Qu.:106.25 3rd Qu.: 35914
Max. :500.00 Max. :340575
> cor(reorg2007)
  fjuri      fvd   UTATO   sauti   CHARA    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.47788136 0.2457820 0.4015964 0.3984978 0.11876769 0.4162974 0.1357914 0.14414301
fvd -0.4778814 1.00000000 -0.1569605 -0.3168628 -0.2529200 -0.08278519 -0.2236643 -0.1104601 -0.02326284
UTATO 0.2457820 -0.15696047 1.0000000 0.3035891 0.5455719 0.69168042 0.3437754 0.2932457 0.14202775
sauti 0.4015964 -0.31686280 0.3035891 1.0000000 0.4576795 0.24865716 0.6615614 0.2438050 0.22729260
CHARA 0.3984978 -0.25291996 0.5455719 0.4576795 1.0000000 0.54198391 0.5692711 0.2969935 0.31731568
cons 0.1187677 -0.08278519 0.6916804 0.2486572 0.5419839 1.0000000 0.2816382 0.2326691 0.01778059
pmda 0.4162974 -0.22366434 0.3437754 0.6615614 0.5692711 0.28163817 1.0000000 0.1163352 0.54332026
ugpto 0.1357914 -0.11046014 0.2932457 0.2438050 0.2969935 0.23266905 0.1163352 1.0000000 -0.13856323
DISPO 0.1441430 -0.02326284 0.1420277 0.2272926 0.3173157 0.01778059 0.5433203 -0.1385632 1.0000000
> #ACP (dizaines m² centaines h, milliers ch, €)
> reorg2007[,3]<-reorg2007[,3]*16
> reorg2007[,5]<-reorg2007[,5]/1000
> reorg2007[,6]<-reorg2007[,6]/10
> reorg2007[,7]<-reorg2007[,7]/1000
> reorg2007[,9]<-reorg2007[,9]/1000
> reorg2007acp<-princomp(reorg2007)
> summary(reorg2007acp)
Importance of components:
      Comp.1   Comp.2   Comp.3   Comp.4   Comp.5   Comp.6   Comp.7   Comp.8
Standard deviation 115.6940229 81.2753603 51.3533242 46.79517988 35.03703907 29.83510749 24.35792563 11.789588623

```

Proportion of Variance 0.4837616 0.2387412 0.0953118 0.07914287 0.04436744 0.03217101 0.02144323 0.005023505  
 Cumulative Proportion 0.4837616 0.7225028 0.8178146 0.89695745 0.94132489 0.97349590 0.99493913 0.999962632  
 Comp.9

Standard deviation 1.016821e+00

Proportion of Variance 3.736787e-05

Cumulative Proportion 1.000000e+00

> #Représentation graphique

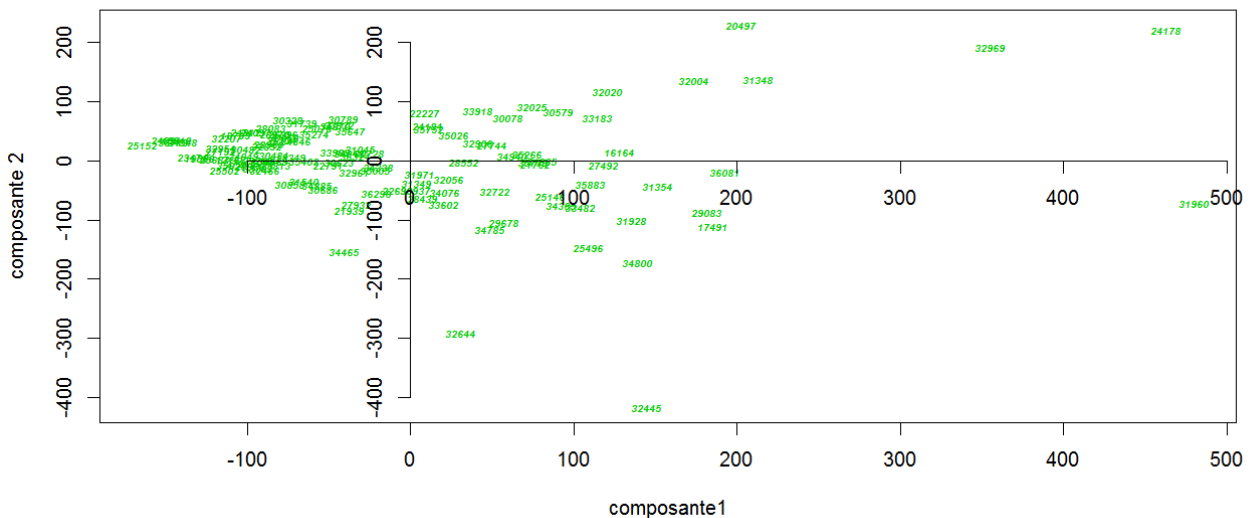
> plot(reorg2007acp\$scores[,1],reorg2007acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(reorg2007)[[1]]

> text(reorg2007acp\$scores[,1],reorg2007acp\$scores[,2],id,cex=0.5,font=4,col=3)

> axis(1,pos=0)

> axis(2,pos=0)



> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2008.csv', header=T, dec=',', sep=',')

> rownames(reorg2008)<-reorg2008[,1]

> reorg2008<-reorg2008[,4:12]

> #Etude sommaire

> summary(reorg2008)

| fjuri          | fvd            | UTATO         | sauti         | CHARA          | cons            | pmda           |
|----------------|----------------|---------------|---------------|----------------|-----------------|----------------|
| Min. :0.0000   | Min. : 0.00    | Min. :1.000   | Min. : 2.5    | Min. : 7178    | Min. : 0.00     | Min. : 2335    |
| 1st Qu.:0.0000 | 1st Qu.: 0.00  | 1st Qu.:1.000 | 1st Qu.: 55.0 | 1st Qu.: 20484 | 1st Qu.: 19.70  | 1st Qu.: 46162 |
| Median :0.0000 | Median : 8.82  | Median :1.200 | Median : 85.0 | Median : 38304 | Median : 93.35  | Median : 75802 |
| Mean :0.8831   | Mean : 23.12   | Mean :1.767   | Mean :105.7   | Mean : 55511   | Mean : 246.53   | Mean :109231   |
| 3rd Qu.:2.0000 | 3rd Qu.: 36.67 | 3rd Qu.:2.340 | 3rd Qu.:135.0 | 3rd Qu.: 64965 | 3rd Qu.: 328.08 | 3rd Qu.:153058 |
| Max. :3.0000   | Max. :100.00   | Max. :5.460   | Max. :400.0   | Max. :380714   | Max. :2405.08   | Max. :551574   |

| ugbto          | DISPO          |
|----------------|----------------|
| Min. : 0.00    | Min. : 0       |
| 1st Qu.: 0.00  | 1st Qu.: 805   |
| Median : 37.50 | Median : 7826  |
| Mean : 66.95   | Mean : 24572   |
| 3rd Qu.: 97.50 | 3rd Qu.: 26801 |
| Max. :500.00   | Max. :248024   |

> cor(reorg2008)

| fjuri | fvd         | UTATO       | sauti      | CHARA      | cons       | pmda        | ugbto      | DISPO       |
|-------|-------------|-------------|------------|------------|------------|-------------|------------|-------------|
| fjuri | 1.00000000  | -0.53970926 | 0.3173651  | 0.4537783  | 0.4387570  | 0.25931935  | 0.3871602  | 0.1608671   |
| fvd   | -0.53970926 | 1.00000000  | -0.1131768 | -0.3835413 | -0.3098616 | -0.20209047 | -0.2690566 | -0.0911299  |
| UTATO | 0.31736507  | -0.11317675 | 1.00000000 | 0.4000096  | 0.3197782  | 0.38449187  | 0.4596382  | 0.3340844   |
| sauti | 0.45377830  | -0.38354126 | 0.4000096  | 1.00000000 | 0.4437766  | 0.43879012  | 0.7486222  | 0.1774664   |
| CHARA | 0.43875696  | -0.30986161 | 0.3197782  | 0.4437766  | 1.00000000 | 0.31938038  | 0.6126433  | 0.2935763   |
| cons  | 0.25931935  | -0.20209047 | 0.3844919  | 0.4387901  | 0.3193804  | 1.00000000  | 0.3504676  | 0.3100988   |
| pmda  | 0.38716023  | -0.26905655 | 0.4596382  | 0.7486222  | 0.6126433  | 0.35046759  | 1.00000000 | 0.1084321   |
| ugbto | 0.16086711  | -0.09112990 | 0.3340844  | 0.1774664  | 0.2935763  | 0.31009881  | 0.1084321  | 1.00000000  |
| DISPO | 0.09505122  | 0.08773009  | 0.25622971 | 0.14041975 | 0.30695442 | 0.03997052  | 0.35707990 | -0.17557109 |

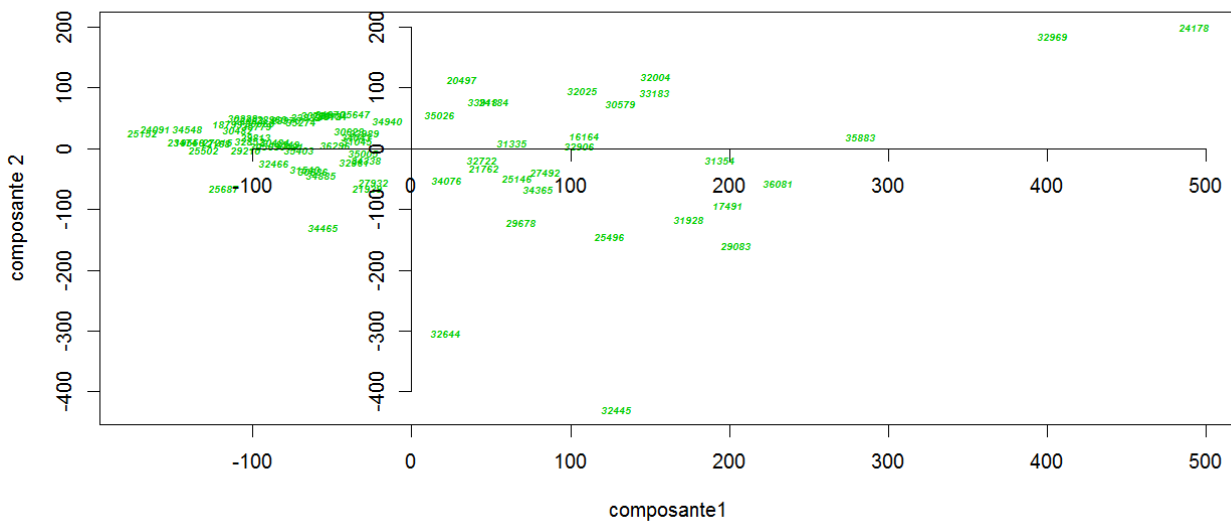


```

DISPO 0.09505122 0.08773009 0.2562297 0.1404198 0.3069544 0.03997052 0.3570799 -0.1755711 1.00000000
> #ACP (dizaines m² centaines h, milliers ch, €)
> reorg2008[,3]<-reorg2008[,3]*16
> reorg2008[,5]<-reorg2008[,5]/1000
> reorg2008[,6]<-reorg2008[,6]/10
> reorg2008[,7]<-reorg2008[,7]/1000
> reorg2008[,9]<-reorg2008[,9]/1000
> reorg2008acp<-princomp(reorg2008)
> summary(reorg2008acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 126.5633221 87.7747291 51.51774083 38.79568850 36.35601256 31.31174071 24.47944632 12.117803895
Proportion of Variance 0.5178708 0.2490833 0.08580632 0.04866005 0.04273248 0.03169714 0.01937353 0.004747374
Cumulative Proportion 0.5178708 0.7669541 0.85276039 0.90142045 0.94415293 0.97585007 0.99522360 0.999970978

      Comp.9
Standard deviation 9.474638e-01
Proportion of Variance 2.902224e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2008acp$scores[,1],reorg2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2008)[[1]]
> text(reorg2008acp$scores[,1],reorg2008acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations 2009.csv', header=T, dec=',', sep=';')
> rownames(reorg2009)<-reorg2009[,1]
> reorg2009<-reorg2009[,4:12]
> #Etude sommaire
> summary(reorg2009)
      fjuri    fvd    UTATO    sauti    CHARA    cons    pmda
Min. :0.00 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 4399 Min. : 0.00 Min. : 3917
1st Qu.:0.00 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 23335 1st Qu.: 24.17 1st Qu.: 43777
Median :0.00 Median : 8.57 Median :1.330 Median : 85.0 Median : 42770 Median : 97.19 Median : 79133
Mean :1.05 Mean : 23.51 Mean :1.752 Mean :108.5 Mean : 60472 Mean : 233.14 Mean : 96192
3rd Qu.:2.25 3rd Qu.: 37.06 3rd Qu.:2.743 3rd Qu.:135.0 3rd Qu.: 71876 3rd Qu.: 242.16 3rd Qu.:130610
Max. :3.00 Max. :100.00 Max. :3.150 Max. :400.0 Max. :310271 Max. :2930.72 Max. :314656
      ugbto    DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 310.8
Median : 32.50 Median : 2544.0
Mean : 64.06 Mean : 20077.0

```

3rd Qu.: 88.75 3rd Qu.: 15776.8

Max. :500.00 Max. :212199.0

> cor(reorg2009)

```
      fjuri  fvd  UTATO  sauti  CHARA  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.61512456 0.31730326 0.43739237 0.370423251 0.230683741 0.3619961 0.14975889 -0.010389800
fvd -0.6151246 1.00000000 -0.15281918 -0.42082376 -0.383324374 -0.199526409 -0.3421466 -0.10140271 -0.087548006
UTATO 0.3173033 -0.15281918 1.00000000 0.36094399 0.491167026 0.378565627 0.4654782 0.40465981 0.050394955
sauti 0.4373924 -0.42082376 0.36094399 1.00000000 0.733550796 0.479449291 0.7953751 0.07263543 0.108005648
CHARA 0.3704233 -0.38332437 0.49116703 0.73355080 1.000000000 0.350305867 0.6842199 0.44681789 0.004364866
cons 0.2306837 -0.19952641 0.37856563 0.47944929 0.350305867 1.000000000 0.4427476 0.31848972 0.002579944
pmda 0.3619961 -0.34214662 0.46547825 0.79537507 0.684219911 0.442747552 1.0000000 0.16898881 0.174512738
ugpto 0.1497589 -0.10140271 0.40465981 0.07263543 0.446817894 0.318489722 0.1689888 1.00000000 -0.013041720
DISPO -0.0103898 -0.08754801 0.05039496 0.10800565 0.004364866 0.002579944 0.1745127 -0.01304172 1.000000000
```

> #ACP (dizaines m<sup>2</sup> centaines h, milliers ch, €)

> reorg2009[,3]<-reorg2009[,3]\*16

> reorg2009[,5]<-reorg2009[,5]/1000

> reorg2009[,6]<-reorg2009[,6]/10

> reorg2009[,7]<-reorg2009[,7]/1000

> reorg2009[,9]<-reorg2009[,9]/1000

> reorg2009acp<-princomp(reorg2009)

> summary(reorg2009acp)

Importance of components:

|                        | Comp.1     | Comp.2     | Comp.3      | Comp.4     | Comp.5      | Comp.6      | Comp.7      | Comp.8      |
|------------------------|------------|------------|-------------|------------|-------------|-------------|-------------|-------------|
| Standard deviation     | 120.497012 | 89.3806413 | 41.37200056 | 40.9282277 | 33.55642345 | 26.06211578 | 24.68484288 | 10.68513285 |
| Proportion of Variance | 0.510803   | 0.2810527  | 0.06021628  | 0.0589314  | 0.03961432  | 0.02389572  | 0.02143688  | 0.00401662  |
| Cumulative Proportion  | 0.510803   | 0.7918557  | 0.85207198  | 0.9110034  | 0.95061770  | 0.97451343  | 0.99595031  | 0.99996693  |

Comp.9

Standard deviation 9.695694e-01

Proportion of Variance 3.307186e-05

Cumulative Proportion 1.000000e+00

> #Représentation graphique

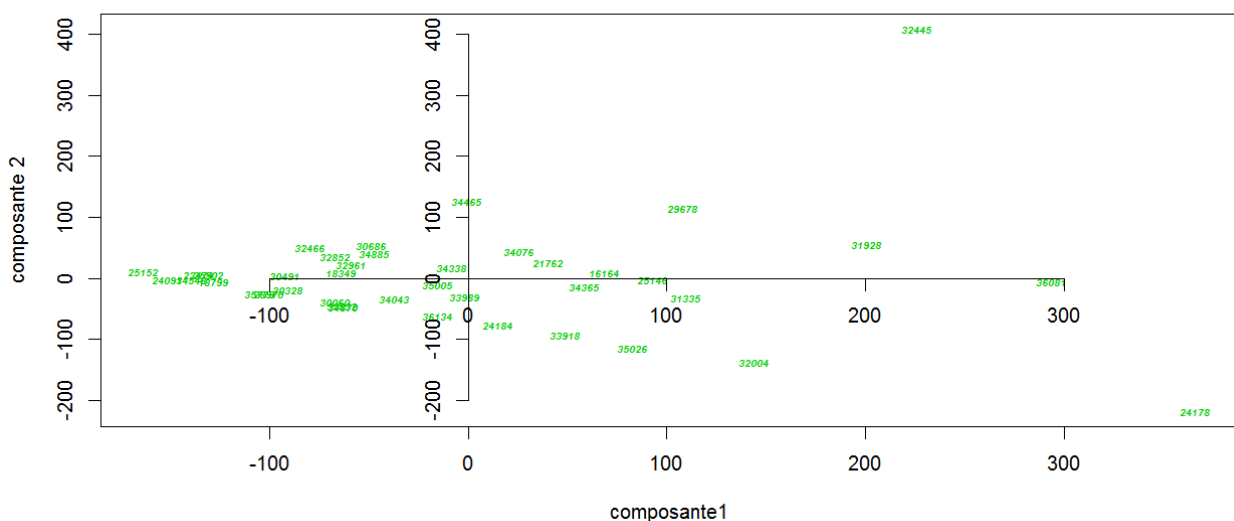
> plot(reorg2009acp\$scores[,1],reorg2009acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(reorg2009)[[1]]

> text(reorg2009acp\$scores[,1],reorg2009acp\$scores[,2],id,cex=0.5,font=4,col=3)

> axis(1,pos=0)

> axis(2,pos=0)



> rupt2000<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2000.csv', header=T, dec=',', sep=';')

> rownames(rupt2000)<-rupt2000[,1]

> rupt2000<-rupt2000[,4:12]

> #Etude sommaire

> summary(rupt2000)

```

  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :0.910 Min. : 0.0 Min. : 5690 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.:32.5 1st Qu.: 36251 1st Qu.: 61.97 1st Qu.: 48641
Median :2.000 Median : 0.000 Median :2.390 Median :85.0 Median : 57598 Median :239.70 Median :87534
Mean :1.537 Mean : 8.477 Mean :3.486 Mean :103.5 Mean :79112 Mean :439.97 Mean :108540
3rd Qu.:2.000 3rd Qu.: 2.940 3rd Qu.:3.600 3rd Qu.:150.0 3rd Qu.: 89908 3rd Qu.: 600.25 3rd Qu.:144581
Max. :3.000 Max. :100.000 Max. :39.590 Max. :400.0 Max. :767622 Max. :6969.51 Max. :680152

```

```

  ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2218
Median : 0.00 Median :11050
Mean :62.97 Mean :27487
3rd Qu.:100.00 3rd Qu.:36842
Max. :500.00 Max. :477670

```

```
> cor(rupt2000)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.000000000 -0.272505868 -0.005648612 0.074378183 0.07518935 0.09114470 0.0965558856 0.1266911930
      -0.032770182
fvd -0.272505868 1.000000000 0.022402712 -0.159582538 0.10396429 0.08696630 -0.1500962165 -0.0055118588
      0.105759651
UTATO -0.005648612 0.022402712 1.000000000 -0.172978871 0.58224954 0.16011759 0.2129941350 -0.1651000586
      0.177572879
sauti 0.074378183 -0.159582538 -0.172978871 1.000000000 0.11381865 -0.02205029 0.6369084802 0.1702284201
      -0.003143567
chara 0.075189346 0.103964290 0.582249545 0.113818648 1.000000000 0.47352100 0.3270059692 0.3254803140
      0.146197582
cons 0.091144699 0.086966301 0.160117586 -0.022050287 0.47352100 1.000000000 0.0748425062 0.4067703142
      0.144339941
pmda 0.096555886 -0.150096217 0.212994135 0.636908480 0.32700597 0.07484251 1.0000000000 -0.0007156477
      0.095011823
ugbto 0.126691193 -0.005511859 -0.165100059 0.170228420 0.32548031 0.40677031 -0.0007156477 1.0000000000
      -0.096880316
DISPO -0.032770182 0.105759651 0.177572879 -0.003143567 0.14619758 0.14433994 0.0950118231 -0.0968803160
      1.000000000

```

```
> #ACP (dizaines m2 centaines h, milliers ch, €)
```

```
> rupt2000[,3]<-rupt2000[,3]*16
```

```
> rupt2000[,5]<-rupt2000[,5]/1000
```

```
> rupt2000[,6]<-rupt2000[,6]/10
```

```
> rupt2000[,7]<-rupt2000[,7]/1000
```

```
> rupt2000[,9]<-rupt2000[,9]/1000
```

```
> rupt2000acp<-princomp(rupt2000)
```

```
> summary(rupt2000acp)
```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 125.2770289 106.541363 92.2277421 51.10382011 46.38456057 42.81615610 33.66111498 19.039466171
Proportion of Variance 0.3595989 0.260083 0.1948941 0.05983871 0.04929722 0.04200402 0.02596166 0.008305869
Cumulative Proportion 0.3595989 0.619682 0.8145761 0.87441478 0.92371200 0.96571602 0.99167768 0.999983549

```

```
      Comp.9
```

```
Standard deviation 8.473376e-01
```

```
Proportion of Variance 1.645085e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

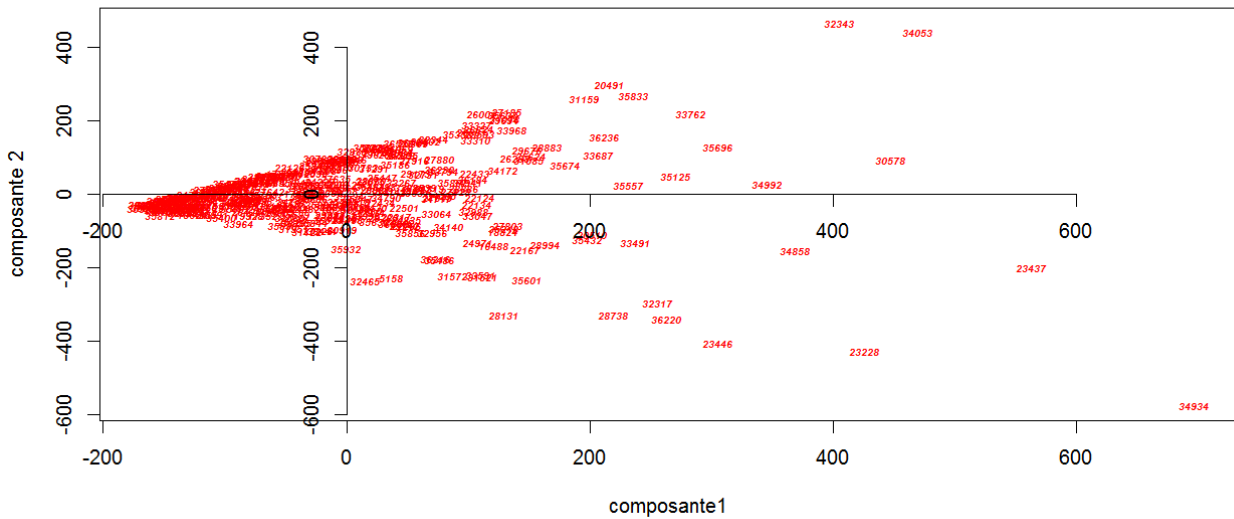
```
> plot(rupt2000acp$scores[,1],rupt2000acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2000)[[1]]
```

```
> text(rupt2000acp$scores[,1],rupt2000acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```

> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2001.csv', header=T, dec=',', sep=',')
> rownames(rupt2001)<-rupt2001[,1]
> rupt2001<-rupt2001[,4:12]
> #Etude sommaire
> summary(rupt2001)
    fjuri      fvd    UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. : 0.910 Min. : 0.0 Min. : 4393 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 35.0 1st Qu.: 36524 1st Qu.: 53.14 1st Qu.: 47661
Median :2.000 Median : 0.000 Median : 2.320 Median : 85.0 Median : 58837 Median : 224.55 Median : 93549
Mean :1.573 Mean : 8.045 Mean : 3.374 Mean :104.5 Mean : 81445 Mean : 430.46 Mean :117192
3rd Qu.:2.000 3rd Qu.: 2.630 3rd Qu.: 3.570 3rd Qu.:155.0 3rd Qu.: 93925 3rd Qu.: 593.34 3rd Qu.:159031
Max. :3.000 Max. :100.000 Max. :36.690 Max. :400.0 Max. :846864 Max. :6339.57 Max. :690191
    ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2510
Median : 0.00 Median : 13927
Mean : 62.23 Mean : 30885
3rd Qu.:102.50 3rd Qu.: 37300
Max. :500.00 Max. :560165
> cor(rupt2001)
    fjuri      fvd    UTATO      sauti      chara      cons      pmda      ugpto    DISPO
fjuri 1.00000000 -0.27757381 -0.01779999 0.10007199 0.08042007 0.07876623 0.07017954 0.14657033 -0.03571696
fvd -0.27757381 1.00000000 0.04055969 -0.17539242 0.08538381 0.11437923 -0.09345007 -0.03394333 0.13896607
UTATO -0.01779999 0.04055969 1.00000000 -0.16829052 0.63178243 0.20787019 0.20655048 -0.16481812 0.19916510
sauti 0.10007199 -0.17539242 -0.16829052 1.00000000 0.13355542 -0.02190848 0.61955199 0.17857246 -0.02643518
chara 0.08042007 0.08538381 0.63178243 0.13355542 1.00000000 0.45658496 0.32471621 0.29590559 0.08688698
cons 0.07876623 0.11437923 0.20787019 -0.02190848 0.45658496 1.00000000 0.11757165 0.43237763 0.07853395
pmda 0.07017954 -0.09345007 0.20655048 0.61955199 0.32471621 0.11757165 1.00000000 0.00562024 0.05512111
ugpto 0.14657033 -0.03394333 -0.16481812 0.17857246 0.29590559 0.43237763 0.00562024 1.00000000 -0.11863833
DISPO -0.03571696 0.13896607 0.19916510 -0.02643518 0.08688698 0.07853395 0.05512111 -0.11863833 1.00000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> rupt2001[,3]<-rupt2001[,3]*16
> rupt2001[,5]<-rupt2001[,5]/1000
> rupt2001[,6]<-rupt2001[,6]/10
> rupt2001[,7]<-rupt2001[,7]/1000
> rupt2001[,9]<-rupt2001[,9]/1000
> rupt2001acp<-princomp(rupt2001)
> summary(rupt2001acp)
Importance of components:
    Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation  128.7074436 105.6692075 92.6936784 52.6988686 50.57666867 43.65226735 30.68716124 18.51114071

```

```

Proportion of Variance  0.3693599  0.2489656  0.1915767  0.0619220  0.05703518  0.04248699  0.02099693  0.00764027
Cumulative Proportion  0.3693599  0.6183254  0.8099021  0.8718241  0.92885924  0.97134623  0.99234316  0.99998343
Comp.9

```

```
Standard deviation  8.619687e-01
```

```
Proportion of Variance 1.656629e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

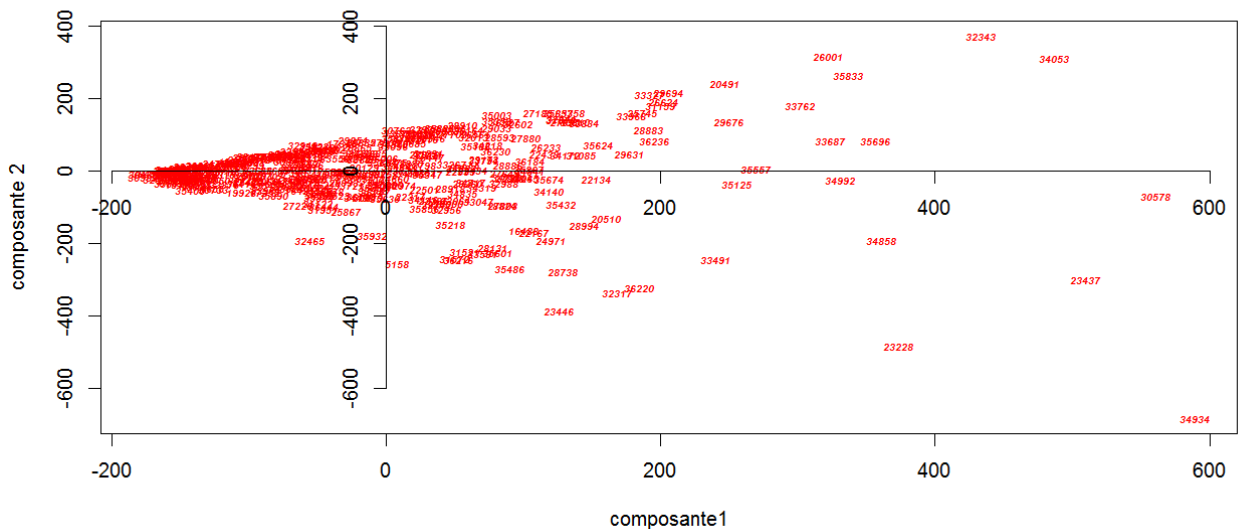
```
> plot(rupt2001acp$scores[,1],rupt2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2001)[[1]]
```

```
> text(rupt2001acp$scores[,1],rupt2001acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2002.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2002)<-rupt2002[,1]
```

```
> rupt2002<-rupt2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2002)
```

| fjuri         | fvd            | UTATO         | sauti         | chara          | cons            | pmda           | ugbto | DISPO |
|---------------|----------------|---------------|---------------|----------------|-----------------|----------------|-------|-------|
| Min. :0.000   | Min. : 0.000   | Min. :1.000   | Min. : 2.5    | Min. : 4023    | Min. : 0.00     | Min. : 0       |       |       |
| 1st Qu.:1.000 | 1st Qu.: 0.000 | 1st Qu.:2.000 | 1st Qu.: 32.5 | 1st Qu.: 37183 | 1st Qu.: 53.43  | 1st Qu.: 36445 |       |       |
| Median :2.000 | Median : 0.000 | Median :2.590 | Median : 85.0 | Median : 57432 | Median :246.93  | Median :81325  |       |       |
| Mean :1.916   | Mean : 8.742   | Mean :3.931   | Mean :104.7   | Mean : 81509   | Mean :440.49    | Mean :102518   |       |       |
| 3rd Qu.:3.000 | 3rd Qu.: 3.850 | 3rd Qu.:4.000 | 3rd Qu.:155.0 | 3rd Qu.: 90381 | 3rd Qu.: 658.62 | 3rd Qu.:139324 |       |       |
| Max. :5.000   | Max. :100.000  | Max. :41.250  | Max. :400.0   | Max. :1050170  | Max. :5577.18   | Max. :639437   |       |       |

| ugbto          | DISPO          |
|----------------|----------------|
| Min. : 0.00    | Min. : 0       |
| 1st Qu.: 0.00  | 1st Qu.: 2349  |
| Median : 0.00  | Median : 13374 |
| Mean : 61.37   | Mean : 33300   |
| 3rd Qu.:102.50 | 3rd Qu.: 41148 |
| Max. :500.00   | Max. :694849   |

```
> cor(rupt2002)
```

| fjuri | fvd         | UTATO       | sauti       | chara       | cons        | pmda        | ugbto       | DISPO       |             |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| fjuri | 1.00000000  | -0.19986115 | 0.04122637  | -0.03882950 | 0.01943839  | -0.02917328 | -0.08514533 | 0.06374809  | -0.04426183 |
| fvd   | -0.19986115 | 1.00000000  | 0.04432593  | -0.16554672 | 0.08651710  | 0.08476128  | -0.15268383 | -0.04367214 | 0.10371044  |
| UTATO | 0.04122637  | 0.04432593  | 1.00000000  | -0.19153287 | 0.61871413  | 0.20877812  | 0.17816661  | -0.18246662 | 0.17420605  |
| sauti | -0.03882950 | -0.16554672 | -0.19153287 | 1.00000000  | 0.09898398  | 0.02011905  | 0.63711020  | 0.22034919  | -0.10220907 |
| chara | 0.01943839  | 0.08651710  | 0.61871413  | 0.09898398  | 1.00000000  | 0.42088255  | 0.39828390  | 0.29695243  | -0.02789458 |
| cons  | -0.02917328 | 0.08476128  | 0.20877812  | 0.02011905  | 0.42088255  | 1.00000000  | 0.08144094  | 0.44360102  | 0.05802075  |
| pmda  | -0.08514533 | -0.15268383 | 0.17816661  | 0.63711020  | 0.39828390  | 0.08144094  | 1.00000000  | 0.01960481  | -0.07789044 |
| ugbto | 0.06374809  | -0.04367214 | -0.18246662 | 0.22034919  | 0.29695243  | 0.44360102  | 0.01960481  | 1.00000000  | -0.14568134 |
| DISPO | -0.04426183 | 0.10371044  | 0.17420605  | -0.10220907 | -0.02789458 | 0.05802075  | -0.07789044 | -0.14568134 | 1.00000000  |

```
DISPO -0.04426183 0.10371044 0.17420605 -0.10220907 -0.02789458 0.05802075 -0.07789044 -0.14568134 1.00000000
```

```
> #ACP (dizaines m² centaines h, milliers ch, €)
```

```
> rupt2002[,3]<-rupt2002[,3]*16
```

```
> rupt2002[,5]<-rupt2002[,5]/1000
```

```
> rupt2002[,6]<-rupt2002[,6]/10
```

```
> rupt2002[,7]<-rupt2002[,7]/1000
```

```
> rupt2002[,9]<-rupt2002[,9]/1000
```

```
> rupt2002acp<-princomp(rupt2002)
```

```
> summary(rupt2002acp)
```

```
Importance of components:
```

|  | Comp.1 | Comp.2 | Comp.3 | Comp.4 | Comp.5 | Comp.6 | Comp.7 | Comp.8 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
|--|--------|--------|--------|--------|--------|--------|--------|--------|

```
Standard deviation 130.9873179 102.5581109 102.0857833 61.12318873 46.27645351 42.85212062 36.9659024 19.610867693
```

```
Proportion of Variance 0.3607314 0.2211391 0.2191069 0.07854843 0.04502416 0.03860736 0.0287295 0.008085727
```

```
Cumulative Proportion 0.3607314 0.5818705 0.8009774 0.87952581 0.92454997 0.96315733 0.9918868 0.999972557
```

```
Comp.9
```

```
Standard deviation 1.142482e+00
```

```
Proportion of Variance 2.744251e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

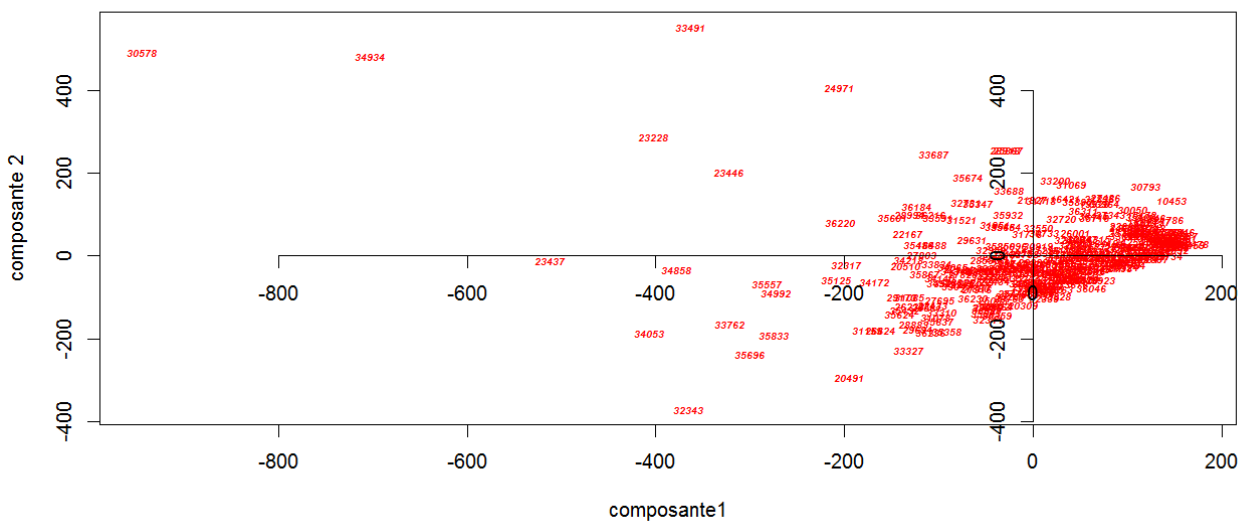
```
> plot(rupt2002acp$scores[,1],rupt2002acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2002)[[1]]
```

```
> text(rupt2002acp$scores[,1],rupt2002acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2003.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2003)<-rupt2003[,1]
```

```
> rupt2003<-rupt2003[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2003)
```

|          | fjuri  | fvd            | UTATO          | sauti         | chara          | cons            | prmda          |
|----------|--------|----------------|----------------|---------------|----------------|-----------------|----------------|
| Min.     | :0.000 | Min. : 0.000   | Min. : 1.000   | Min. : 2.5    | Min. : 5448    | Min. : 0.00     | Min. : 0       |
| 1st Qu.: | 2.000  | 1st Qu.: 0.000 | 1st Qu.: 2.000 | 1st Qu.: 42.5 | 1st Qu.: 42296 | 1st Qu.: 87.44  | 1st Qu.: 48027 |
| Median : | 2.000  | Median : 0.000 | Median : 2.560 | Median : 95.0 | Median : 61612 | Median : 297.46 | Median : 94545 |
| Mean :   | 2.485  | Mean : 8.648   | Mean : 4.059   | Mean :114.1   | Mean : 87039   | Mean : 521.76   | Mean :109149   |
| 3rd Qu.: | 3.000  | 3rd Qu.: 3.590 | 3rd Qu.: 4.040 | 3rd Qu.:165.0 | 3rd Qu.: 95976 | 3rd Qu.: 707.12 | 3rd Qu.:152073 |
| Max. :   | 4.000  | Max. :100.000  | Max. :47.380   | Max. :400.0   | Max. :998769   | Max. :9116.39   | Max. :450725   |

|          | ugbto | DISPO          |
|----------|-------|----------------|
| Min. :   | 0.00  | Min. : 0       |
| 1st Qu.: | 0.00  | 1st Qu.: 4137  |
| Median : | 2.50  | Median : 17572 |
| Mean :   | 71.27 | Mean : 39571   |

3rd Qu.:110.00 3rd Qu.: 42931

Max. :500.00 Max. :785437

> cor(rupt2003)

```
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto  DISPO
fjuri 1.00000000 -0.23487852 0.17534400 -0.05651112 0.01722497 0.02555293 -0.06178936 -0.06946496 0.06097291
fvd   -0.23487852 1.00000000 0.04098606 -0.16454222 0.06293437 0.07649000 -0.16401549 -0.05790284 0.11270003
UTATO 0.17534400 0.04098606 1.00000000 -0.20188076 0.69049882 0.09601516 0.08143506 -0.18780770 0.13184182
saute -0.05651112 -0.16454222 -0.20188076 1.00000000 0.04968512 0.03817428 0.65324044 0.17129530 -0.05466574
chara 0.01722497 0.06293437 0.69049882 0.04968512 1.00000000 0.30655535 0.25373509 0.23513689 -0.02345095
cons  0.02555293 0.07649000 0.09601516 0.03817428 0.30655535 1.00000000 0.08470247 0.43523891 0.03026516
pmda  -0.06178936 -0.16401549 0.08143506 0.65324044 0.25373509 0.08470247 1.00000000 0.05782012 -0.06868604
ugpto -0.06946496 -0.05790284 -0.18780770 0.17129530 0.23513689 0.43523891 0.05782012 1.00000000 -0.15603398
DISPO 0.06097291 0.11270003 0.13184182 -0.05466574 -0.02345095 0.03026516 -0.06868604 -0.15603398 1.00000000
```

> #ACP (dizaines m<sup>2</sup> centaines h, milliers ch, €)

```
> rupt2003[,3]<-rupt2003[,3]*16
> rupt2003[,5]<-rupt2003[,5]/1000
> rupt2003[,6]<-rupt2003[,6]/10
> rupt2003[,7]<-rupt2003[,7]/1000
> rupt2003[,9]<-rupt2003[,9]/1000
> rupt2003acp<-princomp(rupt2003)
> summary(rupt2003acp)
```

Importance of components:

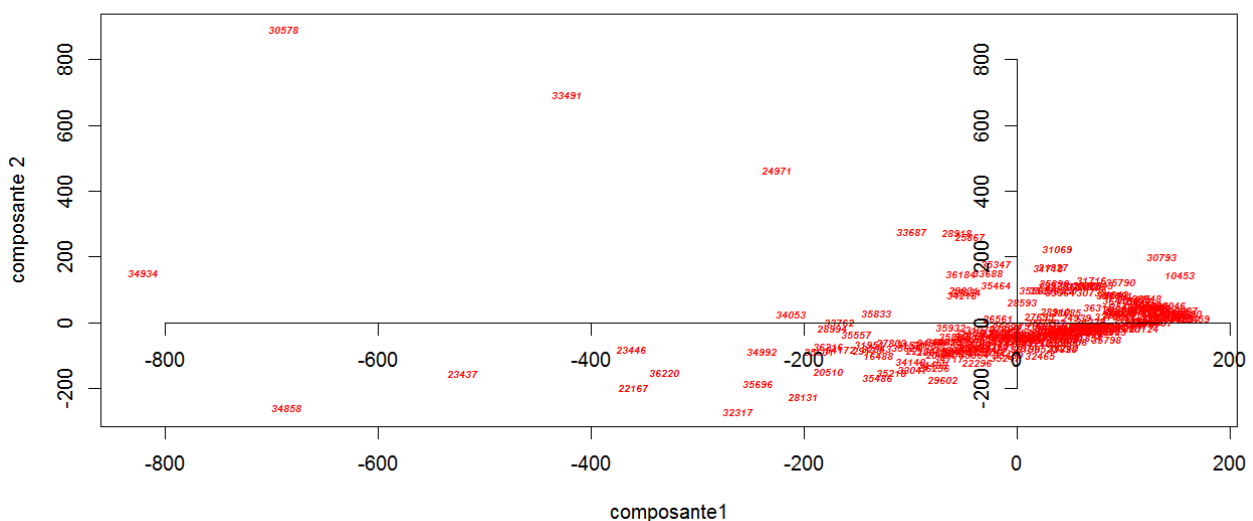
|                        | Comp.1      | Comp.2      | Comp.3      | Comp.4     | Comp.5      | Comp.6      | Comp.7      | Comp.8       |
|------------------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|
| Standard deviation     | 136.1794881 | 115.7328418 | 106.9067036 | 78.6969308 | 64.79367590 | 46.82214000 | 37.14202676 | 19.641907664 |
| Proportion of Variance | 0.3212998   | 0.2320600   | 0.1980145   | 0.1073007  | 0.07273648  | 0.03798303  | 0.02390112  | 0.006684276  |
| Cumulative Proportion  | 0.3212998   | 0.5533598   | 0.7513743   | 0.8586750  | 0.93141148  | 0.96939451  | 0.99329563  | 0.999979907  |

Comp.9

Standard deviation 1.076908e+00  
Proportion of Variance 2.009297e-05  
Cumulative Proportion 1.000000e+00

> #Représentation graphique

```
> plot(rupt2003acp$scores[,1],rupt2003acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2003)[[1]]
> text(rupt2003acp$scores[,1],rupt2003acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)
```



```
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2004.csv', header=T, dec=',', sep=',')
> rownames(rupt2004)<-rupt2004[,1]
> rupt2004<-rupt2004[,4:12]
> #Etude sommaire
> summary(rupt2004)
```

```

fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 6446 Min. : 0.0 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.:55.0 1st Qu.:44283 1st Qu.:109.6 1st Qu.:68354
Median :2.000 Median : 0.000 Median :2.440 Median :105.0 Median :67219 Median :304.8 Median :115259
Mean :2.051 Mean : 9.162 Mean :3.362 Mean :117.7 Mean :96548 Mean :584.1 Mean :125850
3rd Qu.:2.000 3rd Qu.: 6.520 3rd Qu.:3.290 3rd Qu.:165.0 3rd Qu.:105411 3rd Qu.:659.6 3rd Qu.:162525
Max. :5.000 Max. :100.000 Max. :17.380 Max. :400.0 Max. :870798 Max. :8154.9 Max. :538975

```

```

ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3410
Median : 52.50 Median : 14671
Mean : 79.85 Mean : 34531
3rd Qu.:122.50 3rd Qu.: 39610
Max. :500.00 Max. :505324

```

```
> cor(rupt2004)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.26090916 0.12725226 -0.18419347 0.083044230 0.02650711 -0.08441476 -0.03467007 -0.061445568
fvd -0.26090916 1.00000000 0.17688622 -0.26906972 0.091480621 0.05714403 -0.19341859 -0.03504478 0.146612792
UTATO 0.12725226 0.17688622 1.00000000 -0.18114560 0.210034777 0.08478478 0.04363060 -0.22591452 0.442026825
sauti -0.18419347 -0.26906972 -0.18114560 1.00000000 0.046825768 0.04116434 0.65745630 0.10365916 -0.072957501
chara 0.08304423 0.09148062 0.21003478 0.04682577 1.00000000 0.55564063 0.41082034 0.40360437 -0.006282262
cons 0.02650711 0.05714403 0.08478478 0.04116434 0.555640628 1.00000000 0.30343788 0.46932615 0.029999806
pmda -0.08441476 -0.19341859 0.04363060 0.65745630 0.410820341 0.30343788 1.00000000 0.10509587 0.093582147
ugbto -0.03467007 -0.03504478 -0.22591452 0.10365916 0.403604373 0.46932615 0.10509587 1.00000000 -0.174802662
DISPO -0.06144557 0.14661279 0.44202683 -0.07295750 -0.006282262 0.02999981 0.09358215 -0.17480266 1.000000000

```

```
> #ACP (dizaines m2 centaines h, milliers ch, €)
```

```

> rupt2004[,3]<-rupt2004[,3]*16
> rupt2004[,5]<-rupt2004[,5]/1000
> rupt2004[,6]<-rupt2004[,6]/10
> rupt2004[,7]<-rupt2004[,7]/1000
> rupt2004[,9]<-rupt2004[,9]/1000
> rupt2004acp<-princomp(rupt2004)
> summary(rupt2004acp)

```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 159.5165791 108.5499184 94.1987099 70.94607048 62.10442059 41.72373847 33.03726111 19.302915689
Proportion of Variance 0.4372236 0.2024655 0.1524691 0.08648656 0.06627305 0.02991289 0.01875426 0.006402326
Cumulative Proportion 0.4372236 0.6396891 0.7921582 0.87864473 0.94491778 0.97483067 0.99358494 0.999987262

```

```

      Comp.9
Standard deviation 8.610106e-01
Proportion of Variance 1.273822e-05
Cumulative Proportion 1.000000e+00

```

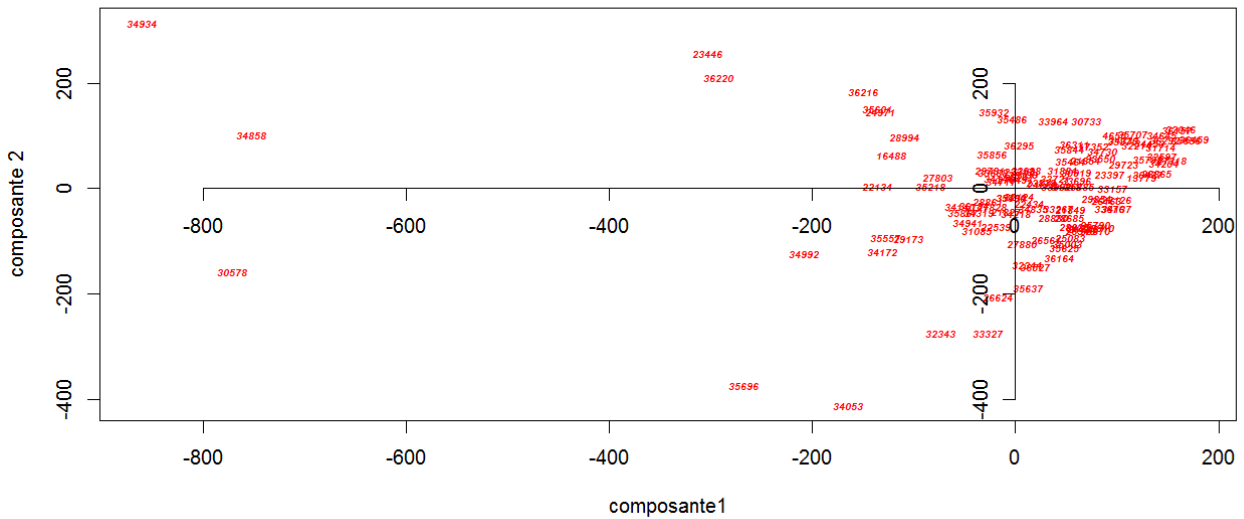
```
> #Représentation graphique
```

```

> plot(rupt2004acp$scores[,1],rupt2004acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2004)[[1]]
> text(rupt2004acp$scores[,1],rupt2004acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```





```

> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2005.csv', header=T, dec=',', sep=',')
> rownames(rupt2005)<-rupt2005[,1]
> rupt2005<-rupt2005[,4:12]
> #Etude sommaire
> summary(rupt2005)
  fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 8110 Min. : 0.0 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 55.0 1st Qu.: 50493 1st Qu.: 106.9 1st Qu.: 69389
Median :2.000 Median : 0.000 Median : 2.250 Median :105.0 Median : 70375 Median : 326.9 Median :122498
Mean :2.041 Mean : 6.982 Mean : 3.323 Mean :124.0 Mean : 99467 Mean : 582.3 Mean :133721
3rd Qu.:3.000 3rd Qu.: 3.330 3rd Qu.: 3.220 3rd Qu.:175.0 3rd Qu.:111921 3rd Qu.: 636.8 3rd Qu.:171032
Max. :4.000 Max. :100.000 Max. :13.750 Max. :400.0 Max. :921750 Max. :7584.0 Max. :562238

  ugpto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1275
Median : 62.50 Median : 14818
Mean : 80.54 Mean : 35504
3rd Qu.:127.50 3rd Qu.: 43365
Max. :500.00 Max. :326778
> cor(rupt2005)
  fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.00000000 -0.36202140 -0.02879983 -0.16912420 0.05465162 -0.02344097 -0.03287723 -0.03617016 -0.14635170
fvd -0.36202140 1.00000000 0.06925632 -0.25699053 0.01236542 0.16001133 -0.20182050 0.02733585 0.26864444
UTATO -0.02879983 0.06925632 1.00000000 -0.15665074 0.07764459 0.10812075 -0.02949467 -0.20099196 0.52560024
sauti -0.16912420 -0.25699053 -0.15665074 1.00000000 0.07984266 0.00771545 0.73951425 0.10078536 -0.06364094
chara 0.05465162 0.01236542 0.07764459 0.07984266 1.00000000 0.61676387 0.34972391 0.41666519 -0.03177113
cons -0.02344097 0.16001133 0.10812075 0.00771545 0.61676387 1.00000000 0.17397471 0.50448060 -0.02281269
pmda -0.03287723 -0.20182050 -0.02949467 0.73951425 0.34972391 0.17397471 1.00000000 0.02940383 -0.07771948
ugpto -0.03617016 0.02733585 -0.20099196 0.10078536 0.41666519 0.50448060 0.02940383 1.00000000 -0.19336910
DISPO -0.14635170 0.26864444 0.52560024 -0.06364094 -0.03177113 -0.02281269 -0.07771948 -0.19336910 1.00000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> rupt2005[,3]<-rupt2005[,3]*16
> rupt2005[,5]<-rupt2005[,5]/1000
> rupt2005[,6]<-rupt2005[,6]/10
> rupt2005[,7]<-rupt2005[,7]/1000
> rupt2005[,9]<-rupt2005[,9]/1000
> rupt2005acp<-princomp(rupt2005)
> summary(rupt2005acp)
Importance of components:
   Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 161.5963690 123.9658977 91.4084519 65.0868435 58.87691658 41.52492628 30.50092422 14.523430342

```

```

Proportion of Variance 0.4323022 0.2544068 0.1383238 0.0701311 0.05738711 0.02854578 0.01540105 0.003491907
Cumulative Proportion 0.4323022 0.6867090 0.8250328 0.8951639 0.95255098 0.98109676 0.99649781 0.999989712
Comp.9

```

```
Standard deviation 7.883221e-01
```

```
Proportion of Variance 1.028802e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

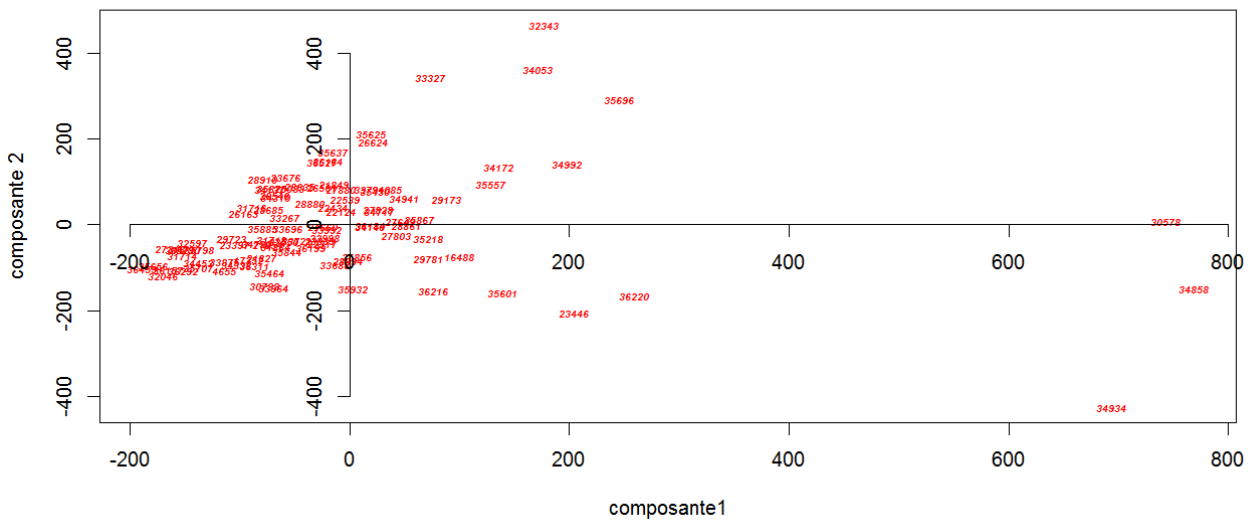
```
> plot(rupt2005acp$scores[,1],rupt2005acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2005)[[1]]
```

```
> text(rupt2005acp$scores[,1],rupt2005acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2006.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2006)<-rupt2006[,1]
```

```
> rupt2006<-rupt2006[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2006)
```

```

fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. :10612 Min. : 0.0 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.:55.0 1st Qu.:49814 1st Qu.:106.8 1st Qu.:65206
Median :2.000 Median : 0.000 Median :2.670 Median :115.0 Median :75814 Median :381.7 Median :110420
Mean :2.053 Mean : 9.676 Mean :3.434 Mean :127.0 Mean :109601 Mean :641.4 Mean :133509
3rd Qu.:3.000 3rd Qu.: 9.318 3rd Qu.:3.910 3rd Qu.:185.0 3rd Qu.:117988 3rd Qu.:795.0 3rd Qu.:173530
Max. :4.000 Max. :100.000 Max. :12.630 Max. :400.0 Max. :976040 Max. :6649.7 Max. :520468

```

```

ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 5906
Median : 72.50 Median : 21128
Mean : 89.54 Mean : 44847
3rd Qu.:122.50 3rd Qu.: 59168
Max. :500.00 Max. :380625

```

```
> cor(rupt2006)
```

```

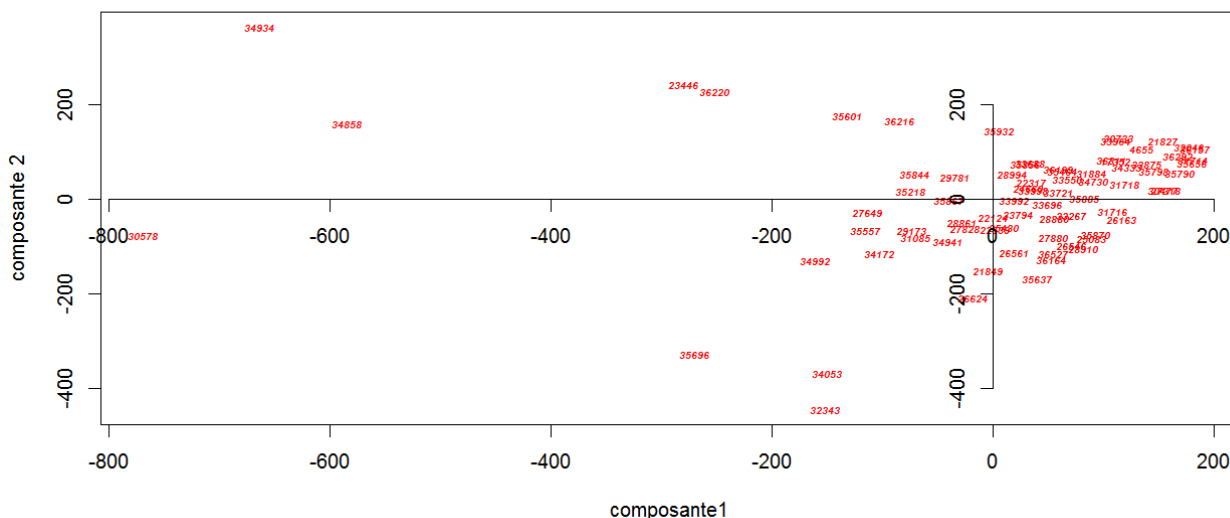
fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.271315117 -0.045318321 -0.26772084 0.16400612 0.0540867379 -0.10476352 0.01036470 -0.0654082177
fvd -0.27131512 1.000000000 -0.008743306 -0.29967802 -0.05360439 0.0702627923 -0.24359589 -0.01449051 0.1106815773
UTATO -0.04531832 -0.008743306 1.000000000 -0.23458629 0.03312065 0.0587952849 -0.09620950 -0.20428082 0.5217032794
sauti -0.26772084 -0.299678024 -0.234586292 1.00000000 0.04251646 0.0694571370 0.72849409 0.09695574 -0.0939295811
chara 0.16400612 -0.053604392 0.033120648 0.04251646 1.00000000 0.4861054638 0.38375340 0.41516601 -0.0769658676
cons 0.05408674 0.070262792 0.058795285 0.06945714 0.48610546 1.000000000 0.18542154 0.43830417 -0.0003113383
pmda -0.10476352 -0.243595891 -0.096209496 0.72849409 0.38375340 0.1854215444 1.00000000 0.03240941 -0.1512199595
ugbto 0.01036470 -0.014490510 -0.204280817 0.09695574 0.41516601 0.4383041673 0.03240941 1.00000000 -0.1661252879

```

```

DISPO -0.06540822 0.110681577 0.521703279 -0.09392958 -0.07696587 -0.0003113383 -0.15121996 -0.16612529 1.0000000000
> #ACP (dizaines m² centaines h, milliers ch, €)
> rupt2006[,3]<-rupt2006[,3]*16
> rupt2006[,5]<-rupt2006[,5]/1000
> rupt2006[,6]<-rupt2006[,6]/10
> rupt2006[,7]<-rupt2006[,7]/1000
> rupt2006[,9]<-rupt2006[,9]/1000
> rupt2006acp<-princomp(rupt2006)
> summary(rupt2006acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 172.5044278 126.6360564 100.554892 77.58669496 67.12759130 41.06180688 28.91810072 18.891941137
Proportion of Variance 0.4293345 0.2313716 0.145882 0.08684999 0.06501258 0.02432604 0.01206521 0.005149303
Cumulative Proportion 0.4293345 0.6607060 0.806588 0.89343801 0.95845058 0.98277662 0.99484183 0.999991130
      Comp.9
Standard deviation 7.840760e-01
Proportion of Variance 8.869755e-06
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(rupt2006acp$scores[,1],rupt2006acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2006)[[1]]
> text(rupt2006acp$scores[,1],rupt2006acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2007<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2007.csv', header=T, dec=',', sep=',')
> rownames(rupt2007)<-rupt2007[,1]
> rupt2007<-rupt2007[,4:12]
> #Etude sommaire
> summary(rupt2007)
      fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. : 2.5 Min. : 8200 Min. : 2.57 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 55.0 1st Qu.: 44345 1st Qu.: 100.58 1st Qu.: 60905
Median :2.000 Median : 0.000 Median : 2.975 Median :120.0 Median : 70276 Median : 286.62 Median :117367
Mean :1.944 Mean : 9.198 Mean : 3.587 Mean :138.5 Mean :101018 Mean : 550.61 Mean :135840
3rd Qu.:2.000 3rd Qu.:11.810 3rd Qu.: 3.995 3rd Qu.:192.5 3rd Qu.:126809 3rd Qu.: 729.89 3rd Qu.:176673
Max. :4.000 Max. :77.270 Max. :11.630 Max. :400.0 Max. :821331 Max. :5771.56 Max. :598871
      ugbto    DISPO
Min. : 0.0 Min. : 0
1st Qu.: 0.0 1st Qu.: 1300
Median : 55.0 Median : 24790
Mean : 86.9 Mean : 56901

```

3rd Qu.:121.2 3rd Qu.: 74884

Max. :500.0 Max. :391667

> cor(rupt2007)

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.00000000 -0.41889614 0.01492078 -0.22721133 -0.06168082 0.003264758 -0.21627567 0.04145554 -0.03371030
fvd -0.418896139 1.00000000 0.07155791 -0.24653432 0.00968656 0.232022691 -0.22893541 -0.04393135 0.36313958
UTATO 0.014920776 0.07155791 1.00000000 -0.23120942 0.12903122 0.105156072 -0.13983712 -0.18473467 0.47362447
sauti -0.227211334 -0.24653432 -0.23120942 1.00000000 0.16920649 0.134184974 0.80778780 0.17740077 -0.06639678
chara -0.061680818 0.00968656 0.12903122 0.16920649 1.00000000 0.448650399 0.22039952 0.69665020 0.04813108
cons 0.003264758 0.23202269 0.10515607 0.13418497 0.44865040 1.00000000 0.16426048 0.59294065 0.04928786
pmda -0.216275668 -0.22893541 -0.13983712 0.80778780 0.22039952 0.164260477 1.00000000 0.22456284 -0.07648139
ugpto 0.041455541 -0.04393135 -0.18473467 0.17740077 0.69665020 0.592940647 0.22456284 1.00000000 -0.13968934
DISPO -0.033710301 0.36313958 0.47362447 -0.06639678 0.04813108 0.049287857 -0.07648139 -0.13968934 1.00000000
```

> #ACP (dizaines m<sup>2</sup> centaines h, milliers ch, €)

```
> rupt2007[,3]<-rupt2007[,3]*16
> rupt2007[,5]<-rupt2007[,5]/1000
> rupt2007[,6]<-rupt2007[,6]/10
> rupt2007[,7]<-rupt2007[,7]/1000
> rupt2007[,9]<-rupt2007[,9]/1000
> rupt2007acp<-princomp(rupt2007)
> summary(rupt2007acp)
```

Importance of components:

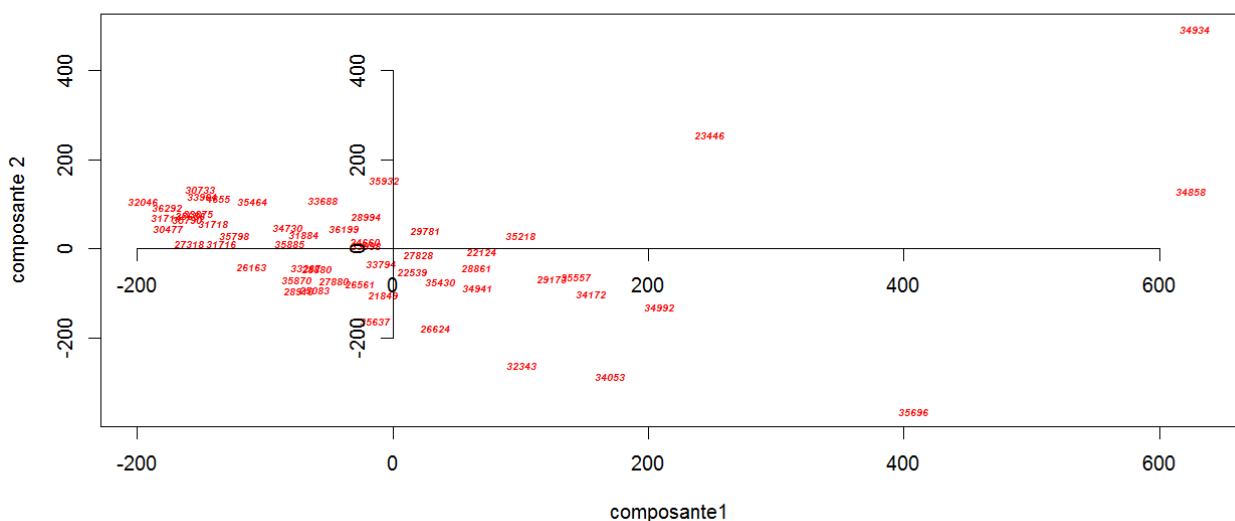
|                        | Comp.1      | Comp.2      | Comp.3     | Comp.4      | Comp.5      | Comp.6      | Comp.7      | Comp.8       |
|------------------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|--------------|
| Standard deviation     | 172.2769927 | 130.8479812 | 85.2347359 | 72.13680939 | 54.79491366 | 46.19783394 | 29.07772957 | 13.524095576 |
| Proportion of Variance | 0.4535714   | 0.2616527   | 0.1110259  | 0.07952523  | 0.04588509  | 0.03261627  | 0.01292147  | 0.002795166  |
| Cumulative Proportion  | 0.4535714   | 0.7152240   | 0.8262499  | 0.90577518  | 0.95166027  | 0.98427654  | 0.99719802  | 0.999993182  |

Comp.9

Standard deviation 6.679295e-01  
Proportion of Variance 6.817927e-06  
Cumulative Proportion 1.000000e+00

> #Représentation graphique

```
> plot(rupt2007acp$scores[,1],rupt2007acp$scores[,2],type="n",xlab="composante 1",ylab="composante 2")
> id<-dimnames(rupt2007)[[1]]
> text(rupt2007acp$scores[,1],rupt2007acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)
```



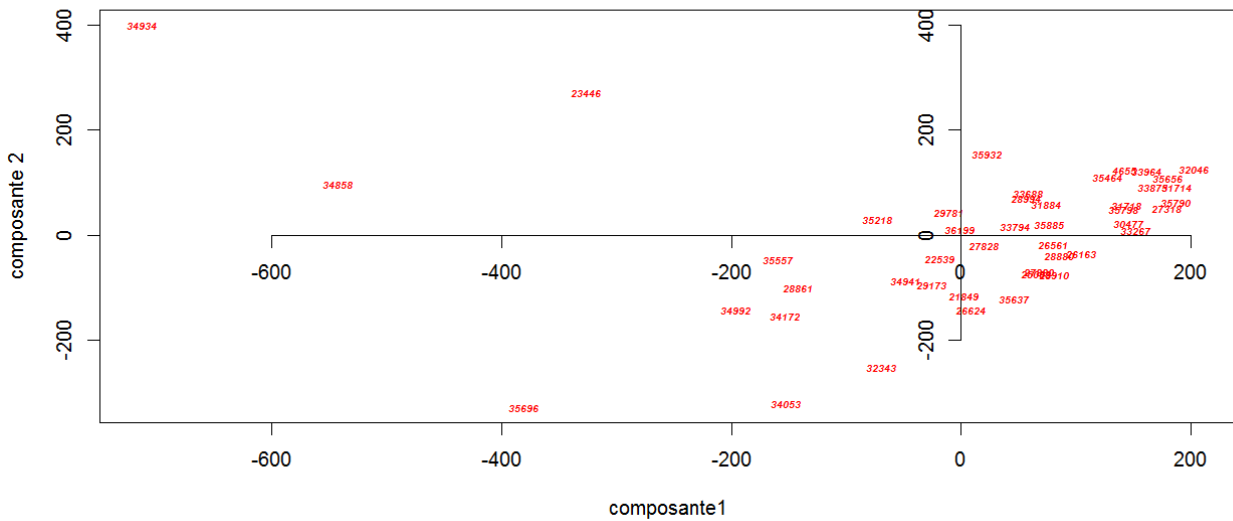
```
> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2008.csv', header=T, dec=',', sep=',')
> rownames(rupt2008)<-rupt2008[,1]
> rupt2008<-rupt2008[,4:12]
> #Etude sommaire
> summary(rupt2008)
```

```

  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. : 2.5 Min. : 8922 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.:0.00 1st Qu.:2.000 1st Qu.:55.0 1st Qu.:39648 1st Qu.:69.26 1st Qu.:63502
Median :2.000 Median :0.00 Median :3.000 Median :135.0 Median :81212 Median :256.61 Median :119718
Mean :2.267 Mean :9.58 Mean :3.431 Mean :144.7 Mean :112479 Mean :493.93 Mean :143088
3rd Qu.:3.000 3rd Qu.:11.90 3rd Qu.:4.000 3rd Qu.:225.0 3rd Qu.:126568 3rd Qu.:595.63 3rd Qu.:193963
Max. :4.000 Max. :77.27 Max. :8.840 Max. :400.0 Max. :862545 Max. :4756.96 Max. :534298

  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 183
Median : 27.50 Median : 16674
Mean : 89.61 Mean : 48301
3rd Qu.:127.50 3rd Qu.: 76238
Max. :500.00 Max. :362275
> cor(rupt2008)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.27541414 -0.094996151 0.02700642 0.17421219 -0.09629761 0.047297131 0.10616999 -0.22320462
fvd -0.27541414 1.00000000 0.121324970 -0.36330143 0.02929647 0.28598531 -0.240700391 -0.02984601 0.58278033
UTATO -0.09499615 0.12132497 1.000000000 -0.16296449 0.03808679 0.12537908 -0.008303876 -0.21773460 0.34379806
sauti 0.02700642 -0.36330143 -0.16296449 1.00000000 0.14077404 0.11755569 0.775774141 0.11203422 -0.14899594
chara 0.17421219 0.02929647 0.038086787 0.14077404 1.00000000 0.42711249 0.335286778 0.72651074 -0.07989012
cons -0.09629761 0.28598531 0.125379076 0.11755569 0.42711249 1.00000000 0.226891985 0.63053604 0.03347473
pmda 0.04729713 -0.24070039 -0.008303876 0.77577414 0.33528678 0.22689198 1.00000000 0.27245616 -0.08149930
ugpto 0.10616999 -0.02984601 -0.217734605 0.11203422 0.72651074 0.63053604 0.272456158 1.00000000 -0.16669933
DISPO -0.22320462 0.58278033 0.343798063 -0.14899594 -0.07989012 0.03347473 -0.081499303 -0.16669933 1.00000000
> #ACP (dizaines m2 centaines h, milliers ch, €)
> rupt2008[,3]<-rupt2008[,3]*16
> rupt2008[,5]<-rupt2008[,5]/1000
> rupt2008[,6]<-rupt2008[,6]/10
> rupt2008[,7]<-rupt2008[,7]/1000
> rupt2008[,9]<-rupt2008[,9]/1000
> rupt2008acp<-princomp(rupt2008)
> summary(rupt2008acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 189.3228687 133.7570051 77.1145188 73.39597281 50.68067315 47.95442838 25.58256704 10.585427729
Proportion of Variance 0.5069528 0.2530431 0.0841073 0.07619138 0.03632839 0.03252511 0.00925656 0.001584814
Cumulative Proportion 0.5069528 0.7599959 0.8441032 0.92029461 0.95662300 0.98914811 0.99840467 0.999989485
      Comp.9
Standard deviation 8.622360e-01
Proportion of Variance 1.051511e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(rupt2008acp$scores[,1],rupt2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2008)[[1]]
> text(rupt2008acp$scores[,1],rupt2008acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures 2009.csv', header=T, dec=',', sep=',')
> rownames(rupt2009)<-rupt2009[,1]
> rupt2009<-rupt2009[,4:12]
> #Etude sommaire
> summary(rupt2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. : 7.5 Min. : 6488 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.: 0.00 1st Qu.: 1.500 1st Qu.: 85.0 1st Qu.: 52642 1st Qu.: 64.83 1st Qu.: 60166
Median :3.000 Median : 0.00 Median : 2.890 Median :145.0 Median : 79505 Median : 250.87 Median :119449
Mean :2.931 Mean : 7.02 Mean : 3.316 Mean :156.2 Mean : 96548 Mean : 584.38 Mean :159126
3rd Qu.:3.000 3rd Qu.: 1.61 3rd Qu.: 3.690 3rd Qu.:225.0 3rd Qu.:120804 3rd Qu.: 748.19 3rd Qu.:195483
Max. :4.000 Max. :77.27 Max. :11.550 Max. :400.0 Max. :316794 Max. :4256.08 Max. :539340
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3686
Median : 52.50 Median : 23000
Mean : 88.19 Mean : 47588
3rd Qu.:137.50 3rd Qu.: 62166
Max. :500.00 Max. :226130
> cor(rupt2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.03379288 0.30952386 0.218635223 0.22795226 0.04969636 0.2337294 -0.06892525 0.283090569
fvd -0.03379288 1.00000000 0.37416425 -0.343329562 0.09222461 0.15954736 -0.2212950 -0.22289909 0.610575750
UTATO 0.30952386 0.37416425 1.00000000 -0.224350030 0.03755442 0.09659317 -0.1922067 -0.25779705 0.556463568
sauti 0.21863522 -0.34332956 -0.22435003 1.000000000 0.54037267 0.26396602 0.7729614 0.40952909 0.007100038
chara 0.22795226 0.09222461 0.03755442 0.540372667 1.00000000 0.73949696 0.6272477 0.63722794 0.174230133
cons 0.04969636 0.15954736 0.09659317 0.263966015 0.73949696 1.00000000 0.3192979 0.76947298 0.193772391
pmda 0.23372941 -0.22129504 -0.19220674 0.772961354 0.62724774 0.31929795 1.0000000 0.41364143 -0.108824568
ugpto -0.06892525 -0.22289909 -0.25779705 0.409529093 0.63722794 0.76947298 0.4136414 1.00000000 -0.102672595
DISPO 0.28309057 0.61057575 0.55646357 0.007100038 0.17423013 0.19377239 -0.1088246 -0.10267260 1.000000000
> #ACP (dizaines m² certaines h, milliers ch, €)
> rupt2009[,3]<-rupt2009[,3]*16
> rupt2009[,5]<-rupt2009[,5]/1000
> rupt2009[,6]<-rupt2009[,6]/10
> rupt2009[,7]<-rupt2009[,7]/1000
> rupt2009[,9]<-rupt2009[,9]/1000
> rupt2009acp<-princomp(rupt2009)
> summary(rupt2009acp)
Importance of components:
  Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 177.4588942 107.4676056 73.60422373 55.77284261 36.24119065 29.58024930 27.70607371 9.936350613

```

Proportion of Variance 0.5765113 0.2114304 0.09917855 0.05694529 0.02404458 0.01601828 0.01405278 0.001807449  
Cumulative Proportion 0.5765113 0.7879417 0.88712025 0.94406554 0.96811012 0.98412840 0.99818118 0.999988634  
Comp.9

Standard deviation 7.879613e-01

Proportion of Variance 1.136638e-05

Cumulative Proportion 1.000000e+00

> #Représentation graphique

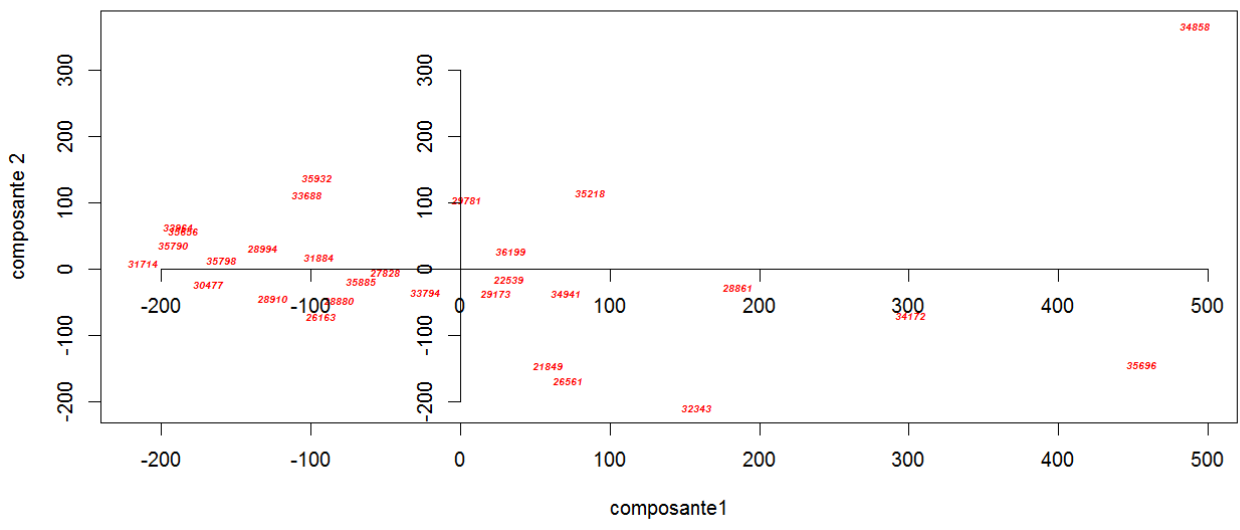
> plot(rupt2009acp\$scores[,1],rupt2009acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(rupt2009)[[1]]

> text(rupt2009acp\$scores[,1],rupt2009acp\$scores[,2],id,cex=0.5,font=4,col=2)

> axis(1,pos=0)

> axis(2,pos=0)



## ANNEXE 8

### Étude alternative de la cohérence des exploitations en réorganisation et en rupture sous-échantillon complet

```
> reorg2000<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2000.csv', header=T, dec=',', sep=',')
> rownames(reorg2000)<-reorg2000[,1]
> reorg2000<-reorg2000[,4:12]
> #Etude sommaire
> summary(reorg2000)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :0.750 Min. : 0.00 Min. : 3489 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.077 1st Qu.:47.50 1st Qu.:26640 1st Qu.: 53.41 1st Qu.:37432
Median:0.000 Median : 2.63 Median :1.785 Median :85.00 Median :47375 Median :191.36 Median :66898
Mean :1.164 Mean :17.74 Mean :2.098 Mean :96.41 Mean :61055 Mean :387.25 Mean :90440
3rd Qu.:2.000 3rd Qu.:28.07 3rd Qu.:2.473 3rd Qu.:125.00 3rd Qu.:80549 3rd Qu.:502.82 3rd Qu.:118149
Max. :3.000 Max. :100.00 Max. :12.840 Max. :400.00 Max. :406037 Max. :5245.58 Max. :584904
  ugpto    DISPO
Min. : 0.0 Min. : 0.0
1st Qu.: 0.0 1st Qu.: 540.8
Median :57.5 Median :5557.5
Mean :84.8 Mean :14119.7
3rd Qu.:118.8 3rd Qu.:17524.2
Max. :500.0 Max. :348836.0
> cor(reorg2000)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.47822316 0.30407237 0.3473996 0.3251264 0.2235450 0.3026217 0.12941030 0.13004682
fvd -0.4782232 1.00000000 -0.15117364 -0.3318163 -0.2019916 -0.1242615 -0.2391923 -0.08533351 -0.09793285
UTATO 0.3040724 -0.15117364 1.00000000 0.2007330 0.5934737 0.3563850 0.4249302 0.06619394 0.35575873
sauti 0.3473996 -0.33181633 0.20073298 1.0000000 0.4791495 0.2976433 0.7668548 0.20418623 0.10886795
chara 0.3251264 -0.20199155 0.59347371 0.4791495 1.0000000 0.5954254 0.5966454 0.39476153 0.28597232
cons 0.2235450 -0.12426147 0.35638496 0.2976433 0.5954254 1.0000000 0.3690981 0.41146209 0.16044205
pmda 0.3026217 -0.23919231 0.42493016 0.7668548 0.5966454 0.3690981 1.0000000 0.22188402 0.11962895
ugpto 0.1294103 -0.08533351 0.06619394 0.2041862 0.3947615 0.4114621 0.2218840 1.0000000 -0.05629563
DISPO 0.1300468 -0.09793285 0.35575873 0.1088679 0.2859723 0.1604420 0.1196290 -0.05629563 1.00000000
>
> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2001.csv', header=T, dec=',', sep=',')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :0.750 Min. : 0.00 Min. : 3849 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:47.50 1st Qu.:25869 1st Qu.: 53.98 1st Qu.:43716
Median:0.000 Median : 2.38 Median :1.780 Median :85.00 Median :47551 Median :194.13 Median :74471
Mean :1.164 Mean :17.65 Mean :2.083 Mean :97.67 Mean :62862 Mean :391.16 Mean :96714
3rd Qu.:2.000 3rd Qu.:28.07 3rd Qu.:2.397 3rd Qu.:135.00 3rd Qu.:79700 3rd Qu.:501.90 3rd Qu.:122368
Max. :3.000 Max. :100.00 Max. :14.000 Max. :400.00 Max. :464294 Max. :5265.49 Max. :670888
  ugpto    DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 619.8
Median :57.50 Median :6737.5
Mean :84.21 Mean :15901.3
3rd Qu.:113.75 3rd Qu.:19372.0
Max. :500.00 Max. :590934.0
> cor(reorg2001)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.49091468 0.30107373 0.3495833 0.3303728 0.24620457 0.3026512 0.15015170 0.11371933
fvd -0.4909147 1.00000000 -0.15031064 -0.3363867 -0.2200700 -0.15568512 -0.2459000 -0.09816876 -0.07910640
UTATO 0.3010737 -0.15031064 1.00000000 0.1685935 0.6034476 0.33756416 0.4268882 0.07619794 0.37762760
```



```
sauti 0.3495833 -0.33638669 0.16859354 1.0000000 0.4610331 0.29226794 0.7485610 0.22187618 0.10895282
chara 0.3303728 -0.22006996 0.60344760 0.4610331 1.0000000 0.57637312 0.5983095 0.39178289 0.33141796
cons 0.2462046 -0.15568512 0.33756416 0.2922679 0.5763731 1.0000000 0.3424202 0.41669556 0.09673095
pmda 0.3026512 -0.24590000 0.42688822 0.7485610 0.5983095 0.34242025 1.0000000 0.21132690 0.14358508
ugbto 0.1501517 -0.09816876 0.07619794 0.2218762 0.3917829 0.41669556 0.2113269 1.0000000 -0.05097714
DISPO 0.1137193 -0.07910640 0.37762760 0.1089528 0.3314180 0.09673095 0.1435851 -0.05097714 1.00000000
>
```

```
> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2002.csv', header=T, dec=',', sep=',';)
> rownames(reorg2002)<-reorg2002[,1]
> reorg2002<-reorg2002[,4:12]
> #Etude sommaire
> summary(reorg2002)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 0.00 Min. : 2603 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 47.50 1st Qu.: 26403 1st Qu.: 48.04 1st Qu.: 36864
Median :0.000 Median : 2.38 Median :1.960 Median : 85.00 Median :46772 Median :181.03 Median :66447
Mean :1.164 Mean :17.85 Mean :2.224 Mean :98.78 Mean :61857 Mean :383.38 Mean :88246
3rd Qu.:2.000 3rd Qu.: 28.43 3rd Qu.:2.500 3rd Qu.:135.00 3rd Qu.: 76874 3rd Qu.: 508.59 3rd Qu.:115737
Max. :3.000 Max. :100.00 Max. :20.060 Max. :400.00 Max. :451616 Max. :4979.42 Max. :721088
      ugbto      DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 836.5
Median :57.50 Median : 6767.0
Mean :85.18 Mean :15661.9
3rd Qu.:117.50 3rd Qu.:17775.0
Max. :500.00 Max. :534780.0
```

```
> cor(reorg2002)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.0000000 -0.49973558 0.27099512 0.3534269 0.3278186 0.2403405 0.3352542 0.16105690 0.10427737
fvd -0.4997356 1.00000000 -0.13898056 -0.3401952 -0.2167821 -0.1643667 -0.2521375 -0.10794211 -0.06162972
UTATO 0.2709951 -0.13898056 1.00000000 0.1364834 0.5862613 0.2808201 0.3143956 0.03622192 0.36670705
sauti 0.3534269 -0.34019525 0.13648336 1.0000000 0.4665928 0.3261181 0.7595341 0.21265447 0.11817337
chara 0.3278186 -0.21678209 0.58626134 0.4665928 1.0000000 0.5420593 0.5855716 0.40339764 0.29085990
cons 0.2403405 -0.16436670 0.28082013 0.3261181 0.5420593 1.0000000 0.3510083 0.45901110 0.07141600
pmda 0.3352542 -0.25213749 0.31439560 0.7595341 0.5855716 0.3510083 1.0000000 0.19383452 0.12565406
ugbto 0.1610569 -0.10794211 0.03622192 0.2126545 0.4033976 0.4590111 0.1938345 1.00000000 -0.09230072
DISPO 0.1042774 -0.06162972 0.36670705 0.1181734 0.2908599 0.0714160 0.1256541 -0.09230072 1.00000000
>
```

```
> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2003.csv', header=T, dec=',', sep=',';)
> rownames(reorg2003)<-reorg2003[,1]
> reorg2003<-reorg2003[,4:12]
> #Etude sommaire
> summary(reorg2003)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 2.5 Min. : 1882 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 47.5 1st Qu.: 26692 1st Qu.: 40.93 1st Qu.: 37680
Median :0.000 Median : 2.63 Median :1.915 Median : 85.0 Median :45055 Median :161.38 Median :70453
Mean :1.164 Mean :17.90 Mean :2.192 Mean :100.2 Mean :60387 Mean :368.45 Mean :88365
3rd Qu.:2.000 3rd Qu.: 28.95 3rd Qu.:2.500 3rd Qu.:135.0 3rd Qu.: 74006 3rd Qu.: 483.83 3rd Qu.:118536
Max. :3.000 Max. :100.00 Max. :21.000 Max. :400.0 Max. :486299 Max. :4614.79 Max. :707114
      ugbto      DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 599.5
Median :57.50 Median : 6462.5
Mean :84.79 Mean :17258.2
3rd Qu.:117.50 3rd Qu.:19612.8
Max. :500.00 Max. :1038114.0
```

```
> cor(reorg2003)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
```

```
fjuri 1.00000000 -0.50884457 0.30141051 0.36856044 0.3143201 0.24260112 0.3269734 0.14980755 0.07632799
fvd -0.50884457 1.00000000 -0.17649220 -0.35023875 -0.2104776 -0.16875745 -0.2718572 -0.07466975 -0.05926493
UTATO 0.30141051 -0.17649220 1.00000000 0.15260483 0.5923399 0.26424072 0.3423418 0.05524118 0.45997559
sauti 0.36856044 -0.35023875 0.15260483 1.00000000 0.4276209 0.33076788 0.7672915 0.20929238 0.04345836
chara 0.31432007 -0.21047762 0.59233992 0.42762088 1.00000000 0.57424641 0.5431849 0.36138773 0.35268898
cons 0.24260112 -0.16875745 0.26424072 0.33076788 0.5742464 1.00000000 0.3483014 0.45428652 0.04878114
pmda 0.32697335 -0.27185719 0.34234179 0.76729149 0.5431849 0.34830140 1.00000000 0.20340212 0.10377486
ugbto 0.14980755 -0.07466975 0.05524118 0.20929238 0.3613877 0.45428652 0.2034021 1.00000000 -0.07938711
DISPO 0.07632799 -0.05926493 0.45997559 0.04345836 0.3526890 0.04878114 0.1037749 -0.07938711 1.00000000
>
```

```
> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2004.csv', header=T, dec=',', sep=',';)
```

```
> rownames(reorg2004)<-reorg2004[,1]
```

```
> reorg2004<-reorg2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2004)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. : 0.900 Min. : 2.5 Min. : 1379 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.000 1st Qu.: 1.000 1st Qu.: 47.5 1st Qu.: 26622 1st Qu.: 40.27 1st Qu.: 38278
Median :0.000 Median : 3.135 Median : 1.940 Median : 85.0 Median : 46360 Median : 149.19 Median : 74596
Mean :1.164 Mean :18.078 Mean : 2.162 Mean :101.6 Mean : 61383 Mean : 350.24 Mean : 92242
3rd Qu.:2.000 3rd Qu.: 28.950 3rd Qu.: 2.500 3rd Qu.:135.0 3rd Qu.: 75018 3rd Qu.: 479.88 3rd Qu.:125121
Max. :3.000 Max. :100.000 Max. :21.130 Max. :400.0 Max. :463620 Max. :4119.23 Max. :815843
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 274
Median : 57.50 Median : 6704
Mean : 84.15 Mean : 16099
3rd Qu.:122.50 3rd Qu.: 18098
Max. :500.00 Max. :854329
```

```
> cor(reorg2004)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 -0.51150852 0.29858546 0.36165124 0.3214185 0.25540076 0.35758113 0.15739973 0.09389915
fvd -0.51150852 1.00000000 -0.17203966 -0.34975649 -0.1992451 -0.18458312 -0.28253056 -0.10198480 -0.07029556
UTATO 0.29858546 -0.17203966 1.00000000 0.16493045 0.6170777 0.29051035 0.36046560 0.07974522 0.51639281
sauti 0.36165124 -0.34975649 0.16493045 1.00000000 0.4742276 0.35919408 0.78020900 0.24521492 0.03481468
chara 0.32141850 -0.19924508 0.61707769 0.47422757 1.00000000 0.55738037 0.60951925 0.43404547 0.30907452
cons 0.25540076 -0.18458312 0.29051035 0.35919408 0.5573804 1.00000000 0.40358814 0.45954343 0.05212289
pmda 0.35758113 -0.28253056 0.36046560 0.78020900 0.6095193 0.40358814 1.00000000 0.24058380 0.09119474
ugbto 0.15739973 -0.10198480 0.07974522 0.24521492 0.4340455 0.45954343 0.24058380 1.00000000 -0.09043558
DISPO 0.09389915 -0.07029556 0.51639281 0.03481468 0.3090745 0.05212289 0.09119474 -0.09043558 1.00000000
>
```

```
> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2005.csv', header=T, dec=',', sep=',';)
```

```
> rownames(reorg2005)<-reorg2005[,1]
```

```
> reorg2005<-reorg2005[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2005)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. : 0.900 Min. : 2.50 Min. : 1880 Min. : 0.0 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 53.12 1st Qu.: 24756 1st Qu.: 34.5 1st Qu.: 41186
Median :0.000 Median : 3.33 Median : 1.800 Median : 85.00 Median : 45467 Median : 149.2 Median : 75062
Mean :1.164 Mean :18.44 Mean : 2.154 Mean :102.70 Mean : 60903 Mean : 351.6 Mean : 96187
3rd Qu.:2.000 3rd Qu.: 29.41 3rd Qu.: 2.500 3rd Qu.:135.00 3rd Qu.: 76894 3rd Qu.: 460.2 3rd Qu.:123730
Max. :3.000 Max. :100.00 Max. :21.560 Max. :400.00 Max. :485809 Max. :4191.3 Max. :838184
      ugbto      DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 429.8
Median : 57.50 Median : 6660.5
Mean : 84.83 Mean : 16610.3
3rd Qu.:122.50 3rd Qu.: 18762.2
```

```

Max. :500.00 Max. :836343.0
> cor(reorg2005)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.51593899 0.30158422 0.3611749 0.3258077 0.25098993 0.3253224 0.15791298 0.09536546
fvd -0.51593899 1.00000000 -0.18006608 -0.3555788 -0.2094036 -0.18173866 -0.2593795 -0.08819988 -0.05153616
UTATO 0.30158422 -0.18006608 1.00000000 0.1541710 0.6462173 0.32415297 0.3978658 0.08022498 0.46380687
sauti 0.36117489 -0.35557881 0.15417100 1.00000000 0.4799764 0.34957829 0.7688619 0.22449073 0.04882730
chara 0.32580769 -0.20940363 0.64621728 0.4799764 1.00000000 0.54167296 0.6472782 0.38212219 0.34885218
cons 0.25098993 -0.18173866 0.32415297 0.3495783 0.5416730 1.00000000 0.4153503 0.42540142 0.05098192
pmda 0.32532241 -0.25937948 0.39786579 0.7688619 0.6472782 0.41535034 1.00000000 0.22312113 0.15037467
ugbto 0.15791298 -0.08819988 0.08022498 0.2244907 0.3821222 0.42540142 0.2231211 1.00000000 -0.06247713
DISPO 0.09536546 -0.05153616 0.46380687 0.0488273 0.3488522 0.05098192 0.1503747 -0.06247713 1.00000000
>

```

```

> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2006.csv', header=T, dec=',', sep=';')
> rownames(reorg2006)<-reorg2006[,1]
> reorg2006<-reorg2006[,4:12]
> #Etude sommaire
> summary(reorg2006)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 2.5 Min. : 1801 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 47.5 1st Qu.: 23924 1st Qu.: 28.46 1st Qu.: 40629
Median :0.000 Median : 3.59 Median : 1.790 Median : 85.0 Median : 44150 Median : 146.10 Median : 73491
Mean :1.164 Mean : 18.81 Mean : 2.134 Mean :104.1 Mean : 60598 Mean : 343.05 Mean : 96624
3rd Qu.:2.000 3rd Qu.: 29.41 3rd Qu.: 2.268 3rd Qu.:145.0 3rd Qu.: 75909 3rd Qu.: 465.62 3rd Qu.:125283
Max. :3.000 Max. :100.00 Max. :22.540 Max. :400.0 Max. :524968 Max. :4166.73 Max. :719959
      ugbto   DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 923.5
Median : 57.50 Median : 8105.0
Mean : 84.01 Mean : 21743.6
3rd Qu.:122.50 3rd Qu.: 24684.2
Max. :500.00 Max. :1435133.0

```

```

> cor(reorg2006)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.52441503 0.28771145 0.35962643 0.3301055 0.24893248 0.3472848 0.18266432 0.07276923
fvd -0.52441503 1.00000000 -0.18287762 -0.35030258 -0.2179010 -0.19062067 -0.2595724 -0.10641575 -0.04449394
UTATO 0.28771145 -0.18287762 1.00000000 0.14127090 0.6503666 0.30572890 0.3896332 0.08592772 0.45198070
sauti 0.35962643 -0.35030258 0.14127090 1.00000000 0.4727674 0.34480931 0.7715610 0.24482584 0.06122477
chara 0.33010547 -0.21790097 0.65036659 0.47276738 1.00000000 0.51294104 0.6777506 0.40466764 0.36797053
cons 0.24893248 -0.19062067 0.30572890 0.34480931 0.5129410 1.00000000 0.4290490 0.44116587 0.09026358
pmda 0.34728479 -0.25957237 0.38963316 0.77156100 0.6777506 0.42904899 1.00000000 0.25093365 0.20618178
ugbto 0.18266432 -0.10641575 0.08592772 0.24482584 0.4046676 0.44116587 0.2509336 1.00000000 -0.04638864
DISPO 0.07276923 -0.04449394 0.45198070 0.06122477 0.3679705 0.09026358 0.2061818 -0.04638864 1.00000000
>

```

```

> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2007.csv', header=T, dec=',', sep=';')
> rownames(reorg2007)<-reorg2007[,1]
> reorg2007<-reorg2007[,4:12]
> #Etude sommaire
> summary(reorg2007)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 2.5 Min. : 1683 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 55.0 1st Qu.: 23296 1st Qu.: 33.78 1st Qu.: 38122
Median :0.000 Median : 4.55 Median : 1.750 Median : 85.0 Median : 46238 Median : 148.94 Median : 77718
Mean :1.164 Mean : 19.30 Mean : 2.092 Mean :105.8 Mean : 61352 Mean : 330.44 Mean : 99344
3rd Qu.:2.000 3rd Qu.: 32.65 3rd Qu.: 2.333 3rd Qu.:145.0 3rd Qu.: 76440 3rd Qu.: 453.10 3rd Qu.:132449
Max. :3.000 Max. :100.00 Max. :20.630 Max. :400.0 Max. :562728 Max. :3657.43 Max. :843176
      ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1418

```

Median : 52.50 Median : 11150  
Mean : 84.31 Mean : 26443  
3rd Qu.:122.50 3rd Qu.: 30010  
Max. :500.00 Max. :1423342

```
> cor(reorg2007)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.53798169 0.2964635 0.3649169 0.3518579 0.24316256 0.3570831 0.18216690 0.10087624
fvd -0.5379817 1.00000000 -0.1961506 -0.3524191 -0.2404942 -0.20459935 -0.2632605 -0.12215660 -0.05436391
UTATO 0.2964635 -0.19615061 1.0000000 0.1939202 0.6214683 0.33345531 0.4402572 0.13268673 0.45867111
sauti 0.3649169 -0.35241915 0.1939202 1.0000000 0.4613856 0.33335349 0.7568768 0.25849569 0.10204754
chara 0.3518579 -0.24049420 0.6214683 0.4613856 1.0000000 0.48889035 0.6589776 0.42358041 0.38474198
cons 0.2431626 -0.20459935 0.3334553 0.3333535 0.4888903 1.0000000 0.4223696 0.41165424 0.04513011
pmda 0.3570831 -0.26326050 0.4402572 0.7568768 0.6589776 0.42236964 1.0000000 0.24895942 0.19583104
ugpto 0.1821669 -0.12215660 0.1326867 0.2584957 0.4235804 0.41165424 0.2489594 1.0000000 -0.06607275
DISPO 0.1008762 -0.05436391 0.4586711 0.1020475 0.3847420 0.04513011 0.1958310 -0.06607275 1.00000000
>
```

```
> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2008.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2008)<-reorg2008[,1]
```

```
> reorg2008<-reorg2008[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2008)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 2.5 Min. : 1213 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 25713 1st Qu.: 25.34 1st Qu.: 39897
Median :0.000 Median : 4.55 Median :1.780 Median :85.0 Median :46041 Median :134.53 Median :82258
Mean :1.164 Mean :19.83 Mean :2.124 Mean :106.7 Mean :62989 Mean :306.32 Mean :103326
3rd Qu.:2.000 3rd Qu.: 33.33 3rd Qu.:2.422 3rd Qu.:145.0 3rd Qu.: 79216 3rd Qu.: 405.96 3rd Qu.:139039
Max. :3.000 Max. :100.00 Max. :25.150 Max. :400.0 Max. :474348 Max. :3298.61 Max. :876100
      ugpto  DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1439
Median : 52.50 Median : 9987
Mean : 83.49 Mean : 24159
3rd Qu.:117.50 3rd Qu.: 26986
Max. :500.00 Max. :990922
```

```
> cor(reorg2008)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.54607489 0.2898211 0.3742282 0.3672978 0.27999421 0.3661659 0.17780726 0.10715323
fvd -0.5460749 1.00000000 -0.1919399 -0.3634275 -0.2599408 -0.23340647 -0.2844534 -0.11548637 -0.06367964
UTATO 0.2898211 -0.19193994 1.0000000 0.1818779 0.5600377 0.29383272 0.3673406 0.12253200 0.49492476
sauti 0.3742282 -0.36342755 0.1818779 1.0000000 0.5171932 0.36153932 0.7807141 0.25139827 0.11094147
chara 0.3672978 -0.25994078 0.5600377 0.5171932 1.0000000 0.45848036 0.6482100 0.43515299 0.30597944
cons 0.2799942 -0.23340647 0.2938327 0.3615393 0.4584804 1.0000000 0.3744194 0.39911551 0.06847088
pmda 0.3661659 -0.28445343 0.3673406 0.7807141 0.6482100 0.37441945 1.0000000 0.21405814 0.21922573
ugpto 0.1778073 -0.11548637 0.1225320 0.2513983 0.4351530 0.39911551 0.2140581 1.0000000 -0.06598211
DISPO 0.1071532 -0.06367964 0.4949248 0.1109415 0.3059794 0.06847088 0.2192257 -0.06598211 1.00000000
>
```

```
> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorg2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2009)<-reorg2009[,1]
```

```
> reorg2009<-reorg2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2009)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 2.5 Min. : 814 Min. : 0.0 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 25648 1st Qu.: 28.5 1st Qu.: 43433
Median :0.000 Median : 4.55 Median :1.800 Median :85.0 Median :49656 Median :135.5 Median :86488
Mean :1.164 Mean :20.13 Mean :2.167 Mean :107.4 Mean :67978 Mean :343.9 Mean :109032
3rd Qu.:2.000 3rd Qu.: 33.33 3rd Qu.:2.462 3rd Qu.:145.0 3rd Qu.: 89588 3rd Qu.: 438.0 3rd Qu.:146043
Max. :3.000 Max. :100.00 Max. :20.660 Max. :400.0 Max. :542807 Max. :4213.6 Max. :974953
```

```

  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1289
Median : 52.50 Median : 8233
Mean : 83.09 Mean : 23198
3rd Qu.:117.50 3rd Qu.: 23015
Max. :500.00 Max. :966659
> cor(reorg2009)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.0000000 -0.55375919 0.3199928 0.3689381 0.3708623 0.2771944 0.3587822 0.18853618 0.11788641
fvd -0.5537592 1.00000000 -0.2108844 -0.3715457 -0.2778996 -0.2414272 -0.2586686 -0.13450012 -0.07480326
UTATO 0.3199928 -0.21088440 1.0000000 0.1849930 0.5906864 0.2954789 0.3782926 0.12841149 0.46927956
sauti 0.3689381 -0.37154568 0.1849930 1.0000000 0.5659161 0.3510058 0.7820048 0.28066170 0.13390024
chara 0.3708623 -0.27789960 0.5906864 0.5659161 1.0000000 0.4584516 0.6687187 0.39800926 0.36095956
cons 0.2771944 -0.24142724 0.2954789 0.3510058 0.4584516 1.0000000 0.3645868 0.38802352 0.12638486
pmda 0.3587822 -0.25866857 0.3782926 0.7820048 0.6687187 0.3645868 1.0000000 0.21494384 0.23647653
ugbto 0.1885362 -0.13450012 0.1284115 0.2806617 0.3980093 0.3880235 0.2149438 1.00000000 -0.02753296
DISPO 0.1178864 -0.07480326 0.4692796 0.1339002 0.3609596 0.1263849 0.2364765 -0.02753296 1.00000000
>

> rupt2000<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2000.csv', header=T, dec=',', sep=';')
> rownames(rupt2000)<-rupt2000[,1]
> rupt2000<-rupt2000[,4:12]
> #Etude sommaire
> summary(rupt2000)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. : 0.910 Min. : 0.0 Min. : 5690 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 32.5 1st Qu.: 36251 1st Qu.: 61.97 1st Qu.: 48641
Median :2.000 Median : 0.000 Median : 2.390 Median : 85.0 Median : 57598 Median : 239.70 Median : 87534
Mean :1.537 Mean : 8.477 Mean : 3.486 Mean :103.5 Mean : 79112 Mean : 439.97 Mean :108540
3rd Qu.:2.000 3rd Qu.: 2.940 3rd Qu.: 3.600 3rd Qu.:150.0 3rd Qu.: 89908 3rd Qu.: 600.25 3rd Qu.:144581
Max. :3.000 Max. :100.000 Max. :39.590 Max. :400.0 Max. :767622 Max. :6969.51 Max. :680152
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2218
Median : 0.00 Median : 11050
Mean : 62.97 Mean : 27487
3rd Qu.:100.00 3rd Qu.: 36842
Max. :500.00 Max. :477670
> cor(rupt2000)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.000000000 -0.272505868 -0.005648612 0.074378183 0.07518935 0.09114470 0.0965558856 0.1266911930
-0.032770182
fvd -0.272505868 1.000000000 0.022402712 -0.159582538 0.10396429 0.08696630 -0.1500962165 -0.0055118588
0.105759651
UTATO -0.005648612 0.022402712 1.000000000 -0.172978871 0.58224954 0.16011759 0.2129941350 -0.1651000586
0.177572879
sauti 0.074378183 -0.159582538 -0.172978871 1.000000000 0.11381865 -0.02205029 0.6369084802 0.1702284201
-0.003143567
chara 0.075189346 0.103964290 0.582249545 0.113818648 1.000000000 0.47352100 0.3270059692 0.3254803140
0.146197582
cons 0.091144699 0.086966301 0.160117586 -0.022050287 0.47352100 1.000000000 0.0748425062 0.4067703142
0.144339941
pmda 0.096555886 -0.150096217 0.212994135 0.636908480 0.32700597 0.07484251 1.0000000000 -0.0007156477
0.095011823
ugbto 0.126691193 -0.005511859 -0.165100059 0.170228420 0.32548031 0.40677031 -0.0007156477 1.0000000000
-0.096880316
DISPO -0.032770182 0.105759651 0.177572879 -0.003143567 0.14619758 0.14433994 0.0950118231 -0.0968803160
1.000000000
>

```

```

> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2001.csv', header=T, dec=',', sep=';')
> rownames(rupt2001)<-rupt2001[,1]
> rupt2001<-rupt2001[,4:12]
> #Etude sommaire
> summary(rupt2001)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :0.910 Min. : 0.0 Min. : 4393 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 35.0 1st Qu.: 36524 1st Qu.: 53.14 1st Qu.: 47661
Median :2.000 Median : 0.000 Median : 2.320 Median : 85.0 Median : 58837 Median : 224.55 Median : 93549
Mean :1.573 Mean : 8.045 Mean : 3.374 Mean :104.5 Mean : 81445 Mean : 430.46 Mean :117192
3rd Qu.:2.000 3rd Qu.: 2.630 3rd Qu.: 3.570 3rd Qu.:155.0 3rd Qu.: 93925 3rd Qu.: 593.34 3rd Qu.:159031
Max. :3.000 Max. :100.000 Max. :36.690 Max. :400.0 Max. :846864 Max. :6339.57 Max. :690191
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2510
Median : 0.00 Median : 13927
Mean :62.23 Mean : 30885
3rd Qu.:102.50 3rd Qu.: 37300
Max. :500.00 Max. :560165
> cor(rupt2001)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.27757381 -0.01779999 0.10007199 0.08042007 0.07876623 0.07017954 0.14657033 -0.03571696
fvd -0.27757381 1.00000000 0.04055969 -0.17539242 0.08538381 0.11437923 -0.09345007 -0.03394333 0.13896607
UTATO -0.01779999 0.04055969 1.00000000 -0.16829052 0.63178243 0.20787019 0.20655048 -0.16481812 0.19916510
sauti 0.10007199 -0.17539242 -0.16829052 1.00000000 0.13355542 -0.02190848 0.61955199 0.17857246 -0.02643518
chara 0.08042007 0.08538381 0.63178243 0.13355542 1.00000000 0.45658496 0.32471621 0.29590559 0.08688698
cons 0.07876623 0.11437923 0.20787019 -0.02190848 0.45658496 1.00000000 0.11757165 0.43237763 0.07853395
pmda 0.07017954 -0.09345007 0.20655048 0.61955199 0.32471621 0.11757165 1.00000000 0.00562024 0.05512111
ugpto 0.14657033 -0.03394333 -0.16481812 0.17857246 0.29590559 0.43237763 0.00562024 1.00000000 -0.11863833
DISPO -0.03571696 0.13896607 0.19916510 -0.02643518 0.08688698 0.07853395 0.05512111 -0.11863833 1.00000000
>

```

```

> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2002.csv', header=T, dec=',', sep=';')
> rownames(rupt2002)<-rupt2002[,1]
> rupt2002<-rupt2002[,4:12]
> #Etude sommaire
> summary(rupt2002)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 4023 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 37.5 1st Qu.: 37634 1st Qu.: 60.58 1st Qu.: 37517
Median :2.000 Median : 0.000 Median : 2.520 Median : 85.0 Median : 57691 Median : 234.70 Median : 81954
Mean :1.958 Mean : 8.305 Mean : 3.806 Mean :107.0 Mean : 81755 Mean : 434.99 Mean :102809
3rd Qu.:3.000 3rd Qu.: 2.630 3rd Qu.: 4.000 3rd Qu.:155.0 3rd Qu.: 92551 3rd Qu.: 654.41 3rd Qu.:141456
Max. :5.000 Max. :100.000 Max. :41.250 Max. :400.0 Max. :1050170 Max. :5577.18 Max. :639437
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2408
Median : 0.00 Median : 13010
Mean :63.31 Mean : 32313
3rd Qu.:102.50 3rd Qu.: 40734
Max. :500.00 Max. :694849
> cor(rupt2002)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.21413511 0.03106576 -0.01205968 0.03110804 -0.01685757 -0.06601799 0.06079696 -0.04899170
fvd -0.21413511 1.00000000 0.05068617 -0.17047340 0.08278242 0.08252356 -0.15339673 -0.03644697 0.10395201
UTATO 0.03106576 0.05068617 1.00000000 -0.18164377 0.61051514 0.21076761 0.18090589 -0.18014989 0.18300600
sauti -0.01205968 -0.17047340 -0.18164377 1.00000000 0.10924043 0.01446659 0.64223362 0.18163285 -0.08613546
chara 0.03110804 0.08278242 0.61051514 0.10924043 1.00000000 0.42095549 0.39826746 0.30450710 -0.02128843
cons -0.01685757 0.08252356 0.21076761 0.01446659 0.42095549 1.00000000 0.08464128 0.43597265 0.05915474
pmda -0.06601799 -0.15339673 0.18090589 0.64223362 0.39826746 0.08464128 1.00000000 0.01786656 -0.05683869
ugpto 0.06079696 -0.03644697 -0.18014989 0.18163285 0.30450710 0.43597265 0.01786656 1.00000000 -0.14430947

```

```
DISPO -0.04899170 0.10395201 0.18300600 -0.08613546 -0.02128843 0.05915474 -0.05683869 -0.14430947 1.00000000
>
```

```
> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2003.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2003)<-rupt2003[,1]
```

```
> rupt2003<-rupt2003[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2003)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 4326 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 37.5 1st Qu.: 36374 1st Qu.: 61.67 1st Qu.: 36882
Median :3.000 Median : 0.000 Median : 2.500 Median : 95.0 Median : 59179 Median : 269.59 Median : 85200
Mean :2.585 Mean : 8.386 Mean : 3.837 Mean :108.9 Mean : 80645 Mean : 447.45 Mean :100066
3rd Qu.:3.500 3rd Qu.: 3.035 3rd Qu.: 4.010 3rd Qu.:155.0 3rd Qu.: 94028 3rd Qu.: 633.97 3rd Qu.:140230
Max. :5.000 Max. :100.000 Max. :47.380 Max. :400.0 Max. :998769 Max. :9116.39 Max. :450725
```

```
  ugbto    DISPO
```

```
Min. : 0.00 Min. : 0
```

```
1st Qu.: 0.00 1st Qu.: 3586
```

```
Median : 0.00 Median : 16336
```

```
Mean : 65.67 Mean : 36180
```

```
3rd Qu.:102.50 3rd Qu.: 39494
```

```
Max. :500.00 Max. :785437
```

```
> cor(rupt2003)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugbto    DISPO
fjuri 1.00000000 -0.229028251 0.19756514 -0.04371984 0.042327711 0.02287413 -0.0604998481 -0.057546877 0.0424031626
fvd -0.22902825 1.000000000 0.04598581 -0.18604674 0.108748906 0.07902835 -0.1636592261 -0.001154341 0.0925538807
UTATO 0.19756514 0.045985806 1.00000000 -0.17734372 0.635707239 0.12091482 0.1053860130 -0.169959615 0.1880068136
sauti -0.04371984 -0.186046741 -0.17734372 1.00000000 0.092843285 0.05322976 0.6577876165 0.181708391 -0.0232914957
chara 0.04232771 0.108748906 0.63570724 0.09284328 1.000000000 0.32460416 0.2864352175 0.298689914 0.0093266447
cons 0.02287413 0.079028350 0.12091482 0.05322976 0.324604165 1.00000000 0.1191382277 0.419017305 0.0390235067
pmda -0.06049985 -0.163659226 0.10538601 0.65778762 0.286435217 0.11913823 1.000000000 0.095412096 0.0003387414
ugbto -0.05754688 -0.001154341 -0.16995961 0.18170839 0.298689914 0.41901731 0.095412096 1.000000000 -0.1469569102
DISPO 0.04240316 0.092553881 0.18800681 -0.02329150 0.009326645 0.03902351 0.0003387414 -0.146956910 1.0000000000
>
```

```
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2004.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2004)<-rupt2004[,1]
```

```
> rupt2004<-rupt2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2004)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 4371 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 37.5 1st Qu.: 35897 1st Qu.: 56.23 1st Qu.: 39385
Median :3.000 Median : 0.000 Median : 2.500 Median : 95.0 Median : 59175 Median : 238.28 Median : 91189
Mean :2.725 Mean : 8.540 Mean : 3.663 Mean :109.2 Mean : 80572 Mean : 442.74 Mean :105855
3rd Qu.:4.000 3rd Qu.: 2.785 3rd Qu.: 4.000 3rd Qu.:165.0 3rd Qu.: 91639 3rd Qu.: 602.05 3rd Qu.:149990
Max. :5.000 Max. :100.000 Max. :34.000 Max. :400.0 Max. :870798 Max. :8154.90 Max. :538975
```

```
  ugbto    DISPO
```

```
Min. : 0.00 Min. : 0
```

```
1st Qu.: 0.00 1st Qu.: 2938
```

```
Median : 0.00 Median : 15726
```

```
Mean : 65.39 Mean : 34216
```

```
3rd Qu.: 97.50 3rd Qu.: 35964
```

```
Max. :500.00 Max. :870014
```

```
> cor(rupt2004)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugbto    DISPO
fjuri 1.00000000 -0.253295219 0.233556740 -0.08581802 0.05151609 -0.005520645 -0.093952037 -0.074204423 0.067289725
fvd -0.253295219 1.000000000 0.068083940 -0.18786025 0.07866150 0.048610142 -0.176587894 -0.002867241 0.071604869
UTATO 0.233556740 0.068083940 1.000000000 -0.19714746 0.38790102 0.135648869 -0.001780356 -0.186830871
0.233557920
sauti -0.085818018 -0.187860255 -0.197147462 1.00000000 0.12017464 0.097580670 0.672624756 0.189120441 -0.071217374
```

```
chara 0.051516087 0.078661499 0.387901016 0.12017464 1.00000000 0.460089042 0.358845680 0.341711545 0.035657921
cons -0.005520645 0.048610142 0.135648869 0.09758067 0.46008904 1.000000000 0.259594724 0.384283140 0.045115477
pmda -0.093952037 -0.176587894 -0.001780356 0.67262476 0.35884568 0.259594724 1.000000000 0.135632901 0.004447492
ugbto -0.074204423 -0.002867241 -0.186830871 0.18912044 0.34171155 0.384283140 0.135632901 1.000000000 -0.141724551
DISPO 0.067289725 0.071604869 0.233557920 -0.07121737 0.03565792 0.045115477 0.004447492 -0.141724551 1.000000000
>
```

```
> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2005.csv', header=T, dec=',', sep=',';')
```

```
> rownames(rupt2005)<-rupt2005[,1]
```

```
> rupt2005<-rupt2005[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2005)
```

```
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.0 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 4852 Min. : 0.00 Min. : 0
1st Qu.:2.0 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 32.5 1st Qu.: 35944 1st Qu.: 56.94 1st Qu.: 41646
Median :3.0 Median : 0.000 Median : 2.390 Median : 95.0 Median : 60014 Median : 235.01 Median : 94996
Mean :2.8 Mean : 7.816 Mean : 3.571 Mean :110.4 Mean : 79109 Mean : 416.81 Mean :110152
3rd Qu.:4.0 3rd Qu.: 2.085 3rd Qu.: 3.970 3rd Qu.:165.0 3rd Qu.: 91134 3rd Qu.: 562.08 3rd Qu.:149875
Max. :5.0 Max. :100.000 Max. :29.000 Max. :400.0 Max. :921750 Max. :7583.96 Max. :562238

  ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3538
Median : 0.00 Median : 14146
Mean : 64.46 Mean : 35220
3rd Qu.:102.50 3rd Qu.: 43953
Max. :500.00 Max. :1082746
```

```
> cor(rupt2005)
```

```
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.221036944 0.21206142 -0.11609621 0.02938781 -0.03655210 -0.08511062 -0.094573073 0.07387247
fvd -0.22103694 1.000000000 0.09293063 -0.18152709 0.08664801 0.06148558 -0.18214891 0.008716739 0.09790927
UTATO 0.21206142 0.092930628 1.00000000 -0.18454170 0.36835932 0.15269602 -0.03071947 -0.176494617 0.28551514
sauti -0.11609621 -0.181527088 -0.18454170 1.00000000 0.15305194 0.09621379 0.74093205 0.203722876 -0.07525043
chara 0.02938781 0.086648007 0.36835932 0.15305194 1.00000000 0.47158617 0.31335509 0.318064865 0.06733219
cons -0.03655210 0.061485581 0.15269602 0.09621379 0.47158617 1.00000000 0.23425011 0.371015779 0.01582925
pmda -0.08511062 -0.182148908 -0.03071947 0.74093205 0.31335509 0.23425011 1.00000000 0.115585860 -0.05163328
ugbto -0.09457307 0.008716739 -0.17649462 0.20372288 0.31806487 0.37101578 0.11558586 1.000000000 -0.12774178
DISPO 0.07387247 0.097909274 0.28551514 -0.07525043 0.06733219 0.01582925 -0.05163328 -0.127741780 1.00000000
>
```

```
> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2006.csv', header=T, dec=',', sep=',';')
```

```
> rownames(rupt2006)<-rupt2006[,1]
```

```
> rupt2006<-rupt2006[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2006)
```

```
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 4166 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 37.5 1st Qu.: 35979 1st Qu.: 52.98 1st Qu.: 39265
Median :3.000 Median : 0.000 Median : 2.340 Median : 95.0 Median : 57618 Median : 210.29 Median : 92461
Mean :2.845 Mean : 8.173 Mean : 3.547 Mean :113.0 Mean : 78450 Mean : 414.79 Mean :108373
3rd Qu.:4.000 3rd Qu.: 2.275 3rd Qu.: 3.810 3rd Qu.:165.0 3rd Qu.: 87827 3rd Qu.: 551.88 3rd Qu.:149153
Max. :5.000 Max. :100.000 Max. :29.000 Max. :400.0 Max. :976040 Max. :6649.66 Max. :520468

  ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3930
Median : 0.00 Median : 15406
Mean : 65.57 Mean : 37776
3rd Qu.:102.50 3rd Qu.: 41250
Max. :500.00 Max. :1259272
```

```
> cor(rupt2006)
```

```
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.220882198 0.21609593 -0.12555890 0.05434293 -0.05539408 -0.10891218 -0.116669550 0.05111451
```



```
fvd -0.22088220 1.00000000 0.08091277 -0.18631152 0.06605924 0.02198453 -0.15202474 0.004334038 0.07672905
UTATO 0.21609593 0.08091277 1.00000000 -0.19863626 0.37371380 0.20170995 -0.04056542 -0.16357956 0.21562218
sauti -0.12555890 -0.186311518 -0.19863626 1.00000000 0.15173565 0.11458142 0.72969153 0.214679848 -0.05734598
chara 0.05434293 0.066059244 0.37371380 0.15173565 1.00000000 0.47545312 0.33840704 0.317927888 0.08606813
cons -0.05539408 0.021984531 0.20170995 0.11458142 0.47545312 1.00000000 0.23228972 0.349620328 0.07238358
pmda -0.10891218 -0.152024745 -0.04056542 0.72969153 0.33840704 0.23228972 1.00000000 0.119650790 -0.06730998
ugbto -0.11666955 0.004334038 -0.16357956 0.21467985 0.31792789 0.34962033 0.11965079 1.000000000 -0.08075832
DISPO 0.05111451 0.076729052 0.21562218 -0.05734598 0.08606813 0.07238358 -0.06730998 -0.080758322 1.00000000
>
```

```
> rupt2007<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2007.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2007)<-rupt2007[,1]
```

```
> rupt2007<-rupt2007[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2007)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 2561 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 37.5 1st Qu.: 34722 1st Qu.: 51.25 1st Qu.: 39600
Median :3.000 Median : 0.000 Median :2.410 Median :95.0 Median :57078 Median :205.75 Median :92581
Mean :2.869 Mean : 8.130 Mean :3.519 Mean :114.5 Mean :79254 Mean :423.72 Mean :112628
3rd Qu.:4.000 3rd Qu.: 2.505 3rd Qu.: 4.000 3rd Qu.:165.0 3rd Qu.: 94898 3rd Qu.: 553.22 3rd Qu.:161972
Max. :5.000 Max. :100.000 Max. :33.000 Max. :400.0 Max. :928446 Max. :5771.56 Max. :598871
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3347
Median : 0.00 Median : 19648
Mean : 67.43 Mean : 41832
3rd Qu.:107.50 3rd Qu.: 53431
Max. :500.00 Max. :1283814
```

```
> cor(rupt2007)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 -0.227054134 0.21404791 -0.13439706 0.03757083 -0.039112752 -0.07957446 -0.122191880 0.05279892
fvd -0.22705413 1.000000000 0.07839623 -0.18462179 0.07593117 -0.001716704 -0.15947616 0.002495604 0.08701250
UTATO 0.21404791 0.078396233 1.00000000 -0.19682723 0.37850096 0.294718250 -0.02757629 -0.162600807 0.15992588
sauti -0.13439706 -0.184621793 -0.19682723 1.00000000 0.14607390 0.158304114 0.70887634 0.217596189 -0.02001731
chara 0.03757083 0.075931174 0.37850096 0.14607390 1.00000000 0.565903725 0.34174228 0.349079671 0.03454195
cons -0.03911275 -0.001716704 0.29471825 0.15830411 0.56590373 1.000000000 0.28472402 0.370070248 0.03154605
pmda -0.07957446 -0.159476158 -0.02757629 0.70887634 0.34174228 0.284724018 1.00000000 0.140198542 -0.02882087
ugbto -0.12219188 0.002495604 -0.16260081 0.21759619 0.34907967 0.370070248 0.14019854 1.000000000 -0.09304540
DISPO 0.05279892 0.087012502 0.15992588 -0.02001731 0.03454195 0.031546053 -0.02882087 -0.093045396 1.00000000
>
```

```
> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2008.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2008)<-rupt2008[,1]
```

```
> rupt2008<-rupt2008[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2008)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. : 2090 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 32.5 1st Qu.: 34603 1st Qu.: 43.16 1st Qu.: 40223
Median :3.000 Median : 0.000 Median :2.310 Median :95.0 Median :60110 Median :181.31 Median :101702
Mean :2.952 Mean : 8.302 Mean :3.462 Mean :116.3 Mean :80508 Mean :383.34 Mean :117937
3rd Qu.:4.000 3rd Qu.: 2.085 3rd Qu.: 3.950 3rd Qu.:165.0 3rd Qu.: 93140 3rd Qu.: 515.35 3rd Qu.:158264
Max. :5.000 Max. :100.000 Max. :33.000 Max. :400.0 Max. :873253 Max. :4756.96 Max. :785817
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2454
Median : 0.00 Median : 17781
Mean : 66.82 Mean : 43845
3rd Qu.:110.00 3rd Qu.: 50775
Max. :500.00 Max. :1511360
```

```

> cor(rupt2008)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.227297156 0.21644635 -0.09949867 0.069065124 -0.057023781 -0.03717667 -0.11172237 0.064136318
fvd -0.22729716 1.000000000 0.08177883 -0.19485711 0.061124939 -0.003452849 -0.15587598 -0.01489226 0.095471835
UTATO 0.21644635 0.081778835 1.00000000 -0.17875475 0.323084740 0.199692781 -0.02371414 -0.16520416 0.230885453
sauti -0.09949867 -0.194857114 -0.17875475 1.00000000 0.203251600 0.193052163 0.69161239 0.22650931 -0.072727071
chara 0.06906512 0.061124939 0.32308474 0.20325160 1.000000000 0.514318251 0.44924215 0.38162167 0.007220188
cons -0.05702378 -0.003452849 0.19969278 0.19305216 0.514318251 1.000000000 0.32604394 0.44205229 -0.006956967
pmda -0.03717667 -0.155875983 -0.02371414 0.69161239 0.449242153 0.326043935 1.00000000 0.16535228 -0.035520996
ugpto -0.11172237 -0.014892257 -0.16520416 0.22650931 0.381621668 0.442052292 0.16535228 1.00000000 -0.095966492
DISPO 0.06413632 0.095471835 0.23088545 -0.07272707 0.007220188 -0.006956967 -0.03552100 -0.09596649 1.000000000
>

```

```

> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Rupt2009.csv', header=T, dec=',', sep=';')
> rownames(rupt2009)<-rupt2009[,1]
> rupt2009<-rupt2009[,4:12]
> #Etude sommaire
> summary(rupt2009)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. : 0.77 Min. : 2.5 Min. : 0 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.: 1.91 1st Qu.: 35.0 1st Qu.: 38781 1st Qu.: 41.73 1st Qu.: 44260
Median :3.000 Median : 0.000 Median : 2.40 Median : 95.0 Median : 68203 Median : 197.58 Median :102293
Mean :3.048 Mean : 8.100 Mean : 3.54 Mean :117.4 Mean : 87516 Mean : 427.31 Mean :124101
3rd Qu.:4.000 3rd Qu.: 2.505 3rd Qu.: 4.00 3rd Qu.:165.0 3rd Qu.:108998 3rd Qu.: 553.02 3rd Qu.:163075
Max. :5.000 Max. :100.000 Max. :34.27 Max. :400.0 Max. :985917 Max. :4550.58 Max. :985471
      ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1727
Median : 0.00 Median : 13095
Mean : 66.84 Mean : 38455
3rd Qu.:110.00 3rd Qu.: 40818
Max. :500.00 Max. :1567780

```

```

> cor(rupt2009)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.222479137 0.24566251 -0.04194499 0.10491296 -0.058297100 0.03778302 -0.11218875 0.11617442
fvd -0.22247914 1.000000000 0.04816922 -0.18858529 0.02669908 0.008087042 -0.15085581 -0.02444796 0.06958298
UTATO 0.24566251 0.048169223 1.00000000 -0.17424737 0.53749085 0.217237438 0.18258478 -0.16124870 0.16074230
sauti -0.04194499 -0.188585292 -0.17424737 1.00000000 0.23798729 0.207383621 0.66073594 0.22330570 -0.06315018
chara 0.10491296 0.026699080 0.53749085 0.23798729 1.00000000 0.516783680 0.50541844 0.32197599 0.06575208
cons -0.05829710 0.008087042 0.21723744 0.20738362 0.51678368 1.000000000 0.35108495 0.45857058 0.01341725
pmda 0.03778302 -0.150855812 0.18258478 0.66073594 0.50541844 0.351084952 1.00000000 0.13966338 -0.01396669
ugpto -0.11218875 -0.024447962 -0.16124870 0.22330570 0.32197599 0.458570576 0.13966338 1.00000000 -0.07292201
DISPO 0.11617442 0.069582983 0.16074230 -0.06315018 0.06575208 0.013417250 -0.01396669 -0.07292201 1.00000000
>

```

## ANNEXE 9

### Étude alternative de la cohérence des exploitations en réorganisation et en rupture seules

```

> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2001.csv', header=T, dec=',', sep=';')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. : 0.910 Min. : 2.5 Min. : 3924 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 42.5 1st Qu.: 24403 1st Qu.: 65.65 1st Qu.: 44766
Median :0.000 Median : 1.85 Median : 1.880 Median : 85.0 Median : 48967 Median : 201.31 Median : 75907
Mean :1.193 Mean :16.21 Mean : 2.128 Mean :105.0 Mean : 64675 Mean : 438.63 Mean :104715
3rd Qu.:2.000 3rd Qu.: 23.03 3rd Qu.: 2.370 3rd Qu.:145.0 3rd Qu.: 78213 3rd Qu.: 571.04 3rd Qu.:125364

```

```

Max. :3.000 Max. :100.00 Max. :11.250 Max. :400.0 Max. :318131 Max. :5265.49 Max. :670888
  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1232
Median : 57.50 Median : 9054
Mean : 84.58 Mean : 15687
3rd Qu.:112.50 3rd Qu.: 21109
Max. :500.00 Max. :134210
> cor(reorg2001)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.0000000 -0.459936981 0.22643005 0.4059104 0.3001885 0.2586092 0.2720005 0.166031493 0.20787527
fvd -0.4599370 1.000000000 -0.093447111 -0.3146554 -0.1725948 -0.1119936 -0.1693784 -0.002881744 -0.10173680
UTATO 0.2264300 -0.093447111 1.00000000 0.3441191 0.4982849 0.1769863 0.6133062 0.092220903 0.08265620
sauti 0.4059104 -0.314655399 0.34411909 1.0000000 0.5925711 0.2949145 0.7569634 0.172080616 0.33014821
chara 0.3001885 -0.172594818 0.49828486 0.5925711 1.0000000 0.5248702 0.7149343 0.406075513 0.24165568
cons 0.2586092 -0.111993612 0.17698630 0.2949145 0.5248702 1.0000000 0.2466240 0.394014105 0.10201307
pmda 0.2720005 -0.169378449 0.61330617 0.7569634 0.7149343 0.2466240 1.0000000 0.173922853 0.25082187
ugbto 0.1660315 -0.002881744 0.09222090 0.1720806 0.4060755 0.3940141 0.1739229 1.000000000 0.09051252
DISPO 0.2078753 -0.101736800 0.08265620 0.3301482 0.2416557 0.1020131 0.2508219 0.090512521 1.00000000
>
> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2002.csv', header=T, dec=',', sep=';')
> rownames(reorg2002)<-reorg2002[,1]
> reorg2002<-reorg2002[,4:12]
> #Etude sommaire
> summary(reorg2002)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.50 Min. : 7546 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:46.25 1st Qu.:25900 1st Qu.: 55.38 1st Qu.:36958
Median :2.000 Median : 1.48 Median :1.890 Median :85.00 Median :43366 Median :191.18 Median :69464
Mean :1.312 Mean :16.60 Mean :2.252 Mean :96.69 Mean :68679 Mean :490.35 Mean :89585
3rd Qu.:2.000 3rd Qu.:34.21 3rd Qu.:2.310 3rd Qu.:135.00 3rd Qu.:85536 3rd Qu.:582.33 3rd Qu.:105606
Max. :3.000 Max. :100.00 Max. :16.750 Max. :325.00 Max. :359521 Max. :3128.62 Max. :512160
  ugbto      DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 2.50 1st Qu.: 882.2
Median : 67.50 Median : 6904.5
Mean : 98.39 Mean : 15830.2
3rd Qu.:128.75 3rd Qu.: 18675.5
Max. :500.00 Max. :122615.0
> cor(reorg2002)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.000000000 -0.48577635 0.25284799 0.34379907 0.33100381 0.2524206 0.3617554 0.2088199 0.009361939
fvd -0.485776346 1.000000000 -0.09713191 -0.38767988 -0.21899973 -0.1862160 -0.3361799 -0.1850091 0.272252690
UTATO 0.252847987 -0.09713191 1.00000000 0.13679411 0.73090851 0.6318420 0.2432441 0.1402202 0.285360088
sauti 0.343799067 -0.38767988 0.13679411 1.00000000 0.37914809 0.3421039 0.7743891 0.4039331 -0.078532790
chara 0.331003807 -0.21899973 0.73090851 0.37914809 1.00000000 0.6677060 0.4875838 0.4838300 0.078185738
cons 0.252420555 -0.18621597 0.63184195 0.34210390 0.66770599 1.0000000 0.3989727 0.4614742 0.107436387
pmda 0.361755418 -0.33617995 0.24324411 0.77438913 0.48758376 0.3989727 1.0000000 0.3231217 -0.142679150
ugbto 0.208819904 -0.18500910 0.14022016 0.40393309 0.48382996 0.4614742 0.3231217 1.0000000 -0.130661014
DISPO 0.009361939 0.27225269 0.28536009 -0.07853279 0.07818574 0.1074364 -0.1426791 -0.1306610 1.000000000
>
> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2003.csv', header=T, dec=',', sep=';')
> rownames(reorg2003)<-reorg2003[,1]
> reorg2003<-reorg2003[,4:12]
> #Etude sommaire
> summary(reorg2003)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 7.50 Min. : 1882 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:42.50 1st Qu.:22322 1st Qu.: 42.27 1st Qu.:37061

```

```
Median :0.000 Median : 5.17 Median :2.000 Median :75.00 Median :43164 Median :176.30 Median :69372
Mean :1.164 Mean :19.27 Mean :2.541 Mean :88.69 Mean :67679 Mean :430.97 Mean :78985
3rd Qu.:2.000 3rd Qu.:31.82 3rd Qu.:2.990 3rd Qu.:125.00 3rd Qu.:74903 3rd Qu.:601.22 3rd Qu.:103393
Max. :3.000 Max. :100.00 Max. :21.000 Max. :225.00 Max. :486299 Max. :3011.44 Max. :273321
```

```
ugbto DISPO
Min. : 0.0 Min. : 0
1st Qu.: 2.5 1st Qu.: 131
Median :72.5 Median : 5271
Mean :105.7 Mean : 29729
3rd Qu.:142.5 3rd Qu.: 16383
Max. :500.0 Max. :1038114
```

```
> cor(reorg2003)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.00000000 -0.5260120 0.30314369 0.33847790 0.1252971 0.1825007 0.2853573 0.11967644 0.09968605
fvd -0.52601203 1.0000000 -0.25442477 -0.39512739 -0.2159822 -0.2226506 -0.3392493 -0.15361150 -0.14266789
UTATO 0.30314369 -0.2544248 1.00000000 -0.02184177 0.6079168 0.1160855 0.2489149 -0.01947581 0.81814319
sauti 0.33847790 -0.3951274 -0.02184177 1.00000000 0.1644839 0.3242330 0.6960770 0.47928415 -0.06333463
chara 0.12529707 -0.2159822 0.60791676 0.16448390 1.00000000 0.6227759 0.3236134 0.24944004 0.66139736
cons 0.18250068 -0.2226506 0.11608554 0.32423297 0.6227759 1.0000000 0.4658725 0.42210625 0.15201328
pmda 0.28535735 -0.3392493 0.24891495 0.69607697 0.3236134 0.4658725 1.0000000 0.37889352 0.17705367
ugbto 0.11967644 -0.1536115 -0.01947581 0.47928415 0.2494400 0.4221063 0.3788935 1.00000000 -0.12091523
DISPO 0.09968605 -0.1426679 0.81814319 -0.06333463 0.6613974 0.1520133 0.1770537 -0.12091523 1.00000000
```

```
> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2004.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2004)<-reorg2004[,1]
```

```
> reorg2004<-reorg2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2004)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. :12.5 Min. : 4704 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:55.0 1st Qu.:33517 1st Qu.:39.51 1st Qu.:42421
Median :0.000 Median : 2.63 Median :2.000 Median :85.0 Median :51548 Median :151.32 Median :79133
Mean :1.127 Mean :20.36 Mean :2.216 Mean :110.2 Mean :60412 Mean :280.18 Mean :94051
3rd Qu.:2.000 3rd Qu.:32.43 3rd Qu.:2.190 3rd Qu.:145.0 3rd Qu.:75835 3rd Qu.:439.28 3rd Qu.:119583
Max. :3.000 Max. :100.00 Max. :10.000 Max. :400.0 Max. :187757 Max. :1538.25 Max. :470919
```

```
      ugbto  DISPO
```

```
Min. : 0.00 Min. : 0
```

```
1st Qu.: 0.00 1st Qu.: 54
```

```
Median :57.50 Median : 8478
```

```
Mean :63.49 Mean :19324
```

```
3rd Qu.:90.00 3rd Qu.:20869
```

```
Max. :275.00 Max. :331432
```

```
> cor(reorg2004)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.00000000 -0.54430450 0.33108658 0.24576097 0.30575515 0.25900215 0.28962487 0.23588838 0.11906944
fvd -0.5443045 1.00000000 -0.06436731 -0.28719517 -0.30653373 -0.20896162 -0.24605705 -0.23978746 -0.13993023
UTATO 0.3310866 -0.06436731 1.00000000 0.09657160 0.31057351 -0.02502476 0.44305272 -0.08771447 0.43725571
sauti 0.2457610 -0.28719517 0.09657160 1.00000000 0.73298294 0.30983097 0.81660595 0.14335095 0.03122188
chara 0.3057552 -0.30653373 0.31057351 0.73298294 1.00000000 0.29797466 0.79059822 0.33672242 0.07578827
cons 0.2590022 -0.20896162 -0.02502476 0.30983097 0.29797466 1.00000000 0.23188060 0.42861999 -0.08564396
pmda 0.2896249 -0.24605705 0.44305272 0.81660595 0.79059822 0.23188060 1.00000000 0.15637958 0.03078618
ugbto 0.2358884 -0.23978746 -0.08771447 0.14335095 0.33672242 0.42861999 0.15637958 1.00000000 -0.17257035
DISPO 0.1190694 -0.13993023 0.43725571 0.03122188 0.07578827 -0.08564396 0.03078618 -0.17257035 1.00000000
```

```
> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2005.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2005)<-reorg2005[,1]
```

```
> reorg2005<-reorg2005[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2005)
```

```

  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 7.50 Min. : 3487 Min. : 0.0 Min. : 6969
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.00 1st Qu.: 21937 1st Qu.: 42.1 1st Qu.: 50536
Median :2.000 Median : 3.85 Median :2.000 Median : 85.00 Median : 47763 Median :132.6 Median : 83631
Mean :1.151 Mean :19.07 Mean :2.142 Mean : 96.65 Mean : 53953 Mean : 338.6 Mean : 96727
3rd Qu.:2.000 3rd Qu.: 29.41 3rd Qu.:3.000 3rd Qu.:125.00 3rd Qu.: 75460 3rd Qu.: 561.3 3rd Qu.:117869
Max. :3.000 Max. :100.00 Max. :5.750 Max. :275.00 Max. :157207 Max. :1690.3 Max. :333290
  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 342
Median : 52.50 Median : 6676
Mean : 86.84 Mean : 14738
3rd Qu.:132.50 3rd Qu.: 19573
Max. :500.00 Max. :103704
> cor(reorg2005)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.0000000 -0.58149920 0.6257417 0.4061629 0.5924108 0.38133795 0.5450063 0.16216142 0.37073413
fvd -0.5814992 1.00000000 -0.4345765 -0.3646002 -0.4242128 -0.28358601 -0.4506769 -0.06561368 -0.28289184
UTATO 0.6257417 -0.43457650 1.0000000 0.3375160 0.6076906 0.27548792 0.5070105 0.28743156 0.39816698
sauti 0.4061629 -0.36460024 0.3375160 1.0000000 0.5498660 0.40421448 0.7688068 0.23348751 0.18141002
chara 0.5924108 -0.42421283 0.6076906 0.5498660 1.0000000 0.41542269 0.7220572 0.49172226 0.28049027
cons 0.3813380 -0.28358601 0.2754879 0.4042145 0.4154227 1.00000000 0.3603474 0.43301946 -0.03968383
pmda 0.5450063 -0.45067691 0.5070105 0.7688068 0.7220572 0.36034741 1.0000000 0.31523590 0.31687542
ugpto 0.1621614 -0.06561368 0.2874316 0.2334875 0.4917223 0.43301946 0.3152359 1.00000000 -0.13961343
DISPO 0.3707341 -0.28289184 0.3981670 0.1814100 0.2804903 -0.03968383 0.3168754 -0.13961343 1.00000000
>
> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2006.csv', header=T, dec=',', sep=';')
> rownames(reorg2006)<-reorg2006[,1]
> reorg2006<-reorg2006[,4:12]
> #Etude sommaire
> summary(reorg2006)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 7.50 Min. : 3057 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.00 1st Qu.: 29466 1st Qu.: 23.54 1st Qu.: 30261
Median :2.000 Median : 2.24 Median :2.000 Median : 85.00 Median : 52556 Median : 88.74 Median : 62009
Mean :1.526 Mean :17.55 Mean :2.056 Mean : 94.93 Mean : 54473 Mean : 318.79 Mean : 73271
3rd Qu.:3.000 3rd Qu.: 25.72 3rd Qu.:2.400 3rd Qu.:122.50 3rd Qu.: 73851 3rd Qu.: 265.47 3rd Qu.:109501
Max. :3.000 Max. :100.00 Max. :9.000 Max. :225.00 Max. :157126 Max. :2202.75 Max. :207103
  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3012
Median : 22.50 Median : 9778
Mean : 64.01 Mean :18045
3rd Qu.: 85.00 3rd Qu.:26953
Max. :425.00 Max. :80154
> cor(reorg2006)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.0000000 -0.6804175 0.36355014 0.62341171 0.6418499 0.35138255 0.6325425 0.21817819 0.1006312
fvd -0.6804175 1.0000000 -0.29375803 -0.45712534 -0.5373539 -0.28619810 -0.4835918 -0.20848551 -0.1170390
UTATO 0.3635501 -0.2937580 1.0000000 0.04097445 0.5218409 0.17897541 0.1721499 0.04827003 0.2488295
sauti 0.6234117 -0.4571253 0.04097445 1.0000000 0.5620126 -0.04787476 0.8858460 0.32158569 0.3142198
chara 0.6418499 -0.5373539 0.52184088 0.56201259 1.0000000 0.44366963 0.5728774 0.57433941 0.4481345
cons 0.3513826 -0.2861981 0.17897541 -0.04787476 0.4436696 1.0000000 0.1253506 0.45892842 0.3312642
pmda 0.6325425 -0.4835918 0.17214985 0.88584603 0.5728774 0.12535064 1.0000000 0.38186312 0.3428360
ugpto 0.2181782 -0.2084855 0.04827003 0.32158569 0.5743394 0.45892842 0.3818631 1.0000000 0.2183633
DISPO 0.1006312 -0.1170390 0.24882952 0.31421984 0.4481345 0.33126417 0.3428360 0.21836334 1.0000000
>
> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2007.csv', header=T, dec=',', sep=';')
> rownames(reorg2007)<-reorg2007[,1]

```

```

> reorg2007<-reorg2007[,4:12]
> #Etude sommaire
> summary(reorg2007)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 22.5 Min. : 5393 Min. :  0.00 Min. : 8042
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.:17622 1st Qu.: 16.41 1st Qu.: 35831
Median :0.000 Median :10.61 Median :1.440 Median : 85.0 Median :28353 Median : 79.81 Median : 79785
Mean :0.973 Mean :20.59 Mean :1.634 Mean :102.7 Mean :42984 Mean :269.96 Mean :96057
3rd Qu.:3.000 3rd Qu.:36.67 3rd Qu.:2.000 3rd Qu.:125.0 3rd Qu.: 62000 3rd Qu.: 380.21 3rd Qu.:124293
Max. :3.000 Max. :77.78 Max. :4.190 Max. :400.0 Max. :181303 Max. :1266.59 Max. :410518
  ugbto    DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 1056
Median : 47.50 Median : 8369
Mean : 63.31 Mean :23697
3rd Qu.:102.50 3rd Qu.: 39838
Max. :265.00 Max. :102102
> cor(reorg2007)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda  ugbto  DISPO
fjuri 1.0000000 -0.39476159 0.45838166 0.4303310 0.5562589 0.2197560 0.5002798 0.19878360 0.15979175
fvd -0.3947616 1.00000000 -0.37666025 -0.2708443 -0.2699468 -0.2125932 -0.2027433 -0.21171332 -0.06940718
UTATO 0.4583817 -0.37666025 1.00000000 0.4415576 0.4796063 0.6249043 0.4773647 0.54557136 -0.05204377
sauti 0.4303310 -0.27084431 0.44155765 1.0000000 0.8679549 0.5207018 0.8833187 0.52328036 0.31399544
chara 0.5562589 -0.26994676 0.47960630 0.8679549 1.0000000 0.5215557 0.9360611 0.47471910 0.38553007
cons 0.2197560 -0.21259325 0.62490429 0.5207018 0.5215557 1.0000000 0.5196487 0.54943932 -0.16733068
pmda 0.5002798 -0.20274335 0.47736474 0.8833187 0.9360611 0.5196487 1.0000000 0.39252413 0.47342955
ugbto 0.1987836 -0.21171332 0.54557136 0.5232804 0.4747191 0.5494393 0.3925241 1.00000000 -0.06463304
DISPO 0.1597917 -0.06940718 -0.05204377 0.3139954 0.3855301 -0.1673307 0.4734296 -0.06463304 1.00000000
>
> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2008.csv', header=T, dec=',', sep=';')
> rownames(reorg2008)<-reorg2008[,1]
> reorg2008<-reorg2008[,4:12]
> #Etude sommaire
> summary(reorg2008)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.0000 Min. : 0.00 Min. :1.000 Min. : 22.5 Min. : 9014 Min. :  0.00 Min. :13614
1st Qu.:0.0000 1st Qu.: 1.11 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.:19549 1st Qu.: 17.34 1st Qu.: 46162
Median :0.0000 Median :13.64 Median :1.050 Median : 85.0 Median :36240 Median :111.73 Median :84146
Mean :0.7027 Mean :25.06 Mean :1.675 Mean :105.3 Mean :56053 Mean :268.15 Mean :121785
3rd Qu.:2.0000 3rd Qu.: 40.91 3rd Qu.:2.010 3rd Qu.:135.0 3rd Qu.: 65614 3rd Qu.: 413.85 3rd Qu.:177657
Max. :3.0000 Max. :100.00 Max. :4.360 Max. :275.0 Max. :380714 Max. :1530.44 Max. :551574
  ugbto    DISPO
Min. : 0.00 Min. :  0
1st Qu.: 7.50 1st Qu.: 1653
Median : 37.50 Median :11881
Mean : 67.64 Mean :24840
3rd Qu.:107.50 3rd Qu.: 32537
Max. :375.00 Max. :248024
> cor(reorg2008)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda  ugbto  DISPO
fjuri 1.00000000 -0.5090323 0.4423649 0.4549306 0.56909247 0.28657781 0.55191185 0.16516882 0.05692394
fvd -0.50903227 1.00000000 -0.1288720 -0.4272047 -0.29753688 -0.22896864 -0.29336362 -0.13251872 0.30554311
UTATO 0.44236492 -0.1288720 1.00000000 0.4814139 0.24038922 0.48160628 0.58334564 0.29332398 0.43670642
sauti 0.45493057 -0.4272047 0.4814139 1.0000000 0.26433513 0.28685886 0.72229532 0.32818229 -0.26690445
chara 0.56909247 -0.2975369 0.2403892 0.2643351 1.00000000 0.24196568 0.54992472 0.07201438 0.29159656
cons 0.28657781 -0.2289686 0.4816063 0.2868589 0.24196568 1.00000000 0.35423644 0.28064550 0.07240839
pmda 0.55191185 -0.2933636 0.5833456 0.7222953 0.54992472 0.35423644 1.00000000 0.09143779 0.19344825
ugbto 0.16516882 -0.1325187 0.2933240 0.3281823 0.07201438 0.28064550 0.09143779 1.00000000 -0.21019693
DISPO 0.05692394 0.3055431 0.4367064 -0.2669045 0.29159656 0.07240839 0.19344825 -0.21019693 1.00000000
>

```

```

> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations TTOTEX seules 2009.csv', header=T, dec=',', sep=';')
> rownames(reorg2009)<-reorg2009[,1]
> reorg2009<-reorg2009[,4:12]
> #Etude sommaire
> summary(reorg2009)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.00 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 4399 Min. : 0.00 Min. : 3917
1st Qu.:0.00 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 55.0 1st Qu.: 23335 1st Qu.: 24.17 1st Qu.: 43777
Median :0.00 Median : 8.57 Median :1.330 Median : 85.0 Median : 42770 Median : 97.19 Median : 79133
Mean :1.05 Mean : 23.51 Mean :1.752 Mean :108.5 Mean : 60472 Mean : 233.14 Mean : 96192
3rd Qu.:2.25 3rd Qu.: 37.06 3rd Qu.:2.743 3rd Qu.:135.0 3rd Qu.: 71876 3rd Qu.: 242.16 3rd Qu.:130610
Max. :3.00 Max. :100.00 Max. :3.150 Max. :400.0 Max. :310271 Max. :2930.72 Max. :314656
  ugpto    DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 310.8
Median : 32.50 Median : 2544.0
Mean : 64.06 Mean : 20077.0
3rd Qu.: 88.75 3rd Qu.: 15776.8
Max. :500.00 Max. :212199.0
> cor(reorg2009)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda  ugpto  DISPO
fjuri 1.0000000 -0.61512456 0.31730326 0.43739237 0.370423251 0.230683741 0.3619961 0.14975889 -0.010389800
fvd -0.6151246 1.00000000 -0.15281918 -0.42082376 -0.383324374 -0.199526409 -0.3421466 -0.10140271 -0.087548006
UTATO 0.3173033 -0.15281918 1.00000000 0.36094399 0.491167026 0.378565627 0.4654782 0.40465981 0.050394955
sauti 0.4373924 -0.42082376 0.36094399 1.00000000 0.733550796 0.479449291 0.7953751 0.07263543 0.108005648
chara 0.3704233 -0.38332437 0.49116703 0.73355080 1.000000000 0.350305867 0.6842199 0.44681789 0.004364866
cons 0.2306837 -0.19952641 0.37856563 0.47944929 0.350305867 1.000000000 0.4427476 0.31848972 0.002579944
pmda 0.3619961 -0.34214662 0.46547825 0.79537507 0.684219911 0.442747552 1.0000000 0.16898881 0.174512738
ugpto 0.1497589 -0.10140271 0.40465981 0.07263543 0.446817894 0.318489722 0.1689888 1.00000000 -0.013041720
DISPO -0.0103898 -0.08754801 0.05039496 0.10800565 0.004364866 0.002579944 0.1745127 -0.01304172 1.000000000
>

```

```

> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2001.csv', header=T, dec=',', sep=';')
> rownames(rupt2001)<-rupt2001[,1]
> rupt2001<-rupt2001[,4:12]
> #Etude sommaire
> summary(rupt2001)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :0.970 Min. : 0.0 Min. :14293 Min. : 3.50 Min. :16182
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.:1.450 1st Qu.: 57.5 1st Qu.: 41955 1st Qu.: 88.64 1st Qu.: 50163
Median :3.000 Median : 0.000 Median :2.000 Median :120.0 Median : 65983 Median : 278.31 Median : 92034
Mean :2.231 Mean : 3.442 Mean :2.144 Mean :122.8 Mean : 81909 Mean : 363.07 Mean :114199
3rd Qu.:3.000 3rd Qu.: 0.000 3rd Qu.:2.783 3rd Qu.:152.5 3rd Qu.:124351 3rd Qu.: 509.57 3rd Qu.:173507
Max. :3.000 Max. :64.710 Max. :4.270 Max. :325.0 Max. :175879 Max. :1218.56 Max. :366608
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1152
Median : 32.50 Median : 11966
Mean : 79.23 Mean : 21223
3rd Qu.:133.75 3rd Qu.: 32254
Max. :375.00 Max. :139773
> cor(rupt2001)
  fjuri    fvd  UTATO   sauti   chara    cons    pmda  ugpto  DISPO
fjuri 1.000000000 -0.25494138 0.14281084 0.21319375 0.16870992 0.14772191 0.21025073 -0.007072445 0.07021734
fvd -0.254941381 1.00000000 -0.02243179 -0.15265633 -0.02739476 -0.06704625 -0.16399529 0.216770818 0.01465749
UTATO 0.142810837 -0.02243179 1.00000000 0.41372409 0.33492011 0.06194602 0.56237235 0.019413402 0.71472835
sauti 0.213193750 -0.15265633 0.41372409 1.00000000 0.34355744 -0.09996281 0.70077854 -0.334245566 0.38389380
chara 0.168709916 -0.02739476 0.33492011 0.34355744 1.00000000 0.46776983 0.34458842 0.531920202 0.34292756
cons 0.147721912 -0.06704625 0.06194602 -0.09996281 0.46776983 1.00000000 0.06824717 0.568389755 0.02244754
pmda 0.210250727 -0.16399529 0.56237235 0.70077854 0.34458842 0.06824717 1.00000000 -0.100644238 0.60146658
ugpto -0.007072445 0.21677082 0.01941340 -0.33424557 0.53192020 0.56838976 -0.10064424 1.000000000 -0.04475234

```

```
DISPO 0.070217338 0.01465749 0.71472835 0.38389380 0.34292756 0.02244754 0.60146658 -0.044752343 1.00000000
>
```

```
> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2002.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2002)<-rupt2002[,1]
```

```
> rupt2002<-rupt2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2002)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.50 Min. : 4023 Min. : 0.00 Min. :  0
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.:1.525 1st Qu.:27.50 1st Qu.:24441 1st Qu.:13.56 1st Qu.:24397
Median :3.000 Median : 0.000 Median :2.515 Median :65.00 Median :43174 Median :98.62 Median :54656
Mean :3.041 Mean : 8.688 Mean :3.500 Mean :82.36 Mean :59036 Mean :222.53 Mean :66363
3rd Qu.:4.000 3rd Qu.: 3.225 3rd Qu.:4.000 3rd Qu.:115.00 3rd Qu.:69815 3rd Qu.:326.35 3rd Qu.:101097
Max. :5.000 Max. :100.000 Max. :21.000 Max. :325.00 Max. :501585 Max. :1470.30 Max. :228665
```

```
  ugpto    DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 4595
Median : 0.00 Median :12968
Mean :41.96 Mean :31986
3rd Qu.:61.25 3rd Qu.:39731
Max. :500.00 Max. :201102
```

```
> cor(rupt2002)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.06139580 0.26836932 0.04933243 0.17060721 0.11853474 -0.04415571 0.10293477 -0.04249872
fvd -0.06139580 1.00000000 0.01905953 -0.27939665 0.22765370 0.06624441 -0.17548497 0.03945464 -0.04131221
UTATO 0.26836932 0.01905953 1.00000000 -0.14378177 0.29569764 0.36788910 0.08110068 -0.12024957 0.44714036
sauti 0.04933243 -0.27939665 -0.14378177 1.00000000 0.18222318 0.09371562 0.64043671 0.34793372 -0.04756833
chara 0.17060721 0.22765370 0.29569764 0.18222318 1.00000000 0.52311095 0.25143428 0.59949015 -0.01278992
cons 0.11853474 0.06624441 0.36788910 0.09371562 0.52311095 1.00000000 0.18895547 0.37245780 0.15389609
pmda -0.04415571 -0.17548497 0.08110068 0.64043671 0.25143428 0.18895547 1.00000000 0.09588846 0.12484145
ugpto 0.10293477 0.03945464 -0.12024957 0.34793372 0.59949015 0.37245780 0.09588846 1.00000000 -0.19990784
DISPO -0.04249872 -0.04131221 0.44714036 -0.04756833 -0.01278992 0.15389609 0.12484145 -0.19990784 1.00000000
>
```

```
> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2003.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2003)<-rupt2003[,1]
```

```
> rupt2003<-rupt2003[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2003)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.50 Min. : 9270 Min. : 0.00 Min. :  0
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.:28.75 1st Qu.:37575 1st Qu.:73.82 1st Qu.:30470
Median :3.000 Median : 0.000 Median :2.790 Median :85.00 Median :59416 Median :276.04 Median :84367
Mean :3.237 Mean : 8.098 Mean :4.313 Mean :110.28 Mean :76449 Mean :470.86 Mean :98728
3rd Qu.:4.000 3rd Qu.: 1.110 3rd Qu.:4.235 3rd Qu.:165.00 3rd Qu.:85122 3rd Qu.:735.72 3rd Qu.:139695
Max. :4.000 Max. :100.000 Max. :33.000 Max. :400.00 Max. :770770 Max. :3125.43 Max. :355640
```

```
  ugpto    DISPO
Min. : 0.00 Min. :  0
1st Qu.: 0.00 1st Qu.: 6328
Median : 0.00 Median :20519
Mean :60.44 Mean :40410
3rd Qu.:87.50 3rd Qu.:43619
Max. :500.00 Max. :785437
```

```
> cor(rupt2003)
```

```
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.23689605 0.23395999 -0.03400939 0.100288424 0.09115980 0.07213092 -0.13730468 0.150268155
fvd -0.23689605 1.00000000 0.01882596 -0.06902989 -0.011682459 0.06062617 -0.11957364 -0.06711226 0.165504593
UTATO 0.23395999 0.01882596 1.00000000 -0.26336831 0.723422408 0.24506316 -0.08472619 -0.20053375 0.086761712
sauti -0.03400939 -0.06902989 -0.26336831 1.00000000 0.087779872 0.01828842 0.62411585 0.23396947 -0.101823303
chara 0.10028842 -0.01168246 0.72342241 0.08777987 1.00000000 0.29795139 0.11483674 0.08862218 -0.009479651
```



```
cons 0.09115980 0.06062617 0.24506316 0.01828842 0.297951387 1.00000000 0.02615860 0.30522044 0.094359423
pmda 0.07213092 -0.11957364 -0.08472619 0.62411585 0.114836744 0.02615860 1.00000000 0.03843042 -0.107171222
ugbto -0.13730468 -0.06711226 -0.20053375 0.23396947 0.088622176 0.30522044 0.03843042 1.00000000 -0.124698545
DISPO 0.15026816 0.16550459 0.08676171 -0.10182330 -0.009479651 0.09435942 -0.10717122 -0.12469855 1.000000000
>
```

```
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2004.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2004)<-rupt2004[,1]
```

```
> rupt2004<-rupt2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2004)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :2.0 Min. : 0.000 Min. : 1.000 Min. : 2.5 Min. :25062 Min. : 0.00 Min. : 0
1st Qu.:3.0 1st Qu.: 0.000 1st Qu.: 2.000 1st Qu.: 42.5 1st Qu.: 38038 1st Qu.: 43.62 1st Qu.: 63647
Median :3.0 Median : 0.000 Median : 2.505 Median :100.0 Median :52559 Median :240.39 Median :96333
Mean :3.2 Mean : 9.133 Mean : 3.502 Mean :102.0 Mean :80644 Mean :380.40 Mean :100977
3rd Qu.:4.0 3rd Qu.: 6.040 3rd Qu.: 3.072 3rd Qu.:145.0 3rd Qu.: 85395 3rd Qu.: 650.42 3rd Qu.:141779
Max. :5.0 Max. :100.000 Max. :17.380 Max. :275.0 Max. :467282 Max. :1186.22 Max. :214478
```

```
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3410
Median : 1.25 Median : 8905
Mean :61.75 Mean :29635
3rd Qu.:103.75 3rd Qu.: 46191
Max. :245.00 Max. :200364
```

```
> cor(rupt2004)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 0.07486127 0.33842223 -0.40861933 0.122471015 -0.31030736 -0.33044310 -0.65244307 0.219068587
fvd 0.07486127 1.00000000 0.73694444 -0.29451491 0.857823725 -0.21731756 -0.33619487 -0.06709007 0.052461584
UTATO 0.33842223 0.73694444 1.00000000 -0.32443625 0.887541100 0.07663720 -0.28182691 -0.23619798 0.177802858
sauti -0.40861933 -0.29451491 -0.32443625 1.00000000 -0.174962612 0.28690343 0.53028538 0.09877511 -0.258625550
chara 0.12247102 0.85782372 0.88754111 -0.17496261 1.000000000 0.06042687 -0.23502595 -0.11823299 0.009801795
cons -0.31030736 -0.21731756 0.0766372 0.28690343 0.060426872 1.00000000 0.58572358 0.34159779 -0.184788664
pmda -0.33044310 -0.33619487 -0.2818269 0.53028538 -0.235025947 0.58572358 1.00000000 0.26887667 -0.040456457
ugbto -0.65244307 -0.06709007 -0.2361980 0.09877511 -0.118232988 0.34159779 0.26887667 1.00000000 -0.111129181
DISPO 0.21906859 0.05246158 0.1778029 -0.25862555 0.009801795 -0.18478866 -0.04045646 -0.11112918 1.000000000
>
```

```
> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2005.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2005)<-rupt2005[,1]
```

```
> rupt2005<-rupt2005[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2005)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. :17.5 Min. : 8110 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.:1.560 1st Qu.: 65.0 1st Qu.: 33478 1st Qu.: 16.47 1st Qu.: 79860
Median :3.000 Median : 0.000 Median :2.000 Median :125.0 Median :60705 Median :228.96 Median :130325
Mean :2.857 Mean :1.524 Mean :2.382 Mean :125.7 Mean :63635 Mean :351.46 Mean :133484
3rd Qu.:3.000 3rd Qu.: 0.000 3rd Qu.:2.380 3rd Qu.:165.0 3rd Qu.: 70841 3rd Qu.: 478.48 3rd Qu.:171032
Max. :4.000 Max. :17.650 Max. :7.700 Max. :375.0 Max. :182864 Max. :2116.87 Max. :366921
```

```
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 4116
Median : 7.50 Median :10972
Mean :53.69 Mean :22723
3rd Qu.: 87.50 3rd Qu.:29577
Max. :185.00 Max. :92994
```

```
> cor(rupt2005)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 0.24329225 0.299932860 -0.17769398 0.161232219 -0.678709624 0.15109870 -0.478149267 0.06294851
fvd 0.24329225 1.00000000 0.677138000 -0.32554039 0.593937043 0.186129352 0.00452633 -0.117474335 -0.10466149
```

```
UTATO 0.29993286 0.67713800 1.000000000 0.01768727 0.706429715 -0.006138544 0.37542341 -0.162452081 -0.13943863
sauti -0.17769398 -0.32554039 0.017687272 1.000000000 0.352530139 0.032625469 0.80117329 0.084454204 0.45131270
chara 0.16123222 0.59393704 0.706429715 0.35253014 1.000000000 0.091790890 0.67165772 0.006879294 0.21828154
cons -0.67870962 0.18612935 -0.006138544 0.03262547 0.091790890 1.000000000 -0.11162168 0.608146985 -0.34783219
pmda 0.15109870 0.00452633 0.375423412 0.80117329 0.671657715 -0.111621677 1.000000000 -0.187075873 0.45020895
ugbto -0.47814927 -0.11747433 -0.162452081 0.08445420 0.006879294 0.608146985 -0.18707587 1.000000000 -0.37407886
DISPO 0.06294851 -0.10466149 -0.139438631 0.45131270 0.218281536 -0.347832190 0.45020895 -0.374078863 1.000000000
>
```

```
> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2006.csv', header=T, dec=',', sep=',')
> rownames(rupt2006)<-rupt2006[,1]
> rupt2006<-rupt2006[,4:12]
> #Etude sommaire
> summary(rupt2006)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 2.50 Min. :26854 Min. : 38.82 Min. : 4443
1st Qu.:2.250 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.: 48.12 1st Qu.: 66196 1st Qu.: 162.70 1st Qu.: 66071
Median :3.000 Median : 0.000 Median :2.115 Median :95.00 Median :82875 Median :492.44 Median :108158
Mean :2.773 Mean : 9.792 Mean :2.762 Mean :104.09 Mean :135673 Mean :791.76 Mean :118273
3rd Qu.:3.000 3rd Qu.: 3.092 3rd Qu.:3.000 3rd Qu.:152.50 3rd Qu.:117852 3rd Qu.: 906.97 3rd Qu.:142759
Max. :4.000 Max. :100.000 Max. :7.580 Max. :225.00 Max. :976040 Max. :3280.16 Max. :455871
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 6243
Median : 75.00 Median : 27327
Mean : 98.07 Mean : 43461
3rd Qu.:128.75 3rd Qu.: 48803
Max. :500.00 Max. :380625
```

```
> cor(rupt2006)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.000000000 -0.02781378 0.001238714 -0.350126823 0.24041388 -0.22900804 0.1757323 -0.297774134 0.008254373
fvd -0.027813781 1.000000000 -0.242601087 -0.346022783 -0.11916553 -0.14753252 -0.2663784 0.041740737 -0.112220694
UTATO 0.001238714 -0.24260109 1.000000000 -0.412997010 -0.04324687 -0.11198836 -0.2043958 -0.210685383 0.491230266
sauti -0.350126823 -0.34602278 -0.412997010 1.000000000 -0.06507649 0.09424398 0.3922587 0.005898639 -0.149499129
chara 0.240413884 -0.11916553 -0.043246866 -0.065076486 1.000000000 0.62134368 0.79999006 0.028076304 -0.153358765
cons -0.229008036 -0.14753252 -0.111988360 0.094243977 0.62134368 1.000000000 0.6433193 0.029686759 -0.109281565
pmda 0.175732327 -0.26637839 -0.204395824 0.392258735 0.799990060 0.64331930 1.000000000 -0.167259058 -0.267471473
ugbto -0.297774134 0.04174074 -0.210685383 0.005898639 0.02807630 0.02968676 -0.1672591 1.000000000 -0.146279534
DISPO 0.008254373 -0.11222069 0.491230266 -0.149499129 -0.15335876 -0.10928157 -0.2674715 -0.146279534 1.000000000
>
```

```
> rupt2007<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2007.csv', header=T, dec=',', sep=',')
> rownames(rupt2007)<-rupt2007[,1]
> rupt2007<-rupt2007[,4:12]
> #Etude sommaire
> summary(rupt2007)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :2.000 Min. : 0.000 Min. :1.000 Min. : 2.5 Min. :41951 Min. : 63.82 Min. :10858
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.: 1.130 1st Qu.: 65.0 1st Qu.:47638 1st Qu.: 131.00 1st Qu.: 84213
Median :3.000 Median : 0.000 Median : 2.600 Median :105.0 Median :69843 Median : 218.98 Median :117391
Mean :2.889 Mean : 7.353 Mean : 3.407 Mean :113.9 Mean :62092 Mean : 410.41 Mean : 98628
3rd Qu.:3.000 3rd Qu.:11.540 3rd Qu.: 3.100 3rd Qu.:155.0 3rd Qu.:75273 3rd Qu.: 705.22 3rd Qu.:126686
Max. :4.000 Max. :38.180 Max. :11.630 Max. :275.0 Max. :80497 Max. :1044.78 Max. :176990
      ugbto      DISPO
Min. : 0.0 Min. : 0
1st Qu.: 0.0 1st Qu.: 23844
Median : 82.5 Median : 76528
Mean : 65.0 Mean : 85744
3rd Qu.:107.5 3rd Qu.:123174
Max. :165.0 Max. :225202
```

```
> cor(rupt2007)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.0000000 0.16403689 0.0509672 -0.21508677 -0.25361484 -0.34181617 -0.55490298 -0.5852869 0.15174717
fvd 0.1640369 1.00000000 -0.2970584 0.47954302 -0.56439375 -0.18809511 -0.09335148 0.3487486 -0.44840273
UTATO 0.0509672 -0.29705838 1.0000000 -0.40137517 -0.35677617 -0.18076943 -0.31444679 -0.5155274 0.70951201
sauti -0.2150868 0.47954302 -0.4013752 1.00000000 -0.04051716 0.03403977 0.71285916 0.5439391 -0.05871436
chara -0.2536148 -0.56439375 -0.3567762 -0.04051716 1.00000000 0.61955960 0.25563035 0.1970524 -0.02730620
cons -0.3418162 -0.18809511 -0.1807694 0.03403977 0.61955960 1.00000000 0.29946344 0.4922826 -0.14219992
pmda -0.5549030 -0.09335148 -0.3144468 0.71285916 0.25563035 0.29946344 1.00000000 0.6923374 -0.06311811
ugbto -0.5852869 0.34874856 -0.5155274 0.54393910 0.19705236 0.49228265 0.69233743 1.0000000 -0.60495651
DISPO 0.1517472 -0.44840273 0.7095120 -0.05871436 -0.02730620 -0.14219992 -0.06311811 -0.6049565 1.00000000
>

```

```
> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2008.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2008)<-rupt2008[,1]
```

```
> rupt2008<-rupt2008[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2008)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :1.000 Min. :0.00 Min. :1.000 Min. : 2.50 Min. : 9397 Min. : 0.12 Min. : 0
1st Qu.:3.000 1st Qu.:0.00 1st Qu.:1.945 1st Qu.:36.25 1st Qu.:29839 1st Qu.: 67.31 1st Qu.:42561
Median :3.000 Median :2.59 Median :3.000 Median :90.00 Median :81239 Median :241.51 Median :117269
Mean :3.125 Mean :11.48 Mean :3.476 Mean :131.56 Mean :149954 Mean :324.11 Mean :136452
3rd Qu.:4.000 3rd Qu.:20.68 3rd Qu.:3.580 3rd Qu.:202.50 3rd Qu.:188212 3rd Qu.:499.10 3rd Qu.:185903
Max. :4.000 Max. :53.85 Max. :8.190 Max. :400.00 Max. :862545 Max. :1431.87 Max. :385387
      ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1134
Median : 0.00 Median : 11536
Mean : 91.09 Mean : 34773
3rd Qu.: 98.12 3rd Qu.: 52496
Max. :500.00 Max. :145756

```

```
> cor(rupt2008)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.568302622 0.069129307 0.513296521 0.13494545 -0.233837794 0.669865351 0.090548241 0.32121237
fvd -0.56830262 1.000000000 -0.248499111 -0.426648335 -0.05682652 0.148284239 -0.476698094 -0.007292595 0.37246911
UTATO 0.06912931 -0.248499111 1.000000000 -0.003396887 0.06278414 0.078656028 0.134363976 -0.244703578 -0.02455447
sauti 0.51329652 -0.426648335 -0.003396887 1.000000000 -0.01051301 -0.228354418 0.808795515 -0.226291891 -0.15355629
chara 0.13494545 -0.056826517 0.062784145 -0.010513013 1.000000000 0.818742200 0.257426581 0.811428546 -0.20308524
cons -0.23383779 0.148284239 0.078656028 -0.228354418 0.81874220 1.000000000 0.009205871 0.716915199 -0.34112780
pmda 0.66986535 -0.476698094 0.134363976 0.808795515 0.25742658 0.009205871 1.000000000 0.087690177 0.06331426
ugbto 0.09054824 -0.007292595 -0.244703578 -0.226291891 0.81142855 0.716915199 0.087690177 1.000000000 -0.11838035
DISPO 0.32121237 0.372469114 -0.024554472 -0.153556286 -0.20308524 -0.341127798 0.063314261 -0.118380346 1.00000000
>

```

```
> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures TTOTEX seules 2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2009)<-rupt2009[,1]
```

```
> rupt2009<-rupt2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2009)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. : 7.5 Min. : 6488 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.:0.00 1st Qu.:1.500 1st Qu.:85.0 1st Qu.:52642 1st Qu.: 64.83 1st Qu.:60166
Median :3.000 Median :0.00 Median :2.890 Median :145.0 Median :79505 Median :250.87 Median :119449
Mean :2.931 Mean :7.02 Mean :3.316 Mean :156.2 Mean :96548 Mean :584.38 Mean :159126
3rd Qu.:3.000 3rd Qu.:1.61 3rd Qu.:3.690 3rd Qu.:225.0 3rd Qu.:120804 3rd Qu.:748.19 3rd Qu.:195483
Max. :4.000 Max. :77.27 Max. :11.550 Max. :400.0 Max. :316794 Max. :4256.08 Max. :539340
      ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3686
Median : 52.50 Median : 23000
Mean : 88.19 Mean : 47588
3rd Qu.:137.50 3rd Qu.: 62166

```

Max. :500.00 Max. :226130

> cor(rupt2009)

```
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.03379288 0.30952386 0.218635223 0.22795226 0.04969636 0.2337294 -0.06892525 0.283090569
fvd -0.03379288 1.00000000 0.37416425 -0.343329562 0.09222461 0.15954736 -0.2212950 -0.22289909 0.610575750
UTATO 0.30952386 0.37416425 1.00000000 -0.224350030 0.03755442 0.09659317 -0.1922067 -0.25779705 0.556463568
sauti 0.21863522 -0.34332956 -0.22435003 1.000000000 0.54037267 0.26396602 0.7729614 0.40952909 0.007100038
chara 0.22795226 0.09222461 0.03755442 0.540372667 1.00000000 0.73949696 0.6272477 0.63722794 0.174230133
cons 0.04969636 0.15954736 0.09659317 0.263966015 0.73949696 1.00000000 0.3192979 0.76947298 0.193772391
pmda 0.23372941 -0.22129504 -0.19220674 0.772961354 0.62724774 0.31929795 1.0000000 0.41364143 -0.108824568
ugbto -0.06892525 -0.22289909 -0.25779705 0.409529093 0.63722794 0.76947298 0.4136414 1.00000000 -0.102672595
DISPO 0.28309057 0.61057575 0.55646357 0.007100038 0.17423013 0.19377239 -0.1088246 -0.10267260 1.000000000
>
```

## ANNEXE 10

### Étude alternative sur variables de l'actif du bilan Dictionnaire

| Variable | Libellé   | Type | Longueur |
|----------|---|------|----------|
| IDNUM    | Numéro de l'exploitation  | num  | 5        |
| MILEX    | Millésime de l'exercice   | num  | 4        |
| OTEFDD   | Orientation technico-économique en 16 postes (typologie 2007)               | char | 4        |
| FJURI    | Code Forme juridique de l'exploitation                                      | char | 1        |
| SAFVD    | SAU en faire-valoir direct (tranche)  | char | 2        |
| SAUTI    | SAU totale (tranche)  | char | 2        |
| AIMI5    | Actif : autres immobilisations incorporelles (clôture) (en euros)           | num  | 0        |
| FONC5    | Foncier (clôture) (en euros)  | num  | 0        |
| CONS5    | Actif : constructions (clôture) (en euros)                                  | num  | 0        |
| ISPE5    | Actif : installations spécialisées (clôture) (en euros)                     | num  | 0        |
| MATE5    | Actif : matériel et outillage (clôture) (en euros)                          | num  | 0        |
| ANIR5    | Actif : animaux reproducteurs (clôture) (en euros)                          | num  | 0        |
| AIMF5    | Actif : autres immobilisations financières (clôture) (en euros)             | num  | 0        |
| REALI    | Valeurs réalisables (yc solde de TVA et avances acomptes versés) (en euros) | num  | 0        |
| STOCK    | Stocks et en-cours nc avances et acomptes versés (clôture) (en euros)       | num  | 0        |
| DISPO    | Disponibilités et titres (en euros)   | num  | 0        |
| REGA5    | Actif : régularisations (clôture) (en euros)                                | num  | 0        |

### Extrait des modalités

|           |                                |
|-----------|--------------------------------|
| fvd       | SAFVD/SAUTI en %               |
| FONC5     | en euro                        |
| consimofi | CONS5 + AIMF5 + AIMI5, en euro |
| MATE5     | en euro                        |
| reali     | REALI + REGA5                  |
| ANIR5     | en euro                        |
| STOCK     | en euro                        |
| DISPO     | en euro                        |

### Étude de la cohérence et du positionnement des exploitations stables

```
> explo2009<-read.table('C:/Users/Bureau LGH/Desktop/stables2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(explo2009)<-explo2009[,1]
```

```
> explo2009<-explo2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(explo2009)
```

```
      fjuri   fvd   FONC5   consimofi   MATE5   reali   STOCK
Min. :0.000 Min. : 0.00 Min. :  0 Min. :  0 Min. :  0 Min. :  0 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:  0 1st Qu.: 4957 1st Qu.: 15312 1st Qu.: 9362 1st Qu.: 25195
```

Median :0.000 Median : 5.26 Median : 14840 Median : 22626 Median : 46186 Median : 21808 Median : 55895  
 Mean :1.138 Mean : 24.09 Mean : 47980 Mean : 57426 Mean : 73183 Mean : 41885 Mean : 94646  
 3rd Qu.:3.000 3rd Qu.: 39.47 3rd Qu.: 64676 3rd Qu.: 69878 3rd Qu.: 98131 3rd Qu.: 49487 3rd Qu.: 109400  
 Max. :3.000 Max. :100.00 Max. :1356796 Max. :1121513 Max. :1021997 Max. :1323448 Max. :2281014

ANIR5 DISPO  
 Min. : 0 Min. : 0  
 1st Qu.: 0 1st Qu.: 1266  
 Median : 0 Median : 8527  
 Mean : 36096 Mean : 23639  
 3rd Qu.: 55519 3rd Qu.: 25393  
 Max. :543048 Max. :877127

> cor(explo2009)

```

      fjuri   fvd  FONC5  consimofi  MATE5  reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.54189472 -0.347230483  0.250388529  0.29422604  0.23162628  0.20085807  0.114050095  0.170000133
fvd   -0.5418947  1.00000000  0.473103032 -0.130528749 -0.27845776 -0.13908770 -0.09471906 -0.133324815 -0.109759764
FONC5 -0.3472305  0.47310303  1.000000000  0.007253221  0.02765154  0.05239481  0.06364494 -0.031158081  0.010548705
consimofi 0.2503885 -0.13052875  0.007253221  1.000000000  0.24915214  0.24437300  0.22938747  0.257650305  0.112186108
MATE5   0.2942260 -0.27845776  0.027651544  0.249152137  1.000000000  0.27999279  0.26344919  0.177555013  0.219945873
reali   0.2316263 -0.13908770  0.052394809  0.244373002  0.27999279  1.000000000  0.27755296 -0.018239207  0.251998328
STOCK   0.2008581 -0.09471906  0.063644936  0.229387474  0.26344919  0.27755296  1.000000000 -0.012486571  0.196143240
ANIR5   0.1140501 -0.13332481 -0.031158081  0.257650305  0.17755501 -0.01823921 -0.01248657  1.000000000 -0.003464608
DISPO   0.1700001 -0.10975976  0.010548705  0.112186108  0.21994587  0.25199833  0.19614324 -0.003464608  1.000000000

```

> #ACP

> explo2009acp<-princomp(explo2009)

> summary(explo2009acp)

Importance of components:

|                        | Comp.1       | Comp.2       | Comp.3       | Comp.4       | Comp.5       | Comp.6       | Comp.7       |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Standard deviation     | 1.508596e+05 | 9.591968e+04 | 8.992799e+04 | 7.740784e+04 | 6.211257e+04 | 5.176623e+04 | 4.682463e+04 |
| Proportion of Variance | 4.155422e-01 | 1.679905e-01 | 1.476587e-01 | 1.094055e-01 | 7.044147e-02 | 4.892856e-02 | 4.003298e-02 |
| Cumulative Proportion  | 4.155422e-01 | 5.835327e-01 | 7.311914e-01 | 8.405970e-01 | 9.110384e-01 | 9.599670e-01 | 1.000000e+00 |

|                        | Comp.8       | Comp.9       |
|------------------------|--------------|--------------|
| Standard deviation     | 2.658621e+01 | 1.039662e+00 |
| Proportion of Variance | 1.290572e-08 | 1.973573e-11 |
| Cumulative Proportion  | 1.000000e+00 | 1.000000e+00 |

> #Représentation graphique

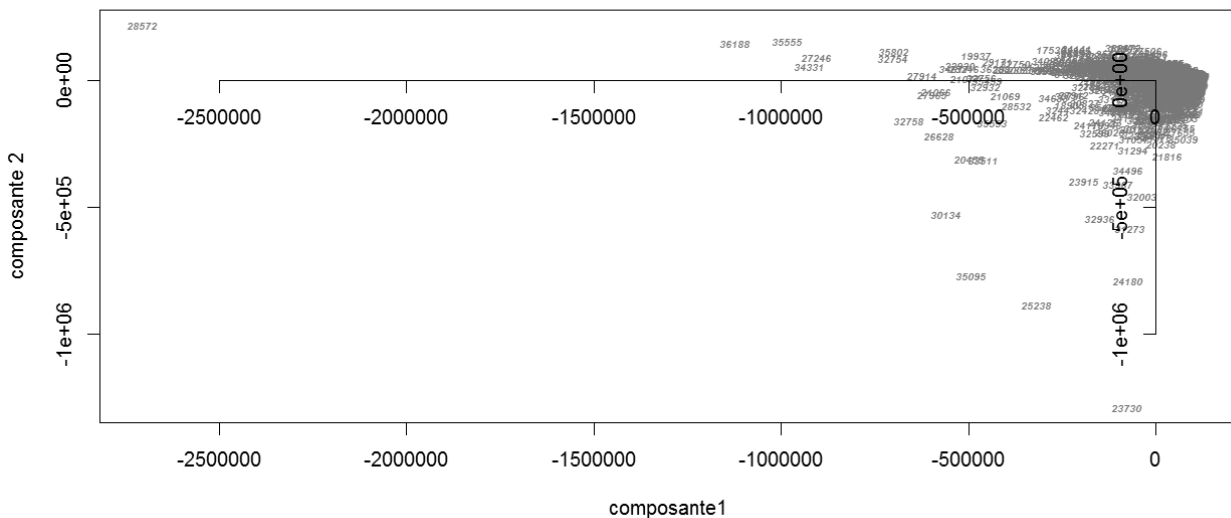
> plot(explo2009acp\$scores[,1],explo2009acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(explo2009)[[1]]

> text(explo2009acp\$scores[,1],explo2009acp\$scores[,2],id,cex=0.5,font=4,col=3)

> axis(1,pos=0)

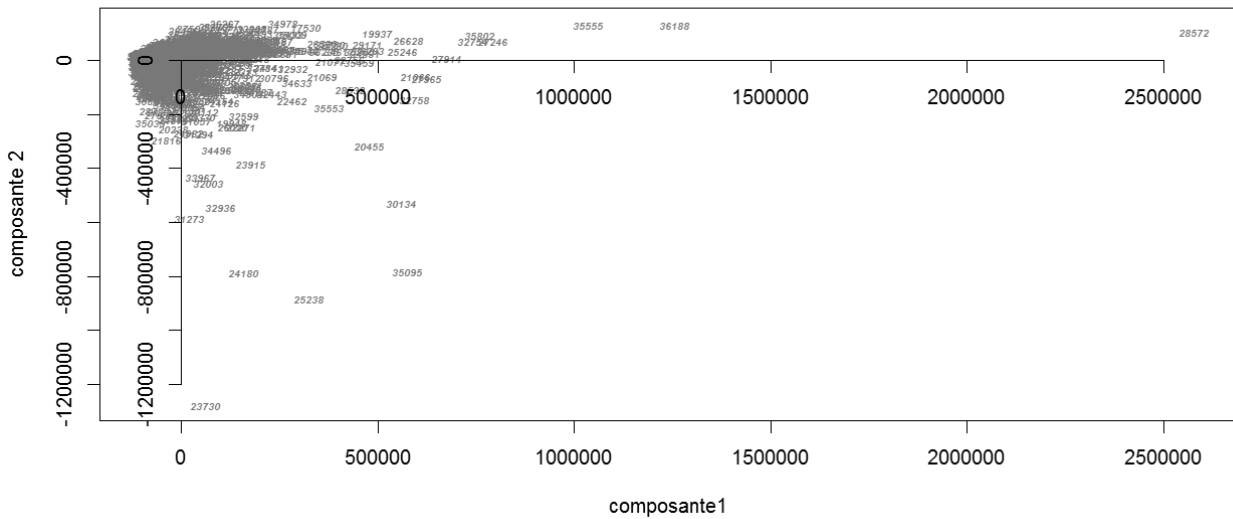
> axis(2,pos=0)



```

> explo2001<-read.table('C:/Users/Bureau LGH/Desktop/stables2001.csv', header=T, dec=',', sep=';')
> rownames(explo2001)<-explo2001[,1]
> explo2001<-explo2001[,4:12]
> #Etude sommaire
> summary(explo2001)
  fjuri    fvd  FONC5  consimofi  MATE5    reali  STOCK
Min. :0.000 Min. : 0.00 Min. :  0 Min. :  0 Min. :  0 Min. :  0 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:  0 1st Qu.: 5785 1st Qu.: 21137 1st Qu.: 8768 1st Qu.: 21961
Median :0.000 Median : 3.85 Median : 11486 Median : 26053 Median : 46088 Median : 19365 Median : 48651
Mean :1.138 Mean : 21.24 Mean : 39353 Mean : 50107 Mean : 59890 Mean : 35517 Mean : 78949
3rd Qu.:3.000 3rd Qu.: 33.33 3rd Qu.: 50356 3rd Qu.: 67370 3rd Qu.: 82774 3rd Qu.: 42940 3rd Qu.: 92311
Max. :3.000 Max. :100.00 Max. :1364415 Max. :627645 Max. :333706 Max. :441593 Max. :2713398
  ANIR5    DISPO
Min. :  0 Min. :  0
1st Qu.:  0 1st Qu.: 1307
Median :  0 Median : 8048
Mean : 30163 Mean : 18709
3rd Qu.: 47140 3rd Qu.: 21456
Max. :355030 Max. :451891
> cor(explo2001)
  fjuri    fvd  FONC5  consimofi  MATE5    reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.48924542 -0.30277771 0.24049737 0.32058643 0.26258844 0.16029896 0.10625335 0.17699549
fvd   -0.4892454 1.00000000 0.47867876 -0.09846820 -0.27501096 -0.11402107 -0.05985637 -0.13892461 -0.09650800
FONC5 -0.3027777 0.47867876 1.00000000 -0.02667241 0.01441618 0.03365954 0.08252761 -0.06416988 -0.04085532
consimofi 0.2404974 -0.09846820 -0.02667241 1.00000000 0.29508539 0.26405000 0.25370910 0.30122430 0.10893146
MATE5   0.3205864 -0.27501096 0.01441618 0.29508539 1.00000000 0.33034323 0.26916630 0.17415657 0.17567693
reali   0.2625884 -0.11402107 0.03365954 0.26405000 0.33034323 1.00000000 0.32473338 -0.03633262 0.18300981
STOCK   0.1602990 -0.05985637 0.08252761 0.25370910 0.26916630 0.32473338 1.00000000 -0.02244956 0.20039882
ANIR5   0.1062533 -0.13892461 -0.06416988 0.30122430 0.17415657 -0.03633262 -0.02244956 1.00000000 -0.01592834
DISPO   0.1769955 -0.09650800 -0.04085532 0.10893146 0.17567693 0.18300981 0.20039882 -0.01592834 1.00000000
> #ACP
> explo2001acp<-princomp(explo2001)
> summary(explo2001acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7
Standard deviation  1.272073e+05 7.995739e+04 6.939547e+04 4.968043e+04 4.397988e+04 3.687010e+04 3.388939e+04
Proportion of Variance 4.717574e-01 1.863854e-01 1.403967e-01 7.195574e-02 5.639009e-02 3.963175e-02 3.348283e-02
Cumulative Proportion 4.717574e-01 6.581428e-01 7.985396e-01 8.704953e-01 9.268854e-01 9.665171e-01 1.000000e+00
      Comp.8  Comp.9
Standard deviation  2.528275e+01 1.077030e+00
Proportion of Variance 1.863560e-08 3.381819e-11
Cumulative Proportion 1.000000e+00 1.000000e+00
> #Représentation graphique
> plot(explo2001acp$scores[,1],explo2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2001)[[1]]
> text(explo2001acp$scores[,1],explo2001acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2002<-read.table('C:/Users/Bureau LGH/Desktop/stables2002.csv', header=T, dec=',', sep=';')
> rownames(explo2002)<-explo2002[,1]
> explo2002<-explo2002[,4:12]
> #Etude sommaire
> summary(explo2002)
  fjuri      fvd  FONC5  consimofi  MATE5  reali  STOCK
Min. :0.000 Min. : 0.00 Min. :  0 Min. :  0 Min. :  0 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:  0 1st Qu.: 5811 1st Qu.: 21030 1st Qu.: 8568 1st Qu.: 21756
Median :0.000 Median : 3.85 Median : 12196 Median : 26388 Median : 44915 Median : 20239 Median : 47595
Mean :.1.138 Mean : 21.89 Mean : 40966 Mean : 51398 Mean : 59187 Mean : 34892 Mean : 79854
3rd Qu.:3.000 3rd Qu.: 33.33 3rd Qu.: 51873 3rd Qu.: 69811 3rd Qu.: 81281 3rd Qu.: 43181 3rd Qu.: 94043
Max. :3.000 Max. :100.00 Max. :1363409 Max. :581836 Max. :543674 Max. :534312 Max. :2428544
  ANIR5  DISPO
Min. : 0 Min. : 0
1st Qu.: 0 1st Qu.: 1076
Median : 0 Median : 7980
Mean : 30739 Mean : 18864
3rd Qu.: 49730 3rd Qu.: 20797
Max. :362255 Max. :449356
> cor(explo2002)
      fjuri      fvd  FONC5  consimofi  MATE5  reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.49793369 -0.306392402 0.24633393 0.328103614 0.25827132 0.16969376 0.10013570 0.16368071
fvd   -0.4979337  1.00000000 0.471141684 -0.10322309 -0.274243986 -0.11940423 -0.05514874 -0.14074919 -0.10054004
FONC5 -0.3063924 0.47114168  1.000000000 -0.01837831 0.001020474 0.04683674 0.10430936 -0.06654241 -0.03606790
consimofi 0.2463339 -0.10322309 -0.018378313  1.00000000 0.335326862 0.27754214 0.24868454 0.28088139 0.09360066
MATE5  0.3281036 -0.27424399 0.001020474 0.33532686  1.00000000 0.32648654 0.26609970 0.19609264 0.13306489
reali  0.2582713 -0.11940423 0.046836736 0.27754214 0.326486538  1.00000000 0.33268340 -0.02485291 0.18993812
STOCK  0.1696938 -0.05514874 0.104309361 0.24868454 0.266099702 0.33268340  1.00000000 -0.03726979 0.20318976
ANIR5  0.1001357 -0.14074919 -0.066542410 0.28088139 0.196092641 -0.02485291 -0.03726979  1.00000000 -0.01633643
DISPO  0.1636807 -0.10054004 -0.036067905 0.09360066 0.133064890 0.18993812 0.20318976 -0.01633643  1.00000000
> #ACP
> explo2002acp<-princomp(explo2002)
> summary(explo2002acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7
Standard deviation  1.286542e+05 8.251753e+04 7.150526e+04 4.860315e+04 4.404441e+04 3.710347e+04 3.423418e+04
Proportion of Variance 4.685622e-01 1.927578e-01 1.447423e-01 6.687260e-02 5.491628e-02 3.897162e-02 3.317718e-02
Cumulative Proportion 4.685622e-01 6.613200e-01 8.060623e-01 8.729349e-01 9.278512e-01 9.668228e-01 1.000000e+00
      Comp.8  Comp.9
Standard deviation  2.586731e+01 1.070235e+00
Proportion of Variance 1.894183e-08 3.242485e-11

```



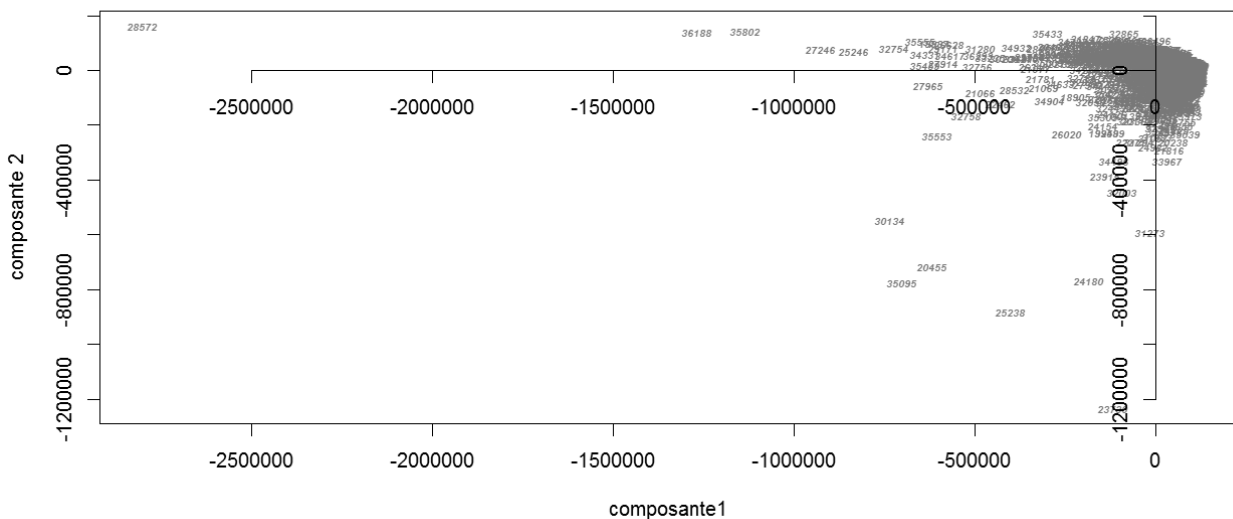




```

STOCK 0.1588574 -0.05146703 0.09801747 0.20389500 0.23244005 0.344598852 1.00000000 -0.042323095 0.19506462
ANIR5 0.1044087 -0.14252031 -0.06319109 0.28642047 0.24801581 -0.008639925 -0.04232310 1.000000000 0.01181499
DISPO 0.1848012 -0.11265811 -0.01648977 0.10356795 0.21914535 0.222923699 0.19506462 0.011814993 1.00000000
> #ACP
> explo2004acp<-princomp(explo2004)
> summary(explo2004acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7
Standard deviation  1.385046e+05 8.196695e+04 7.640647e+04 5.537073e+04 4.532357e+04 3.711396e+04 3.240212e+04
Proportion of Variance 4.882851e-01 1.710105e-01 1.485954e-01 7.803793e-02 5.228697e-02 3.506064e-02 2.672342e-02
Cumulative Proportion 4.882851e-01 6.592956e-01 8.078910e-01 8.859290e-01 9.382159e-01 9.732766e-01 1.000000e+00
      Comp.8  Comp.9
Standard deviation  2.650224e+01 1.053334e+00
Proportion of Variance 1.787765e-08 2.824084e-11
Cumulative Proportion 1.000000e+00 1.000000e+00
> #Représentation graphique
> plot(explo2004acp$scores[,1],explo2004acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2004)[[1]]
> text(explo2004acp$scores[,1],explo2004acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

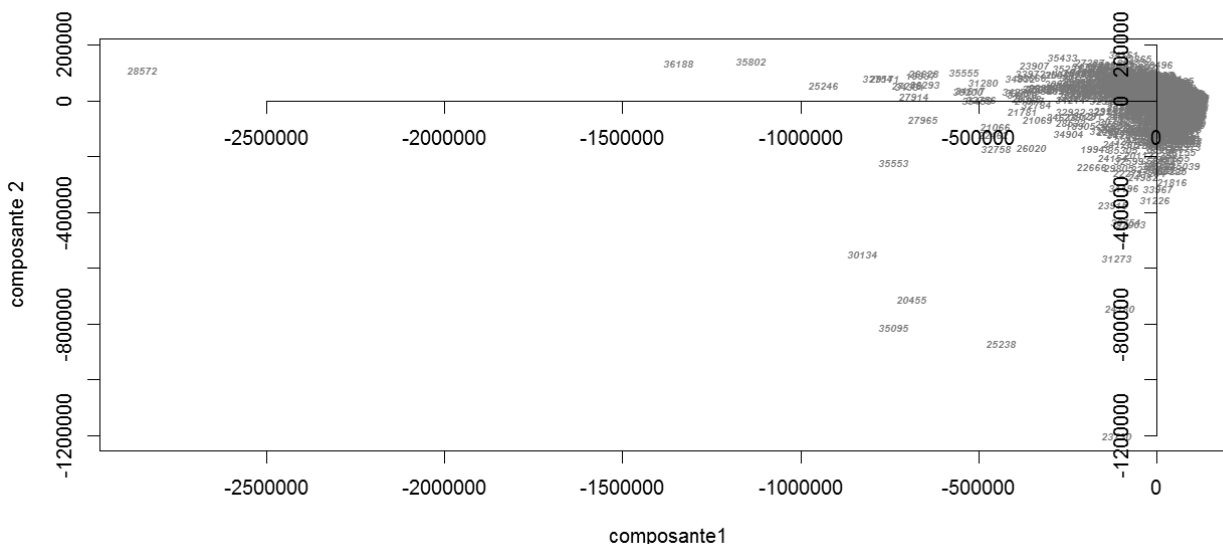
> explo2005<-read.table('C:/Users/Bureau LGH/Desktop/stables2005.csv', header=T, dec=',', sep=';')
> rownames(explo2005)<-explo2005[,1]
> explo2005<-explo2005[,4:12]
> #Etude sommaire
> summary(explo2005)
      fjuri   fvd   FONC5   consimofi   MATE5   reali   STOCK
Min. :0.000 Min. : 0.00 Min. :  0 Min. :  0 Min. :  0 Min. :  0 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:  0 1st Qu.: 5928 1st Qu.: 19103 1st Qu.: 8592 1st Qu.: 23047
Median :0.000 Median : 4.55 Median : 13646 Median : 25412 Median : 45281 Median : 20882 Median : 48529
Mean :.1.138 Mean : 23.00 Mean : 43866 Mean : 52812 Mean : 63229 Mean : 37239 Mean : 84218
3rd Qu.:3.000 3rd Qu.: 37.38 3rd Qu.: 58545 3rd Qu.: 74334 3rd Qu.: 84349 3rd Qu.: 47202 3rd Qu.: 96186
Max. :3.000 Max. :100.00 Max. :1360391 Max. :917124 Max. :630360 Max. :653128 Max. :3016884
      ANIR5   DISPO
Min. :  0 Min. :  0
1st Qu.:  0 1st Qu.: 1152
Median :  0 Median : 8191
Mean : 32407 Mean : 19737
3rd Qu.: 51390 3rd Qu.: 22376
Max. :397990 Max. :585354
> cor(explo2005)

```

```

      fjuri  fvd  FONC5  consimofi  MATE5  reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.51678786 -0.330138960 0.24945774 0.309453350 0.279730039 0.15765960 0.1094395672 0.1685879564
fvd   -0.5167879 1.00000000 0.472009397 -0.11543560 -0.261332379 -0.151934819 -0.05085387 -0.1420673163
-0.1046503371
FONC5  -0.3301390 0.47200940 1.000000000 0.01379056 -0.007861941 0.052343650 0.10052968 -0.0508641280
-0.0232668784
consimofi 0.2494577 -0.11543560 0.013790559 1.00000000 0.254036428 0.287320879 0.20636846 0.2757194450
0.1267183397
MATE5   0.3094533 -0.26133238 -0.007861941 0.25403643 1.000000000 0.342864065 0.21317699 0.2622365535
0.1782829884
reali   0.2797300 -0.15193482 0.052343650 0.28732088 0.342864065 1.000000000 0.32279638 -0.0068740733 0.2429255615
STOCK   0.1576596 -0.05085387 0.100529684 0.20636846 0.213176987 0.322796376 1.00000000 -0.0390734658
0.1955770660
ANIR5   0.1094396 -0.14206732 -0.050864128 0.27571945 0.262236553 -0.006874073 -0.03907347 1.0000000000
-0.0005901613
DISPO   0.1685880 -0.10465034 -0.023266878 0.12671834 0.178282988 0.242925562 0.19557707 -0.0005901613
1.0000000000
> #ACP
> explo2005acp<-princomp(explo2005)
> summary(explo2005acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7
Standard deviation  1.429348e+05 8.438691e+04 7.880813e+04 5.931520e+04 4.700572e+04 3.826310e+04 3.457626e+04
Proportion of Variance 4.847102e-01 1.689492e-01 1.473493e-01 8.347146e-02 5.242125e-02 3.473492e-02 2.836365e-02
Cumulative Proportion 4.847102e-01 6.536594e-01 8.010087e-01 8.844802e-01 9.369014e-01 9.716363e-01 1.000000e+00
      Comp.8  Comp.9
Standard deviation  2.66393e+01 1.052654e+00
Proportion of Variance 1.68365e-08 2.628918e-11
Cumulative Proportion 1.000000e+00 1.000000e+00
> #Représentation graphique
> plot(explo2005acp$scor[1,],explo2005acp$scor[2,],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2005)[[1]]
> text(explo2005acp$scor[1,],explo2005acp$scor[2,],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2006<-read.table('C:/Users/Bureau LGH/Desktop/stables2006.csv', header=T, dec=',', sep=';')
> rownames(explo2006)<-explo2006[,1]
> explo2006<-explo2006[,4:12]
> #Etude sommaire
> summary(explo2006)
      fjuri  fvd  FONC5  consimofi  MATE5  reali  STOCK

```

Min. :0.000 Min. : 0.00 Min. : 0 Min. : 0 Min. : 0 Min. : 0 Min. : 0  
 1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 0 1st Qu.: 5541 1st Qu.: 17710 1st Qu.: 8466 1st Qu.: 22999  
 Median :0.000 Median : 4.55 Median : 13720 Median : 23877 Median : 43786 Median : 19035 Median : 49708  
 Mean :.1.138 Mean : 23.26 Mean : 44721 Mean : 53469 Mean : 62153 Mean : 38600 Mean : 87682  
 3rd Qu.:3.000 3rd Qu.: 38.09 3rd Qu.: 59891 3rd Qu.: 69526 3rd Qu.: 85166 3rd Qu.: 46027 3rd Qu.: 100616  
 Max. :3.000 Max. :100.00 Max. :1359385 Max. :1440491 Max. :593782 Max. :716276 Max. :2846471

ANIR5 DISPO  
 Min. : 0 Min. : 0  
 1st Qu.: 0 1st Qu.: 1722  
 Median : 0 Median : 10055  
 Mean : 33401 Mean : 22169  
 3rd Qu.: 52614 3rd Qu.: 26364  
 Max. :411375 Max. :698386

> cor(explo2006)

```

      fjuri   fvd  FONC5 consimofi  MATE5   reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.52146455 -0.3336386543  0.23590572  0.30912401  0.26835330  0.16664965  0.110574237  0.1668768864
fvd   -0.5214646  1.00000000  0.4702467923 -0.10685639 -0.25671408 -0.14998935 -0.06301391 -0.141419885 -0.1113352989
FONC5 -0.3336387  0.47024679  1.0000000000  0.01116668  0.02933041  0.05864794  0.09707282 -0.048611936 -0.0004339112
consimofi 0.2359057 -0.10685639  0.0111666765  1.00000000  0.26875265  0.28263016  0.19028067  0.270116616  0.0964041707
MATE5   0.3091240 -0.25671408  0.0293304079  0.26875265  1.00000000  0.33247577  0.22827527  0.257117639  0.1795357157
reali   0.2683533 -0.14998935  0.0586479371  0.28263016  0.33247577  1.00000000  0.31982044 -0.049625414  0.2857864921
STOCK   0.1666496 -0.06301391  0.0970728160  0.19028067  0.22827527  0.31982044  1.00000000 -0.034392441  0.2143237824
ANIR5   0.1105742 -0.14141988 -0.0486119356  0.27011662  0.25711764 -0.04962541 -0.03439244  1.000000000 -0.0047859164
DISPO   0.1668769 -0.11133530 -0.0004339112  0.09640417  0.17953572  0.28578649  0.21432378 -0.004785916  1.0000000000

```

> #ACP

> explo2006acp<-princomp(explo2006)

> summary(explo2006acp)

Importance of components:

|                        | Comp.1       | Comp.2       | Comp.3       | Comp.4       | Comp.5       | Comp.6       | Comp.7       |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Standard deviation     | 1.494194e+05 | 8.679199e+04 | 8.466554e+04 | 6.100401e+04 | 5.194907e+04 | 4.111512e+04 | 3.754875e+04 |
| Proportion of Variance | 4.796393e-01 | 1.618303e-01 | 1.539976e-01 | 7.994980e-02 | 5.797706e-02 | 3.631647e-02 | 3.028946e-02 |
| Cumulative Proportion  | 4.796393e-01 | 6.414696e-01 | 7.954672e-01 | 8.754170e-01 | 9.333941e-01 | 9.697105e-01 | 1.000000e+00 |

|                        | Comp.8       | Comp.9       |
|------------------------|--------------|--------------|
| Standard deviation     | 2.664404e+01 | 1.051059e+00 |
| Proportion of Variance | 1.525109e-08 | 2.373313e-11 |
| Cumulative Proportion  | 1.000000e+00 | 1.000000e+00 |

> #Représentation graphique

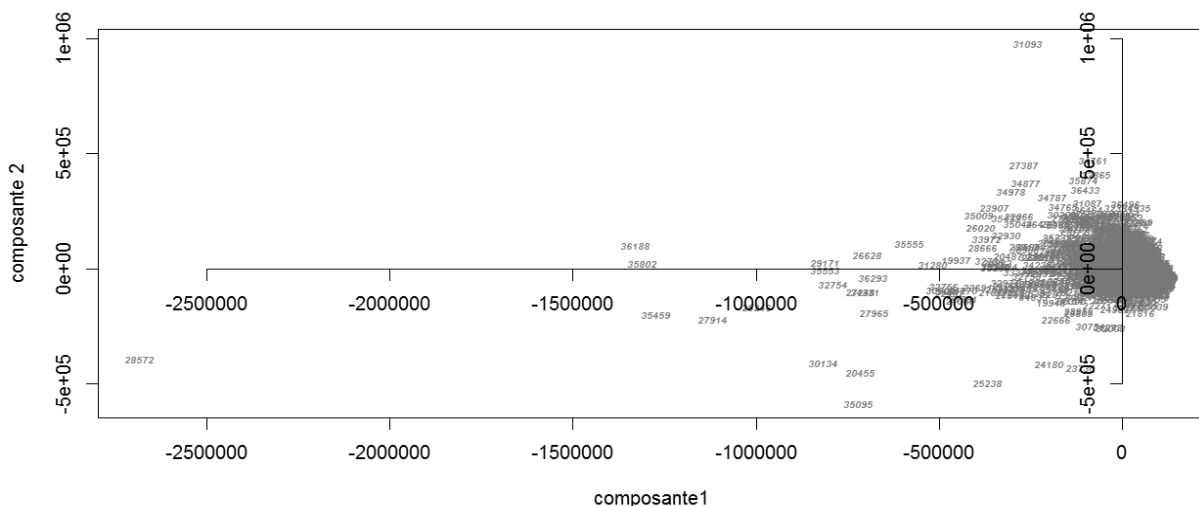
> plot(explo2006acp\$scores[,1],explo2006acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(explo2006)[[1]]

> text(explo2006acp\$scores[,1],explo2006acp\$scores[,2],id,cex=0.5,font=4,col=3)

> axis(1,pos=0)

> axis(2,pos=0)



```

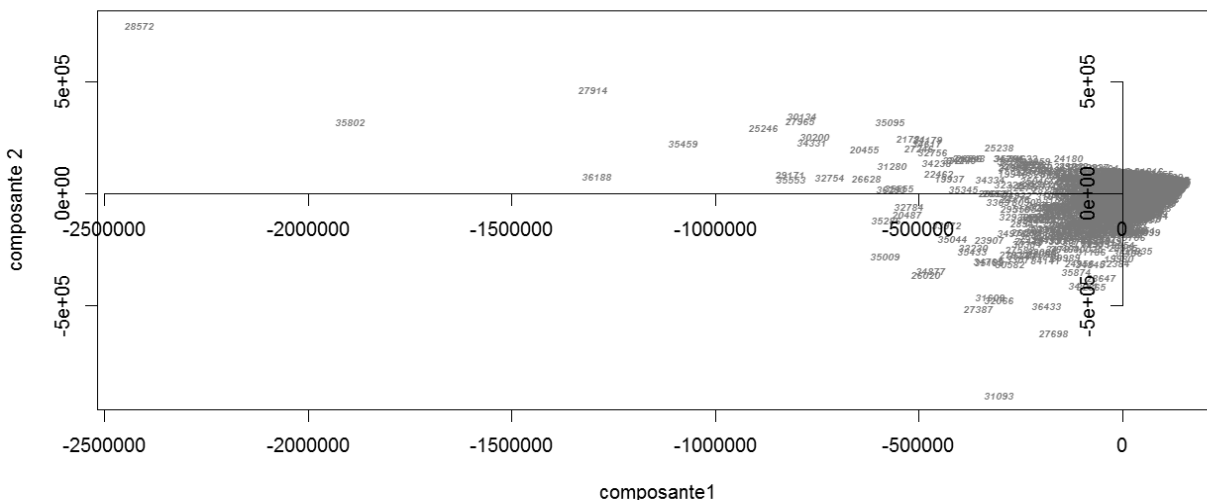
> explo2007<-read.table('C:/Users/Bureau LGH/Desktop/stables2007.csv', header=T, dec=',', sep=';')
> rownames(explo2007)<-explo2007[,1]
> explo2007<-explo2007[,4:12]
> #Etude sommaire
> summary(explo2007)
  fjuri    fvd  FONC5  consimofi  MATE5  reali  STOCK
Min. :0.000 Min. : 0.00 Min. :  0 Min. :  0 Min. :  0 Min. :  0 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:  0 1st Qu.: 5570 1st Qu.: 17214 1st Qu.: 9326 1st Qu.: 26274
Median :0.000 Median : 4.55 Median : 13873 Median : 24089 Median : 45322 Median : 23415 Median : 55915
Mean :1.138 Mean : 23.48 Mean : 45441 Mean : 54219 Mean : 65820 Mean : 42878 Mean : 97175
3rd Qu.:3.000 3rd Qu.: 38.24 3rd Qu.: 61835 3rd Qu.: 68018 3rd Qu.: 88841 3rd Qu.: 53833 3rd Qu.: 114741
Max. :3.000 Max. :100.00 Max. :1358378 Max. :1286501 Max. :608623 Max. :755069 Max. :2685395
  ANIR5  DISPO
Min. :  0 Min. :  0
1st Qu.:  0 1st Qu.: 1768
Median :  0 Median : 9575
Mean : 34750 Mean : 24838
3rd Qu.: 54051 3rd Qu.: 29549
Max. :414840 Max. :559443
> cor(explo2007)
  fjuri    fvd  FONC5  consimofi  MATE5  reali  STOCK  ANIR5  DISPO
fjuri  1.0000000 -0.52627526 -0.338817578 0.245372899 0.313632034 0.27396372 0.18807051 0.11470322 0.18377041
fvd   -0.5262753 1.00000000 0.475567366 -0.121581829 -0.276812544 -0.16284587 -0.08772151 -0.14462909 -0.12555106
FONC5 -0.3388176 0.47556737 1.000000000 0.005224059 0.009287365 0.04310015 0.11204829 -0.04917394 0.03044483
consimofi 0.2453729 -0.12158183 0.005224059 1.000000000 0.289180262 0.27982127 0.21112818 0.31393900 0.11512435
MATE5   0.3136320 -0.27681254 0.009287365 0.289180262 1.000000000 0.37697771 0.25915851 0.22530585 0.22028157
reali   0.2739637 -0.16284587 0.043100154 0.279821274 0.376977712 1.000000000 0.37998727 -0.02605956 0.30463776
STOCK   0.1880705 -0.08772151 0.112048285 0.211128178 0.259158506 0.37998727 1.000000000 -0.02338575 0.22084172
ANIR5   0.1147032 -0.14462909 -0.049173943 0.313938995 0.225305846 -0.02605956 -0.02338575 1.000000000 -0.01948074
DISPO   0.1837704 -0.12555106 0.0304444834 0.115124350 0.220281566 0.30463776 0.22084172 -0.01948074 1.00000000
> #ACP
> explo2007acp<-princomp(explo2007)
> summary(explo2007acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7
Standard deviation  1.542504e+05 8.881008e+04 8.406943e+04 6.415636e+04 5.292748e+04 4.295768e+04 3.983558e+04
Proportion of Variance 4.846092e-01 1.606437e-01 1.439512e-01 8.383368e-02 5.705601e-02 3.758554e-02 3.232074e-02
Cumulative Proportion 4.846092e-01 6.452528e-01 7.892040e-01 8.730377e-01 9.300937e-01 9.676792e-01 1.000000e+00
      Comp.8  Comp.9
Standard deviation  2.639559e+01 1.048671e+00
Proportion of Variance 1.419064e-08 2.239841e-11
Cumulative Proportion 1.000000e+00 1.000000e+00
> #Représentation graphique
> plot(explo2007acp$scores[,1],explo2007acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2007)[[1]]
> text(explo2007acp$scores[,1],explo2007acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



Cumulative Proportion 1.000000e+00 1.000000e+00

```
> #Représentation graphique
> plot(explo2008acp$scores[,1],explo2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2008)[[1]]
> text(explo2008acp$scores[,1],explo2008acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)
```



```
> explo2009<-read.table('C:/Users/Bureau LGH/Desktop/stables2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(explo2009)<-explo2009[,1]
```

```
> explo2009<-explo2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(explo2009)
```

|          | fjuri  | fvd            | FONC5          | consimofi      | MATE5          | reali          | STOCK           |
|----------|--------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Min.     | :0.000 | Min. : 0.00    | Min. : 0       | Min. : 0       | Min. : 0       | Min. : 0       | Min. : 0        |
| 1st Qu.: | 0.000  | 1st Qu.: 0.00  | 1st Qu.: 0     | 1st Qu.: 4957  | 1st Qu.: 15312 | 1st Qu.: 9362  | 1st Qu.: 25195  |
| Median:  | 0.000  | Median : 5.26  | Median : 14840 | Median : 22626 | Median : 46186 | Median : 21808 | Median : 55895  |
| Mean :   | 1.138  | Mean : 24.09   | Mean : 47980   | Mean : 57426   | Mean : 73183   | Mean : 41885   | Mean : 94646    |
| 3rd Qu.: | 3.000  | 3rd Qu.: 39.47 | 3rd Qu.: 64676 | 3rd Qu.: 69878 | 3rd Qu.: 98131 | 3rd Qu.: 49487 | 3rd Qu.: 109400 |
| Max. :   | 3.000  | Max. :100.00   | Max. :1356796  | Max. :1121513  | Max. :1021997  | Max. :1323448  | Max. :2281014   |

|          | ANIR5  | DISPO  |
|----------|--------|--------|
| Min. :   | 0      | 0      |
| 1st Qu.: | 0      | 1266   |
| Median : | 0      | 8527   |
| Mean :   | 36096  | 23639  |
| 3rd Qu.: | 55519  | 25393  |
| Max. :   | 543048 | 877127 |

```
> cor(explo2009)
```

|           | fjuri      | fvd         | FONC5        | consimofi    | MATE5       | reali       | STOCK       | ANIR5        | DISPO        |
|-----------|------------|-------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|
| fjuri     | 1.0000000  | -0.54189472 | -0.347230483 | 0.250388529  | 0.29422604  | 0.23162628  | 0.20085807  | 0.114050095  | 0.170000133  |
| fvd       | -0.5418947 | 1.00000000  | 0.473103032  | -0.130528749 | -0.27845776 | -0.13908770 | -0.09471906 | -0.133324815 | -0.109759764 |
| FONC5     | -0.3472305 | 0.47310303  | 1.000000000  | 0.007253221  | 0.02765154  | 0.05239481  | 0.06364494  | -0.031158081 | 0.010548705  |
| consimofi | 0.2503885  | -0.13052875 | 0.007253221  | 1.000000000  | 0.24915214  | 0.24437300  | 0.22938747  | 0.257650305  | 0.112186108  |
| MATE5     | 0.2942260  | -0.27845776 | 0.027651544  | 0.249152137  | 1.000000000 | 0.27999279  | 0.26344919  | 0.177555013  | 0.219945873  |
| reali     | 0.2316263  | -0.13908770 | 0.052394809  | 0.244373002  | 0.27999279  | 1.000000000 | 0.27755296  | -0.018239207 | 0.251998328  |
| STOCK     | 0.2008581  | -0.09471906 | 0.063644936  | 0.229387474  | 0.26344919  | 0.27755296  | 1.000000000 | -0.012486571 | 0.196143240  |
| ANIR5     | 0.1140501  | -0.13332481 | -0.031158081 | 0.257650305  | 0.17755501  | -0.01823921 | -0.01248657 | 1.000000000  | -0.003464608 |
| DISPO     | 0.1700001  | -0.10975976 | 0.010548705  | 0.112186108  | 0.21994587  | 0.25199833  | 0.19614324  | -0.003464608 | 1.000000000  |

```
> #ACP
```

```
> explo2009acp<-princomp(explo2009)
```

```
> summary(explo2009acp)
```

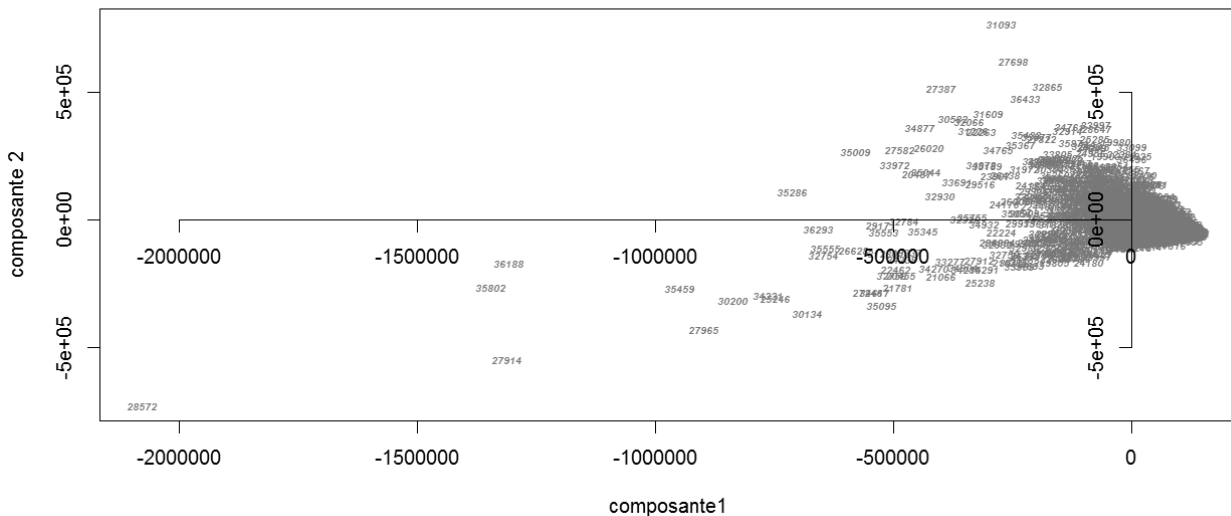
Importance of components:

| Comp.1 | Comp.2 | Comp.3 | Comp.4 | Comp.5 | Comp.6 | Comp.7 |
|--------|--------|--------|--------|--------|--------|--------|
|--------|--------|--------|--------|--------|--------|--------|

Standard deviation 1.508596e+05 9.591968e+04 8.992799e+04 7.740784e+04 6.211257e+04 5.176623e+04 4.682463e+04  
 Proportion of Variance 4.155422e-01 1.679905e-01 1.476587e-01 1.094055e-01 7.044147e-02 4.892856e-02 4.003298e-02  
 Cumulative Proportion 4.155422e-01 5.835327e-01 7.311914e-01 8.405970e-01 9.110384e-01 9.599670e-01 1.000000e+00  
 Comp.8 Comp.9

Standard deviation 2.658621e+01 1.039662e+00  
 Proportion of Variance 1.290572e-08 1.973573e-11  
 Cumulative Proportion 1.000000e+00 1.000000e+00

```
> #Représentation graphique
> plot(explo2009acp$scores[,1],explo2009acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2009)[[1]]
> text(explo2009acp$scores[,1],explo2009acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)
```



## ANNEXE 11

Cohérence et positionnement des exploitations de l'OTEX 1000, artefacts, résultats quasi exhaustifs  
 Exploitations stables, en réorganisation et en rupture.

```
> explo2000<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2000.csv', header=T, dec=',', sep=',')
> rownames(explo2000)<-explo2000[,1]
> explo2000<-explo2000[,4:12]
> #Etude sommaire
> summary(explo2000)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :0.750 Min. : 7.5 Min. : 4878 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.000 1st Qu.: 1.000 1st Qu.: 75.0 1st Qu.: 33845 1st Qu.: 18.23 1st Qu.: 56029
Median :0.000 Median : 1.355 Median : 1.360 Median :125.0 Median : 52826 Median : 81.83 Median : 95227
Mean :1.273 Mean : 13.343 Mean : 1.687 Mean :141.0 Mean : 60029 Mean :176.16 Mean :112712
3rd Qu.:3.000 3rd Qu.: 19.230 3rd Qu.: 2.000 3rd Qu.:185.0 3rd Qu.: 79849 3rd Qu.: 241.68 3rd Qu.:147583
Max. :3.000 Max. :100.000 Max. :12.480 Max. :400.0 Max. :240730 Max. :2267.10 Max. :669022
  ugpto    DISPO
Min. : 0.000 Min. : 0.0
1st Qu.: 0.000 1st Qu.: 883.5
Median : 0.000 Median : 7814.0
Mean : 9.203 Mean : 16767.1
3rd Qu.: 2.500 3rd Qu.: 21823.5
Max. :127.500 Max. :363154.0
> cor(explo2000)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.49339731 0.2381044 0.3328094 0.2925795 0.09727269 0.2804436 0.09297775 0.07702673
```





```

1st Qu.:0.000 1st Qu.: 0.000 1st Qu.:1.000 1st Qu.: 82.5 1st Qu.: 35918 1st Qu.: 12.53 1st Qu.: 66357
Median :0.000 Median : 1.475 Median :1.270 Median :125.0 Median :54113 Median : 75.70 Median :105310
Mean :1.273 Mean :13.660 Mean :1.647 Mean :141.7 Mean :63053 Mean :171.10 Mean :128157
3rd Qu.:3.000 3rd Qu.:19.867 3rd Qu.:2.000 3rd Qu.:185.0 3rd Qu.:84056 3rd Qu.:233.12 3rd Qu.:169608
Max. :3.000 Max. :100.000 Max. :11.590 Max. :400.0 Max. :259149 Max. :1800.85 Max. :616752

```

```

ugbto DISPO
Min. : 0.000 Min. : 0
1st Qu.: 0.000 1st Qu.: 999
Median : 0.000 Median : 8743
Mean : 8.698 Mean :17968
3rd Qu.: 0.000 3rd Qu.:23005
Max. :127.500 Max. :312205

```

```

> cor(explo2001)
      fjuri   fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.0000000 -0.50932559 0.2491043 0.3366194 0.2859788 0.1246631 0.3071014 0.10132934 0.10511108
fvd -0.5093256 1.00000000 -0.1789518 -0.2709926 -0.2844952 -0.1178410 -0.2685505 -0.13735894 -0.09479658
UTATO 0.2491043 -0.17895176 1.0000000 0.3049821 0.5534661 0.3665596 0.4283613 0.11315376 0.18810130
sauti 0.3366194 -0.27099261 0.3049821 1.0000000 0.7593168 0.1905200 0.7112386 0.18184191 0.20700938
chara 0.2859788 -0.28449520 0.5534661 0.7593168 1.0000000 0.4461254 0.7072826 0.25702879 0.22992028
cons 0.1246631 -0.11784103 0.3665596 0.1905200 0.4461254 1.0000000 0.3127623 0.19657567 0.13463062
pmda 0.3071014 -0.26855052 0.4283613 0.7112386 0.7072826 0.3127623 1.0000000 0.14507369 0.22815472
ugbto 0.1013293 -0.13735894 0.1131538 0.1818419 0.2570288 0.1965757 0.1450737 1.0000000 0.06918233
DISPO 0.1051111 -0.09479658 0.1881013 0.2070094 0.2299203 0.1346306 0.2281547 0.06918233 1.00000000

```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```

> explo2001[,3]<-explo2001[,3]*16
> explo2001[,5]<-explo2001[,5]/1000
> explo2001[,6]<-explo2001[,6]/10
> explo2001[,7]<-explo2001[,7]/1000
> explo2001[,9]<-explo2001[,9]/1000
> explo2001acp<-princomp(explo2001)
> summary(explo2001acp)

```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 114.7521764 45.0092320 29.4677878 27.04738000 21.37711701 20.23634422 17.71120659 12.303673875
Proportion of Variance 0.7264471 0.1117597 0.0479046 0.04035827 0.02521044 0.02259156 0.01730527 0.008351255
Cumulative Proportion 0.7264471 0.8382068 0.8861114 0.92646968 0.95168012 0.97427168 0.99157696 0.999928210

```

```
      Comp.9
```

```

Standard deviation 1.140748e+00
Proportion of Variance 7.178958e-05
Cumulative Proportion 1.000000e+00

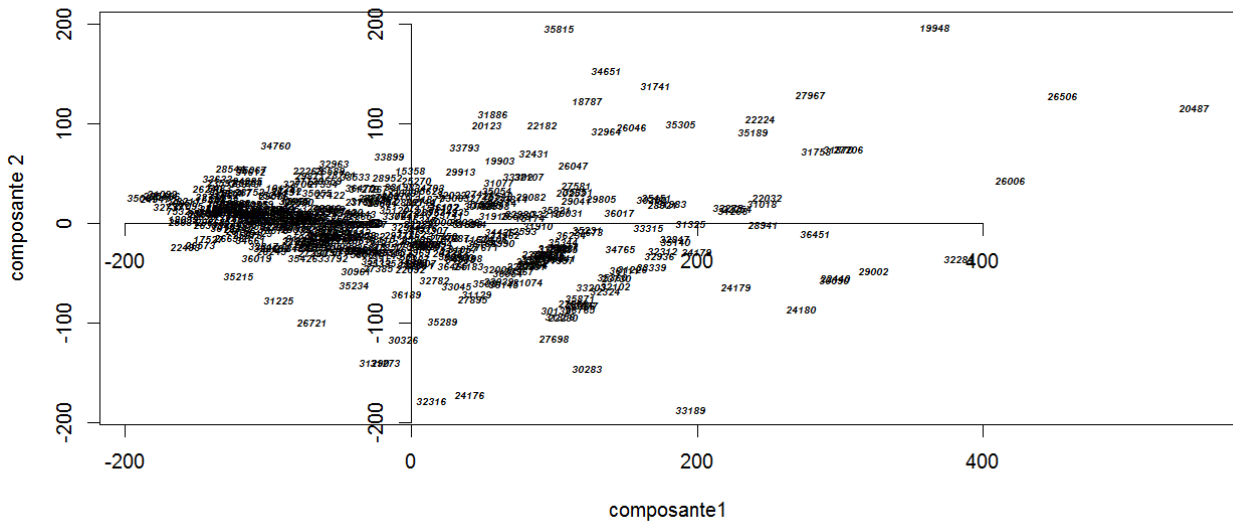
```

```
> #Représentation graphique
```

```

> plot(explo2001acp$scores[,1],explo2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2001)[[1]]
> text(explo2001acp$scores[,1],explo2001acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2002<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2002.csv', header=T, dec=',', sep=',')
> rownames(explo2002)<-explo2002[,1]
> explo2002<-explo2002[,4:12]
> #Etude sommaire
> summary(explo2002)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 7.5 Min. : 3153 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.000 1st Qu.:1.000 1st Qu.:85.0 1st Qu.:33994 1st Qu.:12.03 1st Qu.:58896
Median :0.000 Median : 1.475 Median :1.345 Median :125.0 Median :52793 Median :70.72 Median :93338
Mean :1.273 Mean :13.844 Mean :1.797 Mean :142.6 Mean :60377 Mean :166.23 Mean :110799
3rd Qu.:3.000 3rd Qu.:19.770 3rd Qu.:2.022 3rd Qu.:185.0 3rd Qu.:80571 3rd Qu.:212.93 3rd Qu.:147876
Max. :3.000 Max. :100.000 Max. :17.280 Max. :400.0 Max. :236519 Max. :2418.60 Max. :548512
      ugpto      DISPO
Min. : 0.000 Min. : 0.0
1st Qu.: 0.000 1st Qu.: 871.8
Median : 0.000 Median : 8077.5
Mean : 8.383 Mean :18525.6
3rd Qu.: 0.000 3rd Qu.:21770.2
Max. :147.500 Max. :359803.0
> cor(explo2002)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.00000000 -0.51374749 0.2085439 0.3293506 0.3182410 0.1425209 0.2909842 0.09751667 0.06457402
fvd -0.51374749 1.00000000 -0.1327563 -0.2783757 -0.2952980 -0.1026022 -0.2790062 -0.13403260 -0.06692257
UTATO 0.20854390 -0.13275630 1.0000000 0.3205019 0.6174411 0.3181433 0.4363406 0.08899520 0.13386403
sauti 0.32935059 -0.27837567 0.3205019 1.0000000 0.7417692 0.2009664 0.6665336 0.18796748 0.20373353
chara 0.31824099 -0.29529803 0.6174411 0.7417692 1.0000000 0.4016272 0.6916436 0.24347737 0.24398133
cons 0.14252087 -0.10260217 0.3181433 0.2009664 0.4016272 1.0000000 0.2809594 0.15345063 0.14132886
pmda 0.29098421 -0.27900622 0.4363406 0.6665336 0.6916436 0.2809594 1.0000000 0.15676957 0.19554748
ugpto 0.09751667 -0.13403260 0.0889952 0.1879675 0.2434774 0.1534506 0.1567696 1.0000000 0.05162626
DISPO 0.06457402 -0.06692257 0.1338640 0.2037335 0.2439813 0.1413289 0.1955475 0.05162626 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2002[,3]<-explo2002[,3]*16
> explo2002[,5]<-explo2002[,5]/1000
> explo2002[,6]<-explo2002[,6]/10
> explo2002[,7]<-explo2002[,7]/1000
> explo2002[,9]<-explo2002[,9]/1000
> explo2002acp<-princomp(explo2002)
> summary(explo2002acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8

```

Standard deviation 104.4935190 44.5945024 32.87301365 28.01111109 21.75112856 20.62809199 20.08563887 13.0672209  
 Proportion of Variance 0.6720578 0.1224026 0.06651307 0.04829349 0.02912001 0.02619064 0.02483129 0.0105098  
 Cumulative Proportion 0.6720578 0.7944604 0.86097348 0.90926697 0.93838698 0.96457762 0.98940891 0.9999187

Comp.9

Standard deviation 1.149260e+00

Proportion of Variance 8.129511e-05

Cumulative Proportion 1.000000e+00

> #Représentation graphique

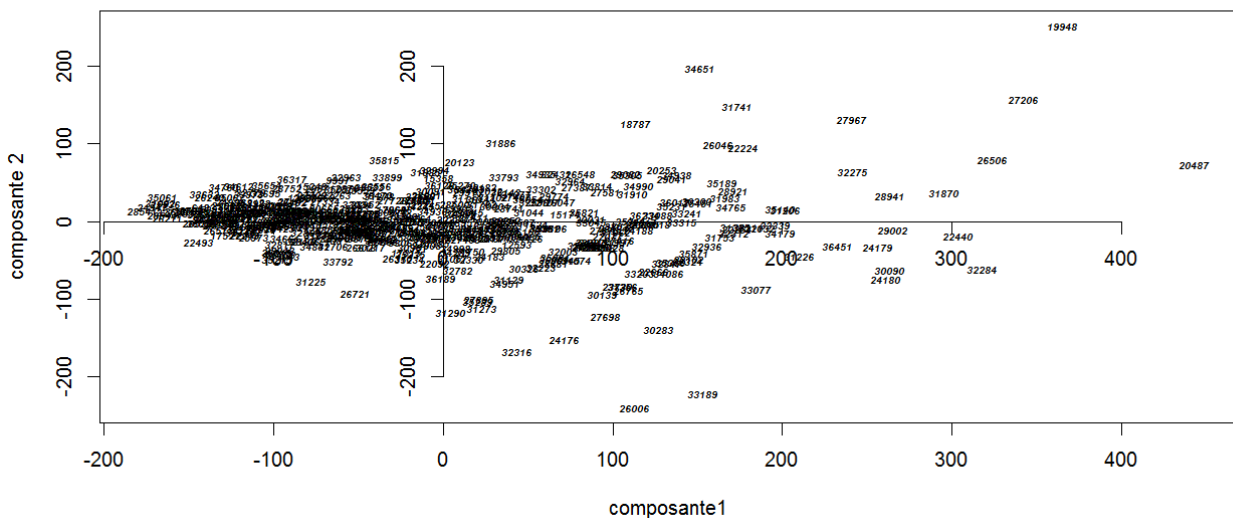
> plot(explo2002acp\$scores[,1],explo2002acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(explo2002)[[1]]

> text(explo2002acp\$scores[,1],explo2002acp\$scores[,2],id,cex=0.5,font=4,col=1)

> axis(1,pos=0)

> axis(2,pos=0)



> explo2003<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2003.csv', header=T, dec=',', sep=',')

> rownames(explo2003)<-explo2003[,1]

> explo2003<-explo2003[,4:12]

> #Etude sommaire

> summary(explo2003)

| fjuri         | fvd            | UTATO         | sauti         | chara          | cons             | pmda           |
|---------------|----------------|---------------|---------------|----------------|------------------|----------------|
| Min. :0.000   | Min. : 0.00    | Min. :0.950   | Min. : 7.5    | Min. : 3785    | Min. : 0.000     | Min. : 0       |
| 1st Qu.:0.000 | 1st Qu.: 0.00  | 1st Qu.:1.000 | 1st Qu.: 85.0 | 1st Qu.: 32815 | 1st Qu.: 8.588   | 1st Qu.: 54641 |
| Median :0.000 | Median : 1.11  | Median :1.295 | Median :125.0 | Median :49841  | Median : 62.280  | Median : 94500 |
| Mean :1.273   | Mean : 13.80   | Mean :1.800   | Mean :143.7   | Mean :57542    | Mean :166.554    | Mean :112155   |
| 3rd Qu.:3.000 | 3rd Qu.: 20.72 | 3rd Qu.:2.155 | 3rd Qu.:185.0 | 3rd Qu.: 76122 | 3rd Qu.: 212.610 | 3rd Qu.:148960 |
| Max. :3.000   | Max. :100.00   | Max. :16.000  | Max. :400.0   | Max. :228239   | Max. :3609.420   | Max. :511833   |

| ugbto          | DISPO            |
|----------------|------------------|
| Min. : 0.000   | Min. : 0.0       |
| 1st Qu.: 0.000 | 1st Qu.: 991.2   |
| Median : 0.000 | Median : 8687.0  |
| Mean : 8.125   | Mean : 20464.9   |
| 3rd Qu.: 0.000 | 3rd Qu.: 25308.2 |
| Max. :142.500  | Max. :284719.0   |

> cor(explo2003)

| fjuri | fvd         | UTATO       | sauti      | chara      | cons       | pmda        | ugbto      | DISPO       |             |
|-------|-------------|-------------|------------|------------|------------|-------------|------------|-------------|-------------|
| fjuri | 1.00000000  | -0.51412054 | 0.2420718  | 0.3266091  | 0.3032324  | 0.14066287  | 0.2808921  | 0.10204630  | 0.09268893  |
| fvd   | -0.51412054 | 1.00000000  | -0.1550734 | -0.2753462 | -0.2803269 | -0.06629743 | -0.2406491 | -0.13720562 | -0.10847145 |
| UTATO | 0.24207176  | -0.15507338 | 1.00000000 | 0.3240189  | 0.6279706  | 0.28752377  | 0.4116795  | 0.10230253  | 0.21649334  |
| sauti | 0.32660912  | -0.27534615 | 0.3240189  | 1.00000000 | 0.7235455  | 0.20870747  | 0.6579123  | 0.18798893  | 0.24723580  |
| chara | 0.30323244  | -0.28032691 | 0.6279706  | 0.7235455  | 1.00000000 | 0.39964782  | 0.6579570  | 0.24265807  | 0.28110002  |
| cons  | 0.14066287  | -0.06629743 | 0.2875238  | 0.2087075  | 0.3996478  | 1.00000000  | 0.3105758  | 0.09515298  | 0.15389412  |
| pmda  | 0.28089209  | -0.24064913 | 0.4116795  | 0.6579123  | 0.6579570  | 0.31057585  | 1.00000000 | 0.14487338  | 0.15416166  |

```

ugbto 0.10204630 -0.13720562 0.1023025 0.1879889 0.2426581 0.09515298 0.1448734 1.00000000 0.06882775
DISPO 0.09268893 -0.10847145 0.2164933 0.2472358 0.2811000 0.15389412 0.1541617 0.06882775 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2003[,3]<-explo2003[,3]*16
> explo2003[,5]<-explo2003[,5]/1000
> explo2003[,6]<-explo2003[,6]/10
> explo2003[,7]<-explo2003[,7]/1000
> explo2003[,9]<-explo2003[,9]/1000
> explo2003acp<-princomp(explo2003)
> summary(explo2003acp)
Importance of components:

```

|                        | Comp.1      | Comp.2     | Comp.3      | Comp.4      | Comp.5      | Comp.6      | Comp.7      | Comp.8      |
|------------------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Standard deviation     | 106.8684344 | 46.9057047 | 32.38909523 | 27.60247557 | 22.94148243 | 20.75731056 | 20.10490838 | 12.78298640 |
| Proportion of Variance | 0.6734772   | 0.1297404  | 0.06186167  | 0.04492831  | 0.03103609  | 0.02540775  | 0.02383572  | 0.00963582  |
| Cumulative Proportion  | 0.6734772   | 0.8032177  | 0.86507934  | 0.91000766  | 0.94104374  | 0.96645149  | 0.99028721  | 0.99992303  |

```

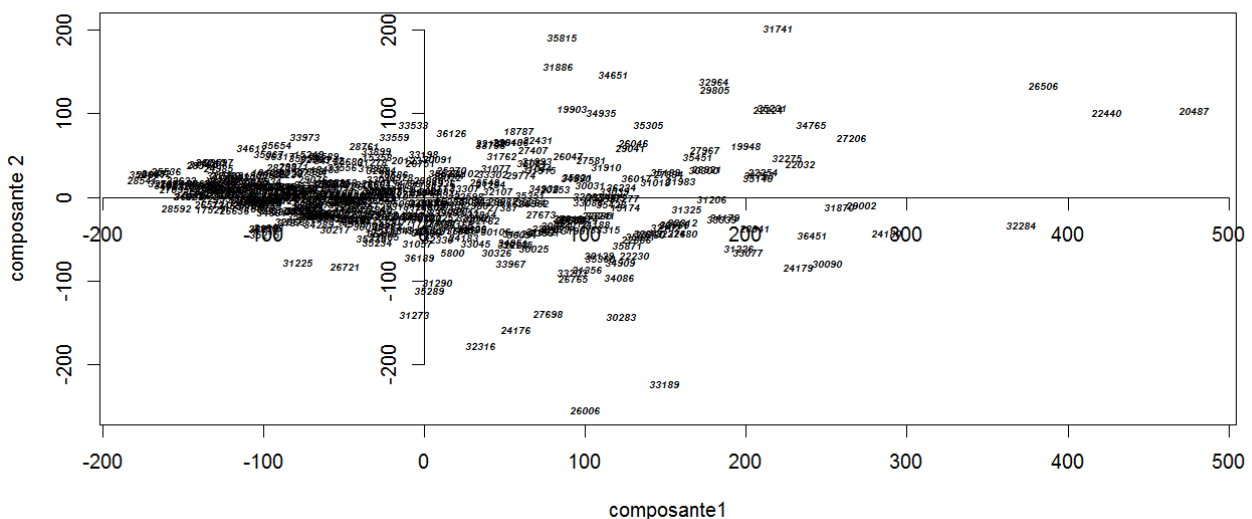
Comp.9
Standard deviation 1.142482e+00
Proportion of Variance 7.697026e-05
Cumulative Proportion 1.000000e+00

```

```

> #Représentation graphique
> plot(explo2003acp$scores[,1],explo2003acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2003)[[1]]
> text(explo2003acp$scores[,1],explo2003acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2004<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2004.csv', header=T, dec=',', sep=';')
> rownames(explo2004)<-explo2004[,1]
> explo2004<-explo2004[,4:12]
> #Etude sommaire
> summary(explo2004)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.950 Min. : 7.5 Min. : 5259 Min. : 0.000 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.: 32632 1st Qu.: 8.965 1st Qu.: 57646
Median :0.000 Median : 1.11 Median :1.280 Median :135.0 Median : 50833 Median : 59.345 Median : 99699
Mean :1.273 Mean : 13.78 Mean :1.759 Mean :144.4 Mean : 58445 Mean :162.754 Mean :120498
3rd Qu.:3.000 3rd Qu.: 20.09 3rd Qu.:2.130 3rd Qu.:195.0 3rd Qu.: 80035 3rd Qu.: 208.325 3rd Qu.:162903
Max. :3.000 Max. :100.00 Max. :8.970 Max. :400.0 Max. :250493 Max. :3137.810 Max. :587413

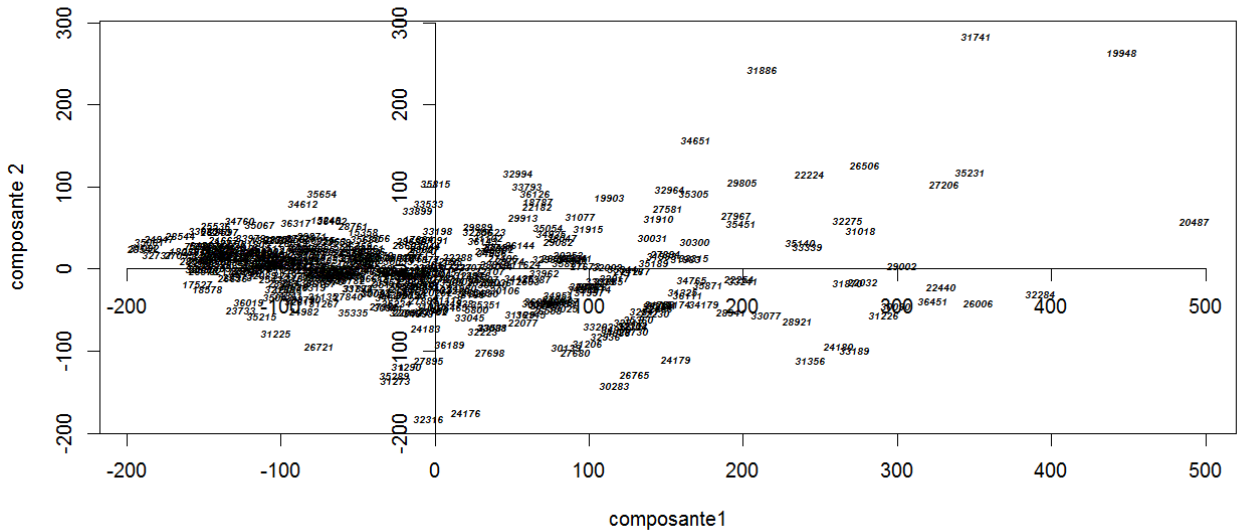
```



```

> explo2005<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2005.csv', header=T, dec=',', sep=',')
> rownames(explo2005)<-explo2005[,1]
> explo2005<-explo2005[,4:12]
> #Etude sommaire
> summary(explo2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 7.5 Min. : 2345 Min. : 0.000 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.: 35338 1st Qu.: 9.607 1st Qu.: 63348
Median :0.000 Median : 1.11 Median :1.300 Median :135.0 Median : 52371 Median : 56.665 Median :105021
Mean :1.273 Mean :14.23 Mean :1.778 Mean :146.7 Mean : 60918 Mean :159.163 Mean :126983
3rd Qu.:3.000 3rd Qu.: 21.33 3rd Qu.:2.115 3rd Qu.:195.0 3rd Qu.: 83067 3rd Qu.: 195.210 3rd Qu.:168897
Max. :3.000 Max. :100.00 Max. :12.930 Max. :400.0 Max. :252512 Max. :2729.570 Max. :629125
  ugpto    DISPO
Min. : 0.000 Min. : 0.0
1st Qu.: 0.000 1st Qu.: 862.8
Median : 0.000 Median : 9269.0
Mean : 8.136 Mean :19886.0
3rd Qu.: 0.000 3rd Qu.:26514.8
Max. :155.000 Max. :205858.0
> cor(explo2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.51993080 0.2691211 0.3302471 0.3006961 0.11828178 0.2534851 0.08383121 0.1299130
fvd -0.51993080 1.00000000 -0.1942688 -0.2821655 -0.2807476 -0.03422308 -0.2284462 -0.14109437 -0.1067573
UTATO 0.26912110 -0.19426877 1.0000000 0.3856323 0.6347569 0.26663561 0.4790166 0.12876198 0.2717988
sauti 0.33024707 -0.28216545 0.3856323 1.0000000 0.7559798 0.19885026 0.6774844 0.20257585 0.2150225
chara 0.30069607 -0.28074759 0.6347569 0.7559798 1.0000000 0.39746421 0.7198193 0.27221780 0.2787510
cons 0.11828178 -0.03422308 0.2666356 0.1988503 0.3974642 1.0000000 0.1976877 0.08611449 0.1102188
pmda 0.25348506 -0.22844617 0.4790166 0.6774844 0.7198193 0.19768774 1.0000000 0.18085328 0.2586341
ugpto 0.08383121 -0.14109437 0.1287620 0.2025759 0.2722178 0.08611449 0.1808533 1.0000000 0.1218266
DISPO 0.12991299 -0.10675731 0.2717988 0.2150225 0.2787510 0.11021884 0.2586341 0.12182664 1.0000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2005[,3]<-explo2005[,3]*16
> explo2005[,5]<-explo2005[,5]/1000
> explo2005[,6]<-explo2005[,6]/10
> explo2005[,7]<-explo2005[,7]/1000
> explo2005[,9]<-explo2005[,9]/1000
> explo2005acp<-princomp(explo2005)
> summary(explo2005acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 118.0616145 49.1254449 30.79360116 27.54278479 22.73415333 20.59501642 18.7626539 12.113669974
Proportion of Variance 0.7148055 0.1237609 0.04862856 0.03890327 0.02650501 0.02175178 0.0180534 0.007525267
Cumulative Proportion 0.7148055 0.8385664 0.88719492 0.92609819 0.95260320 0.97435498 0.9924084 0.999933645
      Comp.9
Standard deviation 1.13750e+00
Proportion of Variance 6.63549e-05
Cumulative Proportion 1.00000e+00
> #Représentation graphique
> plot(explo2005acp$scores[,1],explo2005acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2005)[[1]]
> text(explo2005acp$scores[,1],explo2005acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2006<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2006.csv', header=T, dec=',', sep=',')
> rownames(explo2006)<-explo2006[,1]
> explo2006<-explo2006[,4:12]
> #Etude sommaire
> summary(explo2006)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.900 Min. : 7.5 Min. : 4251 Min. : 0.000 Min. :  0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 85.0 1st Qu.: 32767 1st Qu.:  7.258 1st Qu.: 61955
Median :0.000 Median : 1.11 Median : 1.230 Median :135.0 Median : 52482 Median : 57.395 Median :105667
Mean :1.273 Mean :14.28 Mean :1.769 Mean :147.8 Mean : 60578 Mean :150.950 Mean :127401
3rd Qu.:3.000 3rd Qu.: 21.75 3rd Qu.: 2.007 3rd Qu.:195.0 3rd Qu.: 83131 3rd Qu.: 169.390 3rd Qu.:171950
Max. :3.000 Max. :100.00 Max. :15.000 Max. :400.0 Max. :268247 Max. :3346.190 Max. :605383
      ugpto      DISPO
Min. : 0.000 Min. :  0
1st Qu.: 0.000 1st Qu.: 2969
Median : 0.000 Median :12129
Mean : 8.056 Mean :22393
3rd Qu.: 0.000 3rd Qu.:31018
Max. :147.500 Max. :294135
> cor(explo2006)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.00000000 -0.52680432 0.2498790 0.3329157 0.3078940 0.13099061 0.2847571 0.09098978 0.10522119
fvd -0.52680432 1.00000000 -0.1816580 -0.2873102 -0.2881345 -0.05670702 -0.2565870 -0.13467924 -0.09778172
UTATO 0.24987900 -0.18165804 1.0000000 0.3162279 0.6129775 0.31264042 0.4580084 0.12536003 0.22633176
sauti 0.33291573 -0.28731023 0.3162279 1.0000000 0.7621800 0.18956656 0.6843974 0.20835592 0.25990684
chara 0.30789398 -0.28813445 0.6129775 0.7621800 1.0000000 0.35714705 0.7289027 0.28277626 0.27498325
cons 0.13099061 -0.05670702 0.3126404 0.1895666 0.3571470 1.0000000 0.2561656 0.11258205 0.04721228
pmda 0.28475710 -0.25658696 0.4580084 0.6843974 0.7289027 0.25616560 1.0000000 0.18963306 0.32360190
ugpto 0.09098978 -0.13467924 0.1253600 0.2083559 0.2827763 0.11258205 0.1896331 1.0000000 0.10018115
DISPO 0.10522119 -0.09778172 0.2263318 0.2599068 0.2749832 0.04721228 0.3236019 0.10018115 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2006[,3]<-explo2006[,3]*16
> explo2006[,5]<-explo2006[,5]/1000
> explo2006[,6]<-explo2006[,6]/10
> explo2006[,7]<-explo2006[,7]/1000
> explo2006[,9]<-explo2006[,9]/1000
> explo2006acp<-princomp(explo2006)
> summary(explo2006acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 117.5847318 48.5174399 29.57639637 28.60679936 22.71086550 20.60413282 19.97247173 12.547982711

```



Proportion of Variance 0.7137497 0.1215178 0.04515799 0.04224571 0.02662634 0.02191557 0.02059243 0.008128153  
 Cumulative Proportion 0.7137497 0.8352675 0.88042546 0.92267117 0.94929750 0.97121307 0.99180551 0.999933660  
 Comp.9

Standard deviation 1.1336118743

Proportion of Variance 0.0000663396

Cumulative Proportion 1.0000000000

> #Représentation graphique

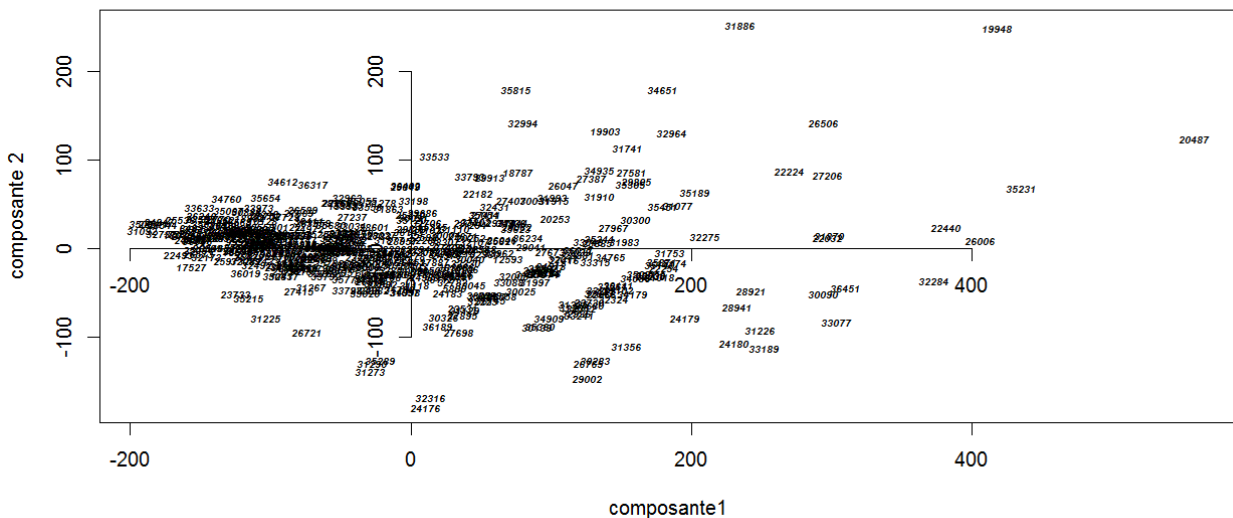
> plot(explo2006acp\$scores[,1],explo2006acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(explo2006)[[1]]

> text(explo2006acp\$scores[,1],explo2006acp\$scores[,2],id,cex=0.5,font=4,col=1)

> axis(1,pos=0)

> axis(2,pos=0)



> explo2007<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2007.csv', header=T, dec=',', sep=',')

> rownames(explo2007)<-explo2007[,1]

> explo2007<-explo2007[,4:12]

> #Etude sommaire

> summary(explo2007)

| fjuri         | fvd            | UTATO         | sauti         | chara          | cons             | pmda           |
|---------------|----------------|---------------|---------------|----------------|------------------|----------------|
| Min. :0.000   | Min. : 0.00    | Min. :1.000   | Min. : 7.5    | Min. : 4372    | Min. : 0.000     | Min. : 0       |
| 1st Qu.:0.000 | 1st Qu.: 0.00  | 1st Qu.:1.000 | 1st Qu.: 85.0 | 1st Qu.: 33904 | 1st Qu.: 9.582   | 1st Qu.: 64243 |
| Median :0.000 | Median : 1.11  | Median :1.255 | Median :135.0 | Median : 51159 | Median : 56.815  | Median :108299 |
| Mean :1.273   | Mean : 14.57   | Mean :1.797   | Mean :148.1   | Mean : 59865   | Mean :145.845    | Mean :130301   |
| 3rd Qu.:3.000 | 3rd Qu.: 23.33 | 3rd Qu.:2.000 | 3rd Qu.:195.0 | 3rd Qu.: 79548 | 3rd Qu.: 161.205 | 3rd Qu.:179895 |
| Max. :3.000   | Max. :100.00   | Max. :20.000  | Max. :400.0   | Max. :323517   | Max. :2855.620   | Max. :631820   |

| ugbto         | DISPO          |
|---------------|----------------|
| Min. : 0.00   | Min. : 0       |
| 1st Qu.: 0.00 | 1st Qu.: 2976  |
| Median : 0.00 | Median : 14859 |
| Mean : 8.05   | Mean : 28883   |
| 3rd Qu.: 0.00 | 3rd Qu.: 36732 |
| Max. :142.50  | Max. :266568   |

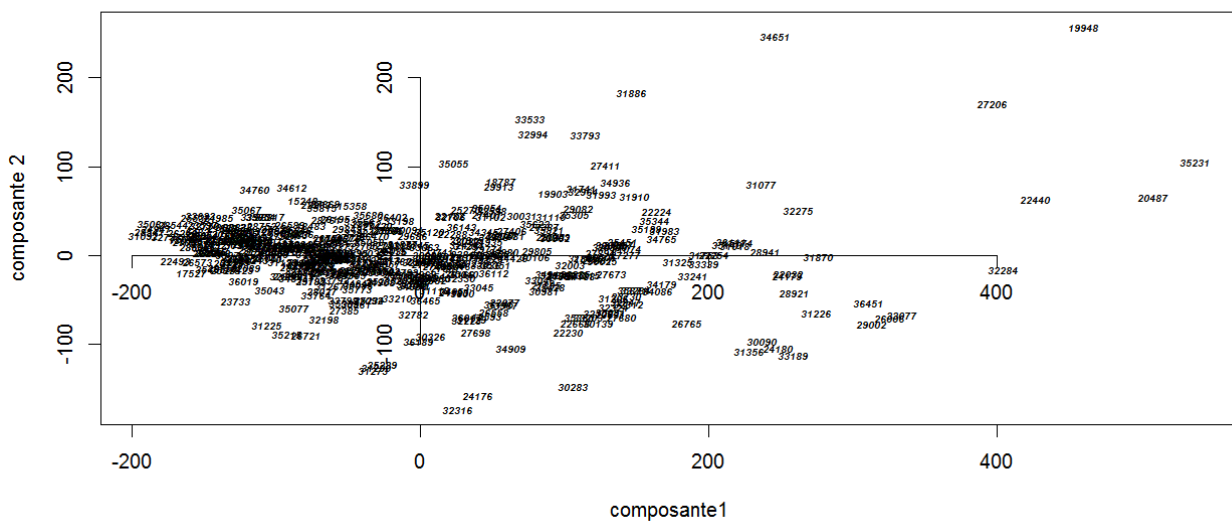
> cor(explo2007)

| fjuri | fvd         | UTATO       | sauti       | chara      | cons       | pmda        | ugbto      | DISPO       |             |
|-------|-------------|-------------|-------------|------------|------------|-------------|------------|-------------|-------------|
| fjuri | 1.00000000  | -0.53021508 | 0.24610625  | 0.3347752  | 0.3137467  | 0.12660037  | 0.2744909  | 0.09221001  | 0.10744488  |
| fvd   | -0.53021508 | 1.00000000  | -0.17310734 | -0.2960212 | -0.2838273 | -0.07096144 | -0.2627587 | -0.13376776 | -0.07970804 |
| UTATO | 0.24610625  | -0.17310734 | 1.00000000  | 0.2689618  | 0.6337397  | 0.30463755  | 0.4401548  | 0.09745922  | 0.21205814  |
| sauti | 0.33477517  | -0.29602122 | 0.26896178  | 1.00000000 | 0.7156040  | 0.21335537  | 0.7156140  | 0.19638638  | 0.31830090  |
| chara | 0.31374669  | -0.28382735 | 0.63373968  | 0.7156040  | 1.00000000 | 0.40144922  | 0.7307874  | 0.28163107  | 0.30602053  |
| cons  | 0.12660037  | -0.07096144 | 0.30463755  | 0.2133554  | 0.4014492  | 1.00000000  | 0.2601946  | 0.17745951  | 0.12526905  |
| pmda  | 0.27449092  | -0.26275867 | 0.44015484  | 0.7156140  | 0.7307874  | 0.26019464  | 1.00000000 | 0.20637047  | 0.32766373  |
| ugbto | 0.09221001  | -0.13376776 | 0.09745922  | 0.1963864  | 0.2816311  | 0.17745951  | 0.2063705  | 1.00000000  | 0.09589443  |

```

DISPO 0.10744488 -0.07970804 0.21205814 0.3183009 0.3060205 0.12526905 0.3276637 0.09589443 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2007[,3]<-explo2007[,3]*16
> explo2007[,5]<-explo2007[,5]/1000
> explo2007[,6]<-explo2007[,6]/10
> explo2007[,7]<-explo2007[,7]/1000
> explo2007[,9]<-explo2007[,9]/1000
> explo2007acp<-princomp(explo2007)
> summary(explo2007acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 120.5336628 46.5796745 36.30123919 29.94683900 22.43353804 21.61133538 20.35665680 13.204006888
Proportion of Variance 0.7096368 0.1059772 0.06436686 0.04380477 0.02458187 0.02281301 0.02024102 0.008515907
Cumulative Proportion 0.7096368 0.8156140 0.87998084 0.92378560 0.94836748 0.97118049 0.99142151 0.999937413
      Comp.9
Standard deviation 1.131960e+00
Proportion of Variance 6.258659e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(explo2007acp$scores[,1],explo2007acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2007)[[1]]
> text(explo2007acp$scores[,1],explo2007acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> explo2008<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2008.csv', header=T, dec=',', sep=';')
> rownames(explo2008)<-explo2008[,1]
> explo2008<-explo2008[,4:12]
> #Etude sommaire
> summary(explo2008)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.950 Min. : 7.5 Min. : 2402 Min. : 0.000 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.: 35751 1st Qu.: 8.557 1st Qu.: 65974
Median :0.000 Median : 1.11 Median :1.250 Median :135.0 Median : 54280 Median : 55.220 Median :113243
Mean :1.273 Mean :14.92 Mean :1.816 Mean :148.8 Mean : 64236 Mean :148.355 Mean :139395
3rd Qu.:3.000 3rd Qu.: 24.44 3rd Qu.: 2.015 3rd Qu.:195.0 3rd Qu.: 87644 3rd Qu.: 174.327 3rd Qu.:192177
Max. :3.000 Max. :100.00 Max. :18.000 Max. :400.0 Max. :319847 Max. :3324.950 Max. :684613

```

```

ugbto      DISPO
Min. : 0.000 Min. : 0
1st Qu.: 0.000 1st Qu.: 3326
Median : 0.000 Median : 13908
Mean : 7.552 Mean : 25751
3rd Qu.: 0.000 3rd Qu.: 36389
Max. :142.500 Max. :246631

```

```
> cor(explo2008)
```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.54273933 0.24802619 0.3319939 0.2853131 0.11803602 0.2815287 0.08072361 0.1356416
fvd -0.54273933 1.00000000 -0.18180191 -0.2947252 -0.2761255 -0.06656724 -0.2630381 -0.12797412 -0.1027599
UTATO 0.24802619 -0.18180191 1.00000000 0.3070564 0.6232259 0.33001808 0.4963983 0.07823816 0.1362416
saute 0.33199393 -0.29472518 0.30705641 1.0000000 0.7680597 0.20009650 0.7237412 0.19046539 0.2710716
chara 0.28531314 -0.27612548 0.62322587 0.7680597 1.0000000 0.34229907 0.7700198 0.24134828 0.2653395
cons 0.11803602 -0.06656724 0.33001808 0.2000965 0.3422991 1.0000000 0.3265512 0.14412830 0.1029720
pmda 0.28152874 -0.26303806 0.49639830 0.7237412 0.7700198 0.32655123 1.0000000 0.21183497 0.2540008
ugbto 0.08072361 -0.12797412 0.07823816 0.1904654 0.2413483 0.14412830 0.2118350 1.0000000 0.1214572
DISPO 0.13564158 -0.10275992 0.13624156 0.2710716 0.2653395 0.10297197 0.2540008 0.12145724 1.0000000

```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```

> explo2008[,3]<-explo2008[,3]*16
> explo2008[,5]<-explo2008[,5]/1000
> explo2008[,6]<-explo2008[,6]/10
> explo2008[,7]<-explo2008[,7]/1000
> explo2008[,9]<-explo2008[,9]/1000
> explo2008acp<-princomp(explo2008)
> summary(explo2008acp)

```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 129.4177123 48.5562310 34.18964028 28.09539502 22.98410568 22.0416128 20.70105375 13.719829135
Proportion of Variance 0.7379346 0.1038772 0.05150146 0.03477769 0.02327479 0.0214051 0.01888058 0.008293309
Cumulative Proportion 0.7379346 0.8418119 0.89331335 0.92809104 0.95136582 0.9727709 0.99165150 0.999944811

```

```
      Comp.9
```

```

Standard deviation 1.119212e+00
Proportion of Variance 5.518938e-05
Cumulative Proportion 1.000000e+00

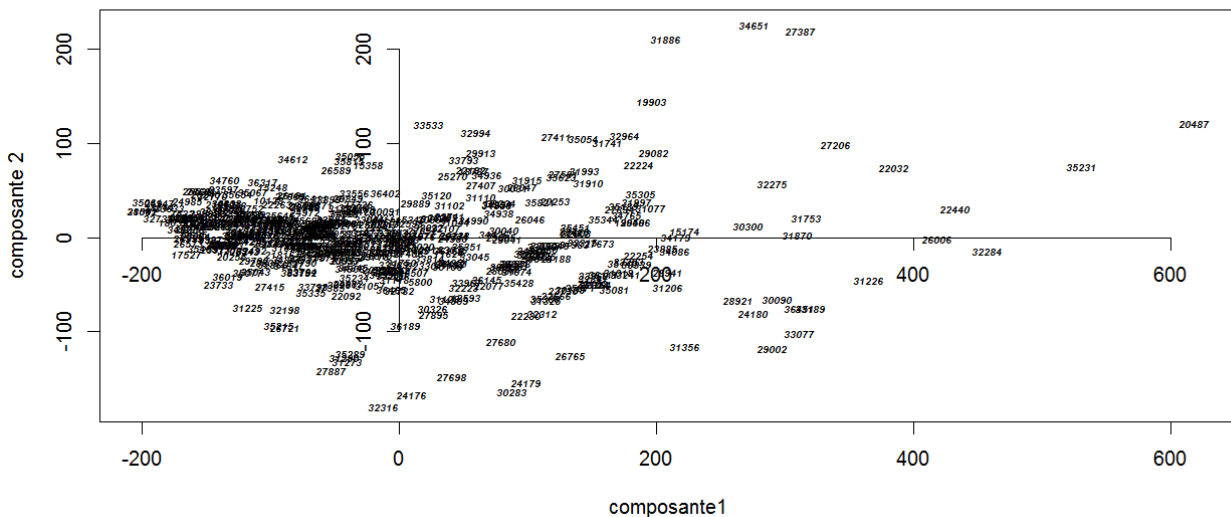
```

```
> #Représentation graphique
```

```

> plot(explo2008acp$scores[,1],explo2008acp$scores[,2],type="n",xlab="composante 1",ylab="composante 2")
> id<-dimnames(explo2008)[[1]]
> text(explo2008acp$scores[,1],explo2008acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

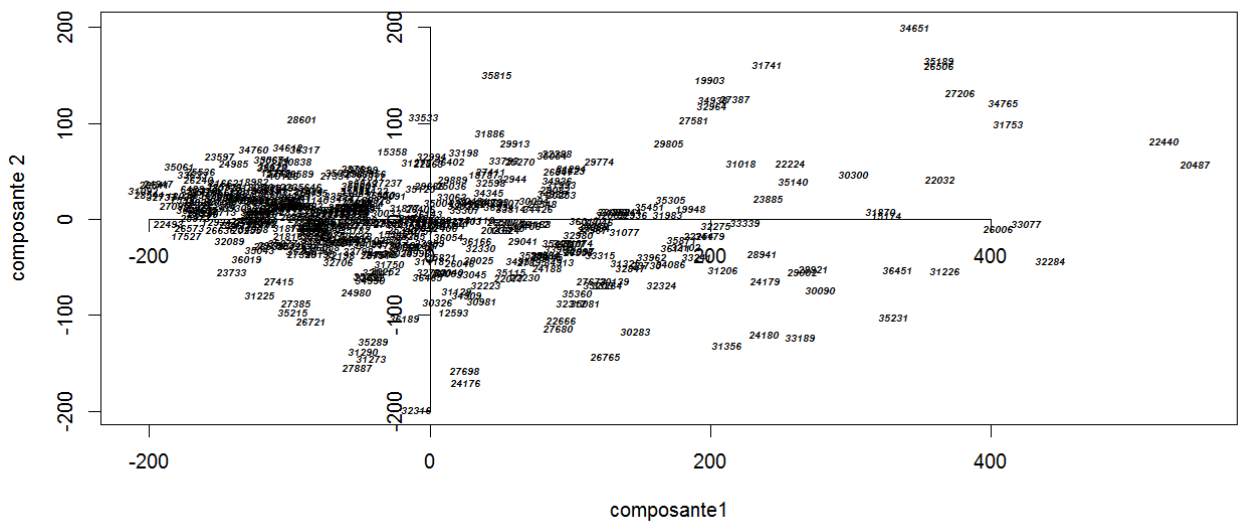
```



```

> explo2009<-read.table('C:/Users/Bureau LGH/Desktop/Stables OTEX1000 2009.csv', header=T, dec=',', sep=',')
> rownames(explo2009)<-explo2009[,1]
> explo2009<-explo2009[,4:12]
> #Etude sommaire
> summary(explo2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. : 7.5 Min. : 3943 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.000 1st Qu.:1.000 1st Qu.:85.0 1st Qu.: 42765 1st Qu.: 9.86 1st Qu.: 73888
Median :0.000 Median : 1.195 Median :1.195 Median :135.0 Median : 63507 Median : 60.62 Median :113409
Mean :1.273 Mean :15.218 Mean :1.849 Mean :148.8 Mean : 76899 Mean :179.06 Mean :143446
3rd Qu.:3.000 3rd Qu.:24.253 3rd Qu.:2.040 3rd Qu.:195.0 3rd Qu.:103458 3rd Qu.:189.61 3rd Qu.:193217
Max. :3.000 Max. :100.000 Max. :20.870 Max. :400.0 Max. :360994 Max. :3589.35 Max. :609674
  ugpto    DISPO
Min. : 0.000 Min. : 0
1st Qu.: 0.000 1st Qu.: 2072
Median : 0.000 Median :11999
Mean : 7.649 Mean :23466
3rd Qu.: 0.000 3rd Qu.:31121
Max. :155.000 Max. :239008
> cor(explo2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.54766116 0.22290501 0.3324628 0.2942866 0.13207930 0.2794353 0.08181828 0.07250585
fvd -0.54766116 1.00000000 -0.16643219 -0.2965133 -0.2887987 -0.08786446 -0.2574169 -0.13125171 -0.00683297
UTATO 0.22290501 -0.16643219 1.00000000 0.3086382 0.6041465 0.39611426 0.4671435 0.09465003 0.11099681
sauti 0.33246281 -0.29651334 0.30863816 1.00000000 0.8050529 0.17426392 0.7100330 0.19032580 0.19185113
chara 0.29428659 -0.28879865 0.60414645 0.8050529 1.00000000 0.30808457 0.7419735 0.23874160 0.18419134
cons 0.13207930 -0.08786446 0.39611426 0.1742639 0.3080846 1.00000000 0.2354035 0.10384824 0.02067104
pmda 0.27943527 -0.25741693 0.46714346 0.7100330 0.7419735 0.23540353 1.0000000 0.18070339 0.17809183
ugpto 0.08181828 -0.13125171 0.09465003 0.1903258 0.2387416 0.10384824 0.1807034 1.00000000 0.14262598
DISPO 0.07250585 -0.00683297 0.11099681 0.1918511 0.1841913 0.02067104 0.1780918 0.14262598 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> explo2009[,3]<-explo2009[,3]*16
> explo2009[,5]<-explo2009[,5]/1000
> explo2009[,6]<-explo2009[,6]/10
> explo2009[,7]<-explo2009[,7]/1000
> explo2009[,9]<-explo2009[,9]/1000
> explo2009acp<-princomp(explo2009)
> summary(explo2009acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 133.0570435 50.6912263 38.05473167 32.99763487 26.00002302 22.63233361 21.09633472 14.914580300
Proportion of Variance 0.7177051 0.1041684 0.05870669 0.04414036 0.02740424 0.02076486 0.01804198 0.009017629
Cumulative Proportion 0.7177051 0.8218734 0.88058013 0.92472049 0.95212473 0.97288959 0.99093157 0.999949203
      Comp.9
Standard deviation 1.119395e+00
Proportion of Variance 5.079689e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(explo2009acp$scores[,1],explo2009acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(explo2009)[[1]]
> text(explo2009acp$scores[,1],explo2009acp$scores[,2],id,cex=0.5,font=4,col=1)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2000<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2000.csv', header=T, dec=',', sep=',')
> rownames(reorg2000)<-reorg2000[,1]
> reorg2000<-reorg2000[,4:12]
> #Etude sommaire
> summary(reorg2000)
  fjuri    fvd   UTATO    sauti   chara    cons    pmda
Min. :0.000 Min. : 0.00 Min. :0.770 Min. : 2.5 Min. :10506 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:75.0 1st Qu.:36732 1st Qu.: 35.71 1st Qu.:54751
Median :0.000 Median : 0.91 Median :1.500 Median :115.0 Median :56289 Median :139.28 Median :93823
Mean :1.255 Mean :11.20 Mean :2.135 Mean :126.6 Mean :65821 Mean :259.27 Mean :118088
3rd Qu.:3.000 3rd Qu.:16.67 3rd Qu.:2.500 3rd Qu.:155.0 3rd Qu.:81880 3rd Qu.:368.02 3rd Qu.:155910
Max. :3.000 Max. :100.00 Max. :12.840 Max. :400.0 Max. :406037 Max. :1448.85 Max. :584904
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 912
Median : 0.00 Median : 7175
Mean :16.99 Mean :20312
3rd Qu.:12.50 3rd Qu.:21639
Max. :175.00 Max. :348836
> cor(reorg2000)
      fjuri   fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.000000000 -0.49968827 0.1921742 0.34935434 0.2700407 0.11275931 0.31258456 -0.0059006393 0.1248068241
fvd -0.499688271 1.000000000 -0.1172042 -0.24788073 -0.1278297 -0.09173423 -0.18911175 -0.0118329874 -0.1450917878
UTATO 0.192174194 -0.11720419 1.0000000 0.07314770 0.6173138 0.35593603 0.37813126 0.0744791033 0.4687136269
sauti 0.349354345 -0.24788073 0.0731477 1.0000000 0.5699908 0.50624041 0.75795156 0.4679167073 0.0669664293
chara 0.270040652 -0.12782974 0.6173138 0.56999083 1.0000000 0.60877021 0.67971454 0.3097567733 0.4720443392
cons 0.112759309 -0.09173423 0.3559360 0.50624041 0.6087702 1.0000000 0.53132237 0.3295680499 0.3289942244
pmda 0.312584557 -0.18911175 0.3781313 0.75795156 0.6797145 0.53132237 1.0000000 0.3615061184 0.0452374753
ugpto -0.005900639 -0.01183299 0.0744791 0.46791671 0.3097568 0.32956805 0.36150612 1.0000000000 0.0009483033
DISPO 0.124806824 -0.14509179 0.4687136 0.06696643 0.4720443 0.32899422 0.04523748 0.0009483033 1.0000000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2000[,3]<-reorg2000[,3]*16
> reorg2000[,5]<-reorg2000[,5]/1000
> reorg2000[,6]<-reorg2000[,6]/10
> reorg2000[,7]<-reorg2000[,7]/1000
> reorg2000[,9]<-reorg2000[,9]/1000
> reorg2000acp<-princomp(reorg2000)
> summary(reorg2000acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8

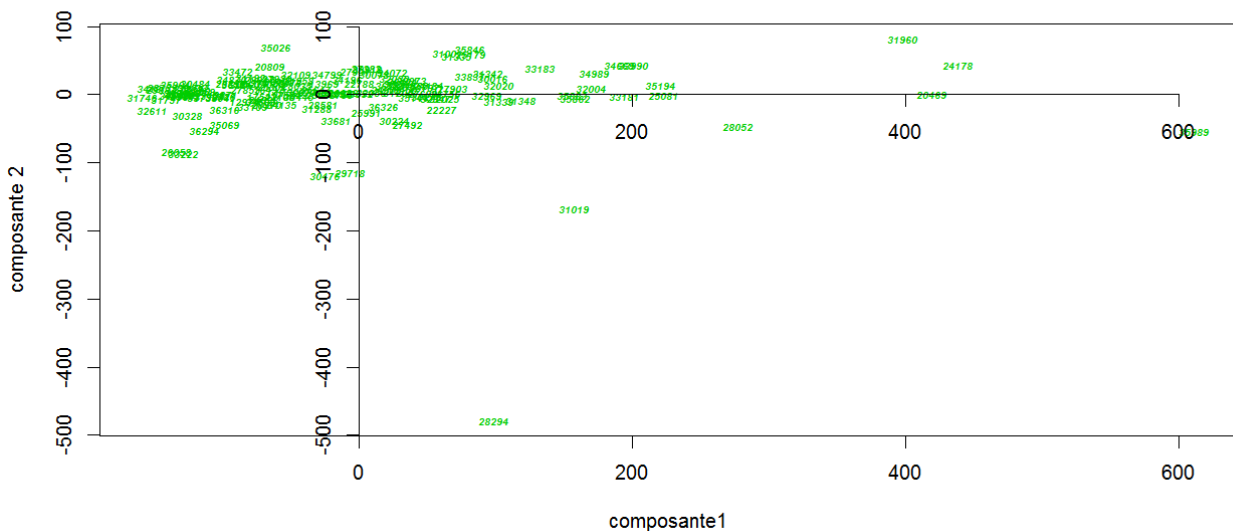
```

Standard deviation 124.2496853 52.4711266 43.45449021 29.79196869 22.98815547 22.92998051 18.65071623 16.09454501  
 Proportion of Variance 0.6822095 0.1216656 0.08344426 0.03922162 0.02335261 0.02323456 0.01537157 0.01144681  
 Cumulative Proportion 0.6822095 0.8038751 0.88731940 0.92654103 0.94989364 0.97312820 0.98849977 0.99994658

Comp.9

Standard deviation 1.099432e+00  
 Proportion of Variance 5.341507e-05  
 Cumulative Proportion 1.000000e+00

```
> #Représentation graphique
> plot(reorg2000acp$scores[,1],reorg2000acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2000)[[1]]
> text(reorg2000acp$scores[,1],reorg2000acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)
```

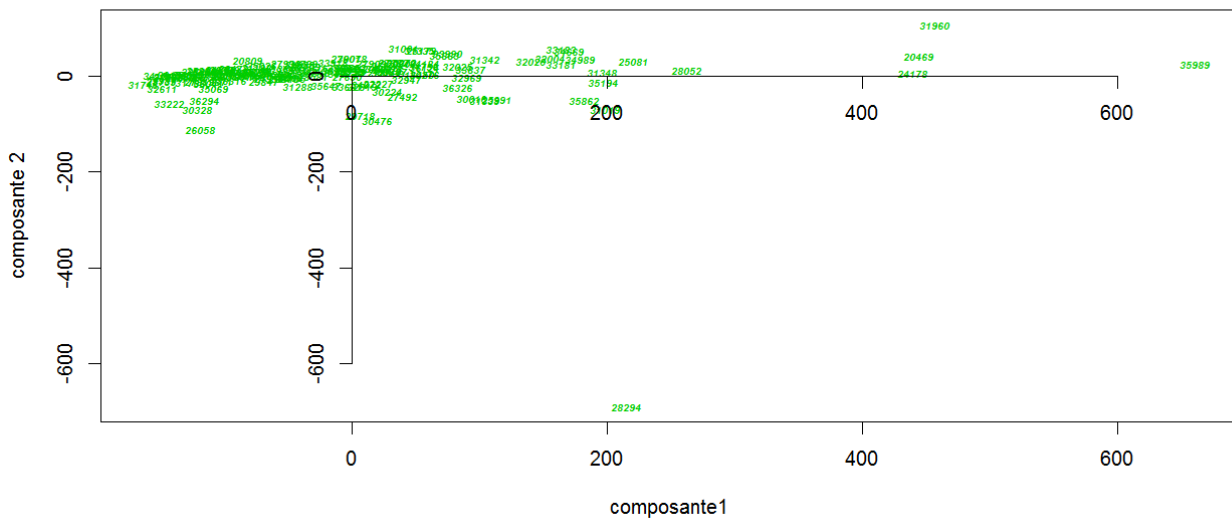


```
> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2001.csv', header=T, dec=',', sep=',')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :0.770 Min. : 2.5 Min. : 8544 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 75.0 1st Qu.: 34599 1st Qu.: 27.79 1st Qu.: 58064
Median :0.000 Median : 0.91 Median :1.500 Median :115.0 Median : 59331 Median :116.48 Median :105714
Mean :1.255 Mean :11.32 Mean : 2.145 Mean :127.6 Mean : 68086 Mean :258.11 Mean :126720
3rd Qu.:3.000 3rd Qu.:17.65 3rd Qu.: 2.390 3rd Qu.:155.0 3rd Qu.: 83882 3rd Qu.:357.72 3rd Qu.:164451
Max. :3.000 Max. :100.00 Max. :14.000 Max. :400.0 Max. :464294 Max. :1990.61 Max. :670888
  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2015
Median : 0.00 Median : 8793
Mean :17.24 Mean :23804
3rd Qu.: 7.50 3rd Qu.:23819
Max. :165.00 Max. :590934
> cor(reorg2001)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.50597945 0.21213280 0.34051061 0.2786359 0.09884674 0.3165692 -0.02056134 0.10592761
fvd -0.50597945 1.00000000 -0.12336997 -0.24246521 -0.1587876 -0.11537322 -0.1917629 0.01721884 -0.09876953
UTATO 0.21213280 -0.12336997 1.00000000 0.03210119 0.6015814 0.28604215 0.3992342 0.04222395 0.48136861
sauti 0.34051061 -0.24246521 0.03210119 1.00000000 0.5768638 0.46264053 0.7214691 0.45959491 0.04841659
chara 0.27863592 -0.15878763 0.60158141 0.57686383 1.00000000 0.55191918 0.7091926 0.27955333 0.61428865
cons 0.09884674 -0.11537322 0.28604215 0.46264053 0.5519192 1.00000000 0.5129831 0.33787888 0.24699107
pmda 0.31656921 -0.19176286 0.39923418 0.72146907 0.7091926 0.51298313 1.00000000 0.32482170 0.10812936
```

```

ugbto -0.02056134 0.01721884 0.04222395 0.45959491 0.2795533 0.33787888 0.3248217 1.00000000 -0.01900384
DISPO 0.10592761 -0.09876953 0.48136861 0.04841659 0.6142887 0.24699107 0.1081294 -0.01900384 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2001[,3]<-reorg2001[,3]*16
> reorg2001[,5]<-reorg2001[,5]/1000
> reorg2001[,6]<-reorg2001[,6]/10
> reorg2001[,7]<-reorg2001[,7]/1000
> reorg2001[,9]<-reorg2001[,9]/1000
> reorg2001acp<-princomp(reorg2001)
> summary(reorg2001acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 129.6124068 66.1125242 48.40942331 31.85057296 26.23274038 22.30468729 19.02823496 15.860157130
Proportion of Variance 0.6380647 0.1660118 0.08900848 0.03853062 0.02613719 0.01889574 0.01375209 0.009554028
Cumulative Proportion 0.6380647 0.8040765 0.89308496 0.93161559 0.95775278 0.97664851 0.99040060 0.999954625
      Comp.9
Standard deviation 1.093000e+00
Proportion of Variance 4.537451e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2001acp$scores[,1],reorg2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2001)[[1]]
> text(reorg2001acp$scores[,1],reorg2001acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

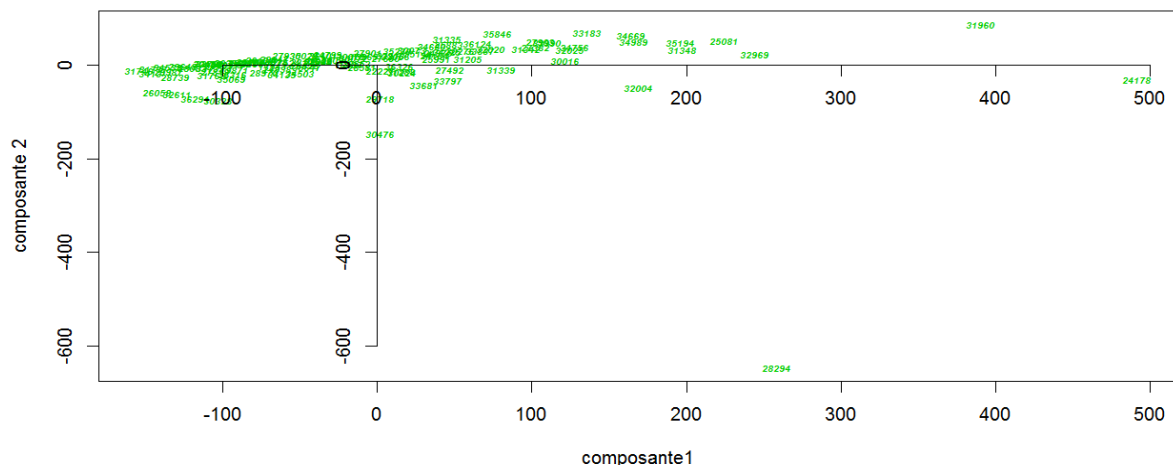
> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2002.csv', header=T, dec=',', sep=',')
> rownames(reorg2002)<-reorg2002[,1]
> reorg2002<-reorg2002[,4:12]
> #Etude sommaire
> summary(reorg2002)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 8832 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 65.0 1st Qu.: 37148 1st Qu.: 23.93 1st Qu.: 55092
Median :0.000 Median : 0.77 Median :1.500 Median :105.0 Median : 54799 Median : 98.34 Median : 87873
Mean :1.288 Mean :11.34 Mean :2.169 Mean :123.2 Mean : 64230 Mean :226.85 Mean :114302
3rd Qu.:3.000 3rd Qu.: 16.01 3rd Qu.:2.250 3rd Qu.:155.0 3rd Qu.: 75226 3rd Qu.: 279.87 3rd Qu.:155041
Max. :3.000 Max. :100.00 Max. :18.000 Max. :400.0 Max. :451616 Max. :2365.17 Max. :455955

```

```

    ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2226
Median : 0.00 Median : 8579
Mean : 13.56 Mean : 24683
3rd Qu.: 3.75 3rd Qu.: 22312
Max. :132.50 Max. :534780
> cor(reorg2002)
      fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugbto    DISPO
fjuri 1.00000000 -0.53267851 0.23949345 0.32214863 0.2468331 0.07593678 0.3791779 -0.02629507 0.13138923
fvd -0.53267851 1.00000000 -0.19057834 -0.32027659 -0.2146237 -0.15785134 -0.2736810 -0.09392701 -0.10409256
UTATO 0.23949345 -0.19057834 1.00000000 -0.02192549 0.6391378 0.26231278 0.2166400 0.01431098 0.67179551
sauti 0.32214863 -0.32027659 -0.02192549 1.00000000 0.4802536 0.42829634 0.7017132 0.37531031 0.08655584
chara 0.24683313 -0.21462368 0.63913781 0.48025357 1.0000000 0.45641905 0.5750910 0.14239041 0.75053789
cons 0.07593678 -0.15785134 0.26231278 0.42829634 0.4564191 1.0000000 0.4657425 0.29035597 0.32533565
pmda 0.37917793 -0.27368098 0.21664002 0.70171320 0.5750910 0.46574247 1.0000000 0.17044557 0.18070202
ugbto -0.02629507 -0.09392701 0.01431098 0.37531031 0.1423904 0.29035597 0.1704456 1.00000000 -0.05028359
DISPO 0.13138923 -0.10409256 0.67179551 0.08655584 0.7505379 0.32533565 0.1807020 -0.05028359 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2002[,3]<-reorg2002[,3]*16
> reorg2002[,5]<-reorg2002[,5]/1000
> reorg2002[,6]<-reorg2002[,6]/10
> reorg2002[,7]<-reorg2002[,7]/1000
> reorg2002[,9]<-reorg2002[,9]/1000
> reorg2002acp<-princomp(reorg2002)
> summary(reorg2002acp)
Importance of components:
      Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7 Comp.8
Standard deviation 113.0366662 71.8847155 44.04851262 29.94096364 25.97764060 21.62988578 19.21688271 16.23886096
Proportion of Variance 0.5664128 0.2290696 0.08601156 0.03973982 0.02991533 0.02073972 0.01637044 0.01168976
Cumulative Proportion 0.5664128 0.7954824 0.88149392 0.92123374 0.95114907 0.97188878 0.98825922 0.99994898
      Comp.9
Standard deviation 1.072854e+00
Proportion of Variance 5.102413e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2002acp$scores[,1],reorg2002acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2002)[[1]]
> text(reorg2002acp$scores[,1],reorg2002acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```

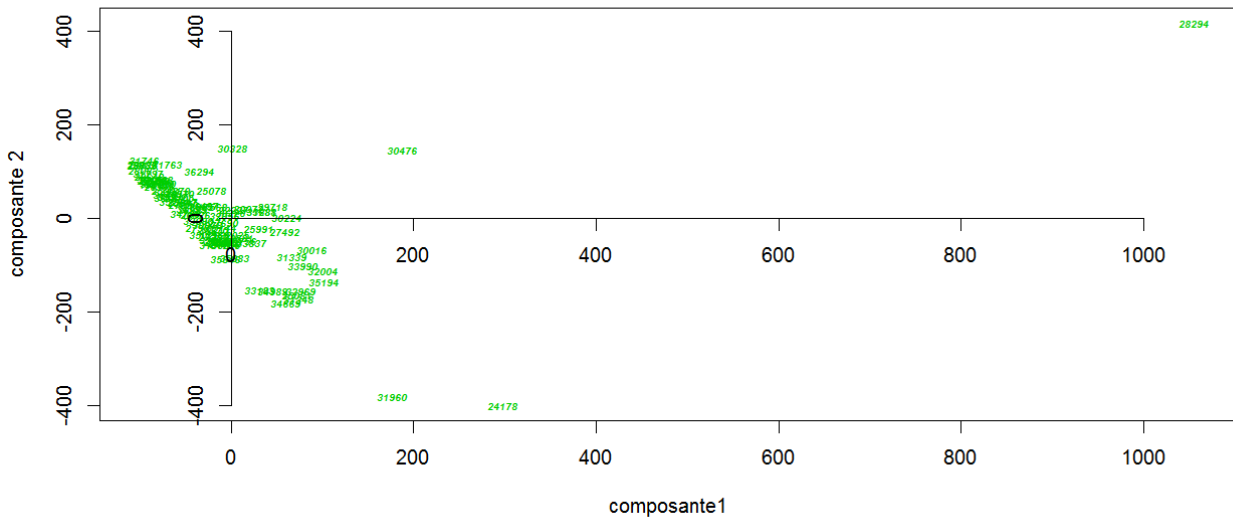




```

> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2003.csv', header=T, dec=',', sep=',')
> rownames(reorg2003)<-reorg2003[,1]
> reorg2003<-reorg2003[,4:12]
> #Etude sommaire
> summary(reorg2003)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. : 7.5 Min. : 9531 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.:75.0 1st Qu.:34769 1st Qu.:25.05 1st Qu.:55176
Median :0.000 Median :1.665 Median :1.470 Median :115.0 Median :54755 Median :109.25 Median :93374
Mean :1.284 Mean :10.720 Mean :2.278 Mean :128.2 Mean :64653 Mean :250.48 Mean :111020
3rd Qu.:3.000 3rd Qu.:15.535 3rd Qu.:2.232 3rd Qu.:155.0 3rd Qu.:78603 3rd Qu.:295.47 3rd Qu.:148386
Max. :3.000 Max. :77.780 Max. :21.000 Max. :400.0 Max. :486299 Max. :2879.15 Max. :511788
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1149
Median : 0.00 Median : 7333
Mean :15.43 Mean : 34073
3rd Qu.: 7.50 3rd Qu.: 27425
Max. :142.50 Max. :1038114
> cor(reorg2003)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.54244997 0.291683229 0.32395818 0.2571636 0.1535779 0.3797476 -0.074148164 0.10332357
fvd -0.54244997 1.00000000 -0.234915259 -0.29695366 -0.2403391 -0.1689786 -0.3358598 -0.074818017 -0.11870014
UTATO 0.29168323 -0.23491526 1.000000000 -0.02791226 0.7063516 0.2103269 0.2487627 0.001850937 0.76313711
sauti 0.32395818 -0.29695366 -0.027912256 1.00000000 0.4592519 0.4075191 0.7571703 0.373405547 -0.04690073
chara 0.25716359 -0.24033913 0.706351642 0.45925188 1.0000000 0.4033573 0.5894475 0.177221973 0.78336557
cons 0.15357795 -0.16897863 0.210326902 0.40751908 0.4033573 1.0000000 0.3834162 0.279668092 0.17173242
pmda 0.37974755 -0.33585979 0.248762737 0.75717026 0.5894475 0.3834162 1.0000000 0.187235164 0.12960973
ugpto -0.07414816 -0.07481802 0.001850937 0.37340555 0.1772220 0.2796681 0.1872352 1.000000000 -0.04992686
DISPO 0.10332357 -0.11870014 0.763137112 -0.04690073 0.7833656 0.1717324 0.1296097 -0.049926860 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2003[,3]<-reorg2003[,3]*16
> reorg2003[,5]<-reorg2003[,5]/1000
> reorg2003[,6]<-reorg2003[,6]/10
> reorg2003[,7]<-reorg2003[,7]/1000
> reorg2003[,9]<-reorg2003[,9]/1000
> reorg2003acp<-princomp(reorg2003)
> summary(reorg2003acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 132.2801611 105.8871882 41.3433292 36.75048959 28.01193248 23.42874583 17.419878399 14.280459052
Proportion of Variance 0.5205881 0.3335736 0.0508529 0.04018196 0.02334484 0.01633063 0.009028073 0.006067212
Cumulative Proportion 0.5205881 0.8541617 0.9050146 0.94519660 0.96854144 0.98487207 0.993900144 0.999967356
      Comp.9
Standard deviation 1.047489e+00
Proportion of Variance 3.264402e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2003acp$scores[,1],reorg2003acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2003)[[1]]
> text(reorg2003acp$scores[,1],reorg2003acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2004.csv', header=T, dec=',', sep=',')
> rownames(reorg2004)<-reorg2004[,1]
> reorg2004<-reorg2004[,4:12]
> #Etude sommaire
> summary(reorg2004)
      fjuri    fvd  UTATO    sauti   chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. : 8342 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.: 36142 1st Qu.: 25.66 1st Qu.: 63402
Median :0.000 Median : 1.430 Median :1.380 Median :125.0 Median :56441 Median : 78.95 Median :108656
Mean :1.304 Mean : 9.804 Mean :1.971 Mean :134.0 Mean :64327 Mean :214.65 Mean :127460
3rd Qu.:3.000 3rd Qu.:16.060 3rd Qu.: 2.195 3rd Qu.:165.0 3rd Qu.: 80691 3rd Qu.:240.34 3rd Qu.:171344
Max. :3.000 Max. :77.780 Max. :10.000 Max. :400.0 Max. :215966 Max. :1838.78 Max. :462952
      ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2465
Median : 0.00 Median :10363
Mean :17.88 Mean :25032
3rd Qu.:20.00 3rd Qu.:27935
Max. :155.00 Max. :331432
> cor(reorg2004)
      fjuri    fvd  UTATO    sauti   chara    cons    pmda    ugpto    DISPO
fjuri 1.0000000 -0.53510780 0.36568572 0.3239186 0.3110515 0.15138804 0.41638789 -0.11308902 0.12272730
fvd -0.5351078 1.00000000 -0.26116991 -0.2507658 -0.2330592 -0.12549888 -0.24183359 -0.03503573 -0.10645498
UTATO 0.3656857 -0.26116991 1.00000000 0.1056694 0.3447256 0.05184989 0.37784351 0.05962911 0.41552616
sauti 0.3239186 -0.25076575 0.10566937 1.0000000 0.8482439 0.42384894 0.71974635 0.32010435 0.07083610
chara 0.3110515 -0.23305917 0.34472564 0.8482439 1.0000000 0.39887451 0.82760994 0.30589570 0.12019265
cons 0.1513880 -0.12549888 0.05184989 0.4238489 0.3988745 1.0000000 0.34684458 0.21499396 0.01846251
pmda 0.4163879 -0.24183359 0.37784351 0.7197463 0.8276099 0.34684458 1.0000000 0.26111270 0.04677072
ugpto -0.1130890 -0.03503573 0.05962911 0.3201043 0.3058957 0.21499396 0.26111270 1.0000000 -0.03141057
DISPO 0.1227273 -0.10645498 0.41552616 0.0708361 0.1201926 0.01846251 0.04677072 -0.03141057 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2004[,3]<-reorg2004[,3]*16
> reorg2004[,5]<-reorg2004[,5]/1000
> reorg2004[,6]<-reorg2004[,6]/10
> reorg2004[,7]<-reorg2004[,7]/1000
> reorg2004[,9]<-reorg2004[,9]/1000
> reorg2004acp<-princomp(reorg2004)
> summary(reorg2004acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 116.3938660 47.1003376 45.03800073 31.85040797 30.00237529 20.29133362 15.86422723 13.339604814

```

```

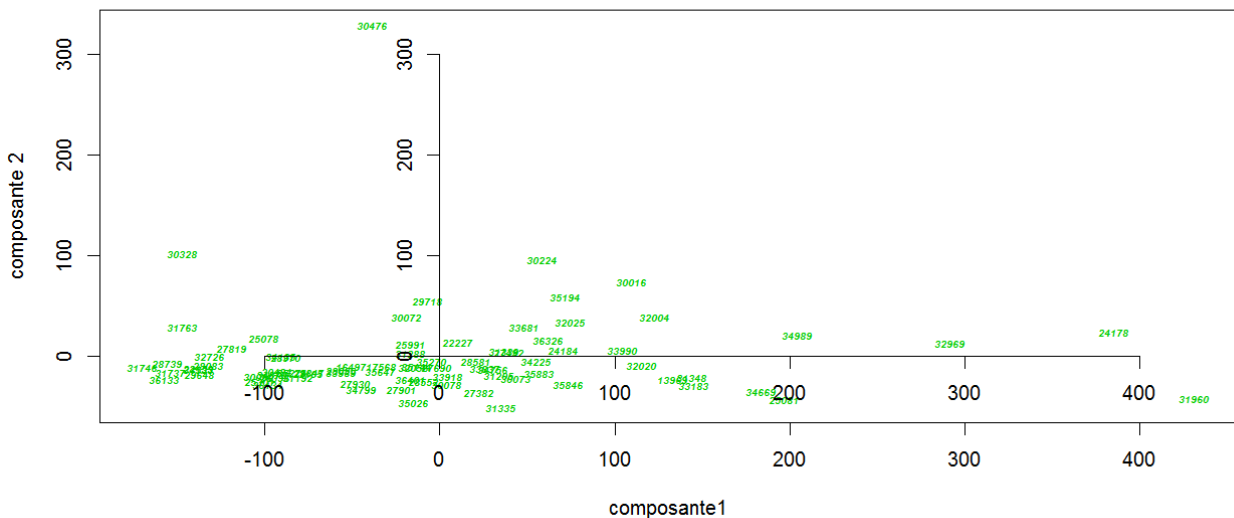
Proportion of Variance 0.6592032 0.1079462 0.09870004 0.04936159 0.04379963 0.02003458 0.01224608 0.008658548
Cumulative Proportion 0.6592032 0.7671494 0.86584942 0.91521101 0.95901064 0.97904522 0.99129130 0.999949845
Comp.9

```

```

Standard deviation 1.015262e+00
Proportion of Variance 5.015516e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2004acp$scores[,1],reorg2004acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2004)[[1]]
> text(reorg2004acp$scores[,1],reorg2004acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2005.csv', header=T, dec=',', sep=',')
> rownames(reorg2005)<-reorg2005[,1]
> reorg2005<-reorg2005[,4:12]
> #Etude sommaire
> summary(reorg2005)
  fjuri    fvd  UTATO    sauti   chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :22.5 Min. : 8592 Min. : 0.00 Min. :12562
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.:35332 1st Qu.: 15.64 1st Qu.: 54079
Median :0.000 Median :1.715 Median :1.205 Median :115.0 Median :48266 Median : 91.62 Median :94755
Mean :1.321 Mean :9.337 Mean :1.688 Mean :129.0 Mean :59770 Mean :225.03 Mean :122370
3rd Qu.:3.000 3rd Qu.:15.200 3rd Qu.:2.053 3rd Qu.:165.0 3rd Qu.: 74780 3rd Qu.:229.62 3rd Qu.:159935
Max. :3.000 Max. :77.780 Max. :4.930 Max. :400.0 Max. :222383 Max. :1689.70 Max. :536738

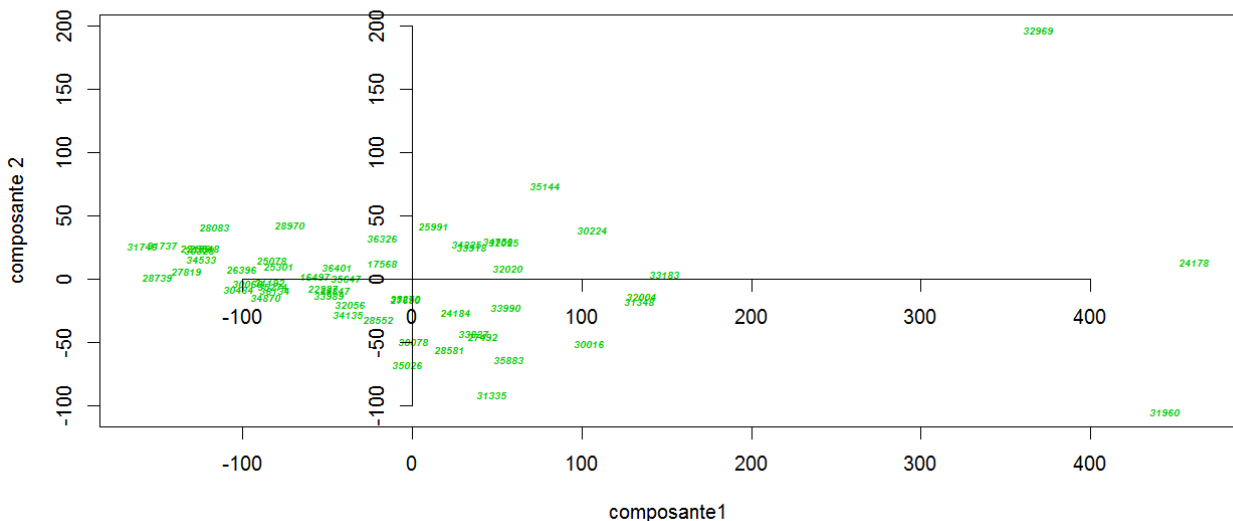
  ugpto    DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 435.5
Median : 0.00 Median : 8226.5
Mean :17.90 Mean :19321.3
3rd Qu.:18.75 3rd Qu.:24240.2
Max. :155.00 Max. :146645.0
> cor(reorg2005)
  fjuri    fvd  UTATO    sauti   chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.54893688 0.4123353 0.4182234 0.3971372 0.2347463 0.4361263 -0.1585227 0.08706332
fvd -0.54893688 1.00000000 -0.3515472 -0.3809073 -0.3596055 -0.2395865 -0.3331366 -0.0362564 -0.07143895
UTATO 0.41233533 -0.35154718 1.0000000 0.5071546 0.5204233 0.3301190 0.5177371 0.3633509 0.19757914
sauti 0.41822344 -0.38090731 0.5071546 1.0000000 0.9052300 0.4468598 0.7777734 0.3422214 0.13178770
chara 0.39713723 -0.35960549 0.5204233 0.9052300 1.0000000 0.3778361 0.8409053 0.3423766 0.11339604
cons 0.23474628 -0.23958647 0.3301190 0.4468598 0.3778361 1.0000000 0.4273007 0.3310723 0.12896398
pmda 0.43612632 -0.33313656 0.5177371 0.7777734 0.8409053 0.4273007 1.0000000 0.2045884 0.17139506
ugpto -0.15852274 -0.03625640 0.3633509 0.3422214 0.3423766 0.3310723 0.2045884 1.0000000 0.12890404

```

```

DISPO 0.08706332 -0.07143895 0.1975791 0.1317877 0.1133960 0.1289640 0.1713951 0.1289040 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2005[,3]<-reorg2005[,3]*16
> reorg2005[,5]<-reorg2005[,5]/1000
> reorg2005[,6]<-reorg2005[,6]/10
> reorg2005[,7]<-reorg2005[,7]/1000
> reorg2005[,9]<-reorg2005[,9]/1000
> reorg2005acp<-princomp(reorg2005)
> summary(reorg2005acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 127.7189138 43.19870516 34.09344367 28.21308934 26.26849569 13.997743885 12.864601360
10.33863308
Proportion of Variance 0.7659731 0.08762833 0.05458142 0.03737699 0.03240212 0.009200664 0.007771337 0.00501914
Cumulative Proportion 0.7659731 0.85360139 0.90818281 0.94555980 0.97796193 0.987162591 0.994933928 0.99995307
      Comp.9
Standard deviation 9.997353e-01
Proportion of Variance 4.693244e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2005acp$scores[,1],reorg2005acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2005)[[1]]
> text(reorg2005acp$scores[,1],reorg2005acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

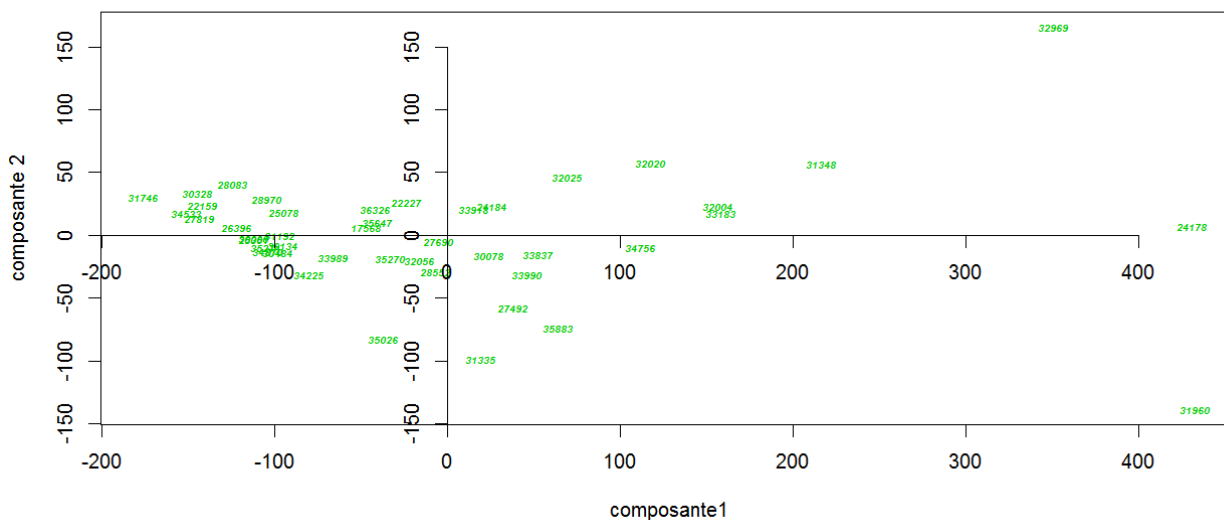
> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2006.csv', header=T, dec=',', sep=';')
> rownames(reorg2006)<-reorg2006[,1]
> reorg2006<-reorg2006[,4:12]
> #Etude sommaire
> summary(reorg2006)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. :17.5 Min. : 9233 Min. : 0.09 Min. :20171
1st Qu.:0.000 1st Qu.: 0.000 1st Qu.:1.000 1st Qu.: 85.0 1st Qu.: 30997 1st Qu.: 27.61 1st Qu.: 53111
Median :1.000 Median : 1.675 Median :1.215 Median :120.0 Median : 48914 Median :104.31 Median :103731
Mean :1.409 Mean :10.274 Mean :1.648 Mean :136.8 Mean : 62816 Mean :212.14 Mean :135778
3rd Qu.:3.000 3rd Qu.:16.670 3rd Qu.:2.000 3rd Qu.:170.0 3rd Qu.: 78299 3rd Qu.:311.25 3rd Qu.:164465
Max. :3.000 Max. :100.000 Max. :5.680 Max. :400.0 Max. :229978 Max. :1392.39 Max. :522020

```

```

  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1432
Median : 0.00 Median : 6714
Mean : 18.64 Mean : 19521
3rd Qu.: 7.50 3rd Qu.: 29338
Max. :185.00 Max. :154157
> cor(reorg2006)
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.50736223 0.397302826 0.3914628 0.3530837 0.19215024 0.3752415 -0.12295425 0.096979439
fvd -0.50736223 1.00000000 -0.287309007 -0.3897536 -0.3494974 -0.19128631 -0.2829582 -0.08423019 -0.036241545
UTATO 0.39730283 -0.28730901 1.000000000 0.4446133 0.4990090 0.29663376 0.4515566 0.34210150 -0.005979301
sauti 0.39146277 -0.38975364 0.444613287 1.0000000 0.9035491 0.58021575 0.7998792 0.38169921 0.136163273
chara 0.35308374 -0.34949743 0.499009033 0.9035491 1.0000000 0.42215950 0.8844288 0.35345265 0.189920308
cons 0.19215024 -0.19128631 0.296633762 0.5802157 0.4221595 1.00000000 0.4969721 0.54481173 -0.051396515
pmda 0.37524153 -0.28295824 0.451556598 0.7998792 0.8844288 0.49697210 1.0000000 0.25013707 0.190652379
ugbto -0.12295425 -0.08423019 0.342101498 0.3816992 0.3534526 0.54481173 0.2501371 1.00000000 -0.038945921
DISPO 0.09697944 -0.03624154 -0.005979301 0.1361633 0.1899203 -0.05139651 0.1906524 -0.03894592 1.000000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2006[,3]<-reorg2006[,3]*16
> reorg2006[,5]<-reorg2006[,5]/1000
> reorg2006[,6]<-reorg2006[,6]/10
> reorg2006[,7]<-reorg2006[,7]/1000
> reorg2006[,9]<-reorg2006[,9]/1000
> reorg2006acp<-princomp(reorg2006)
> summary(reorg2006acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 142.7171214 46.42701823 34.97459276 29.00052876 21.58417120 16.77970159 12.068583150
10.333713867
Proportion of Variance 0.7959778 0.08423457 0.04780289 0.03286704 0.01820621 0.01100316 0.005691954 0.004173128
Cumulative Proportion 0.7959778 0.88021237 0.92801526 0.96088230 0.97908851 0.99009167 0.995783622 0.999956750
      Comp.9
Standard deviation 1.052010e+00
Proportion of Variance 4.325021e-05
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(reorg2006acp$scores[,1],reorg2006acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2006)[[1]]
> text(reorg2006acp$scores[,1],reorg2006acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2007.csv', header=T, dec=',', sep=',')
> rownames(reorg2007)<-reorg2007[,1]
> reorg2007<-reorg2007[,4:12]
> #Etude sommaire
> summary(reorg2007)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :37.5 Min. :16542 Min. : 0.00 Min. :27252
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.:95.0 1st Qu.:35416 1st Qu.: 19.16 1st Qu.:62245
Median :0.000 Median :2.785 Median :1.210 Median :130.0 Median :51266 Median :139.01 Median :118897
Mean :1.167 Mean :11.134 Mean :1.593 Mean :150.8 Mean :67933 Mean :239.17 Mean :146810
3rd Qu.:3.000 3rd Qu.:19.168 3rd Qu.:2.098 3rd Qu.:215.0 3rd Qu.:80567 3rd Qu.:340.12 3rd Qu.:177198
Max. :3.000 Max. :38.000 Max. :3.260 Max. :400.0 Max. :232315 Max. :1186.81 Max. :541355
      ugpto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1546
Median : 0.00 Median : 21024
Mean :28.08 Mean : 44029
3rd Qu.:26.25 3rd Qu.: 46187
Max. :245.00 Max. :284950
> cor(reorg2007)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.0000000 -0.6060712 0.2451453 0.3790699 0.3540353 0.25107876 0.4909307 -0.11622530 0.33115402
fvd -0.6060712 1.0000000 -0.2626407 -0.2034130 -0.2844838 -0.26885221 -0.2885765 0.11834634 -0.11712630
UTATO 0.2451453 -0.2626407 1.0000000 0.6172806 0.6789855 0.57825608 0.6718585 0.50049495 0.38249914
sautei 0.3790699 -0.2034130 0.6172806 1.0000000 0.8671375 0.63580901 0.7339210 0.41841530 0.44557431
chara 0.3540353 -0.2844838 0.6789855 0.8671375 1.0000000 0.50549899 0.8427695 0.36973540 0.59400386
cons 0.2510788 -0.2688522 0.5782561 0.6358090 0.5054990 1.0000000 0.5016966 0.61753901 0.06336883
pmda 0.4909307 -0.2885765 0.6718585 0.7339210 0.8427695 0.50169656 1.0000000 0.24613112 0.42939823
ugpto -0.1162253 0.1183463 0.5004950 0.4184153 0.3697354 0.61753901 0.2461311 1.0000000 -0.02681507
DISPO 0.3311540 -0.1171263 0.3824991 0.4455743 0.5940039 0.06336883 0.4293982 -0.02681507 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> reorg2007[,3]<-reorg2007[,3]*16
> reorg2007[,5]<-reorg2007[,5]/1000
> reorg2007[,6]<-reorg2007[,6]/10
> reorg2007[,7]<-reorg2007[,7]/1000
> reorg2007[,9]<-reorg2007[,9]/1000
> reorg2007acp<-princomp(reorg2007)
> summary(reorg2007acp)
Importance of components:
      Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7 Comp.8
Standard deviation 152.6459862 62.2096753 56.40249563 39.61346116 19.11206550 15.722623296 10.036220877 6.667626844

```

```

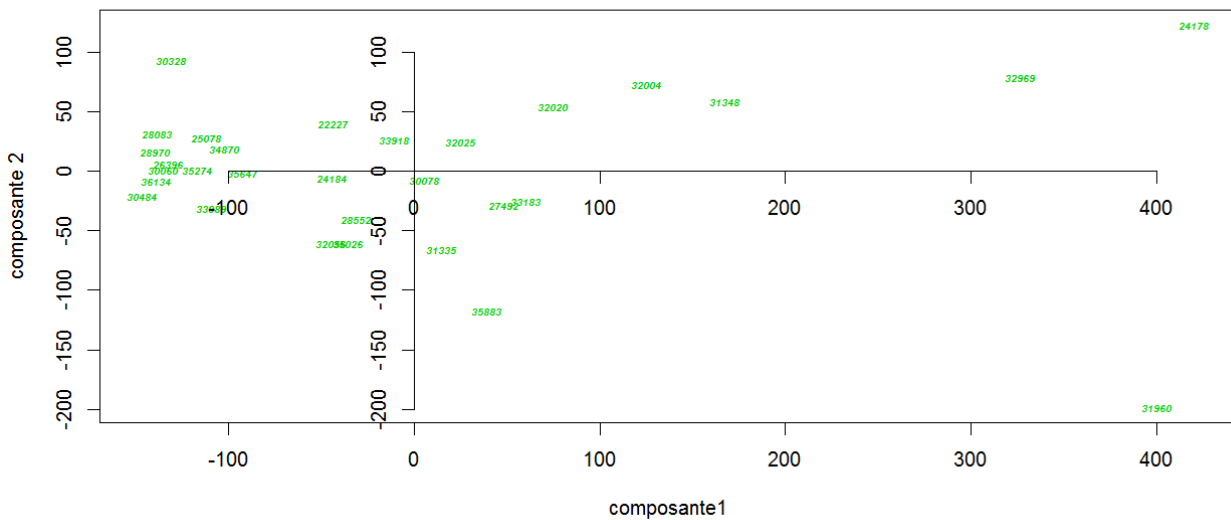
Proportion of Variance  0.7130065  0.1184237  0.09734628  0.04801847  0.01117733  0.007564369  0.003082216  0.001360396
Cumulative Proportion  0.7130065  0.8314302  0.92877647  0.97679494  0.98797227  0.995536639  0.998618856  0.999979251
Comp.9

```

```

Standard deviation  8.234418e-01
Proportion of Variance  2.074859e-05
Cumulative Proportion  1.000000e+00
> #Représentation graphique
> plot(reorg2007acp$scores[,1],reorg2007acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(reorg2007)[[1]]
> text(reorg2007acp$scores[,1],reorg2007acp$scores[,2],id,cex=0.5,font=4,col=3)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2008.csv', header=T, dec=',', sep=';')

```

```

> rownames(reorg2008)<-reorg2008[,1]

```

```

> reorg2008<-reorg2008[,4:12]

```

```

> #Etude sommaire

```

```

> summary(reorg2008)

```

```

  fjuri    fvd   UTATO   sauti   chara    cons   pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :37.5 Min. :16564 Min. : 0.00 Min. :24357
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.:87.5 1st Qu.:33324 1st Qu.: 6.81 1st Qu.:64737
Median :0.000 Median :3.745 Median :1.035 Median :130.0 Median :46426 Median :176.33 Median :87731
Mean :1.136 Mean :11.819 Mean :1.550 Mean :144.5 Mean :66935 Mean :198.24 Mean :157587
3rd Qu.:3.000 3rd Qu.:21.665 3rd Qu.:2.067 3rd Qu.:212.5 3rd Qu.:94834 3rd Qu.:309.75 3rd Qu.:205118
Max. :3.000 Max. :42.860 Max. :3.000 Max. :400.0 Max. :231993 Max. :785.48 Max. :551574

```

```

  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2057
Median : 0.00 Median : 11359
Mean : 18.75 Mean : 37962
3rd Qu.: 18.75 3rd Qu.: 35480
Max. :122.50 Max. :193551

```

```

> cor(reorg2008)

```

```

  fjuri    fvd   UTATO   sauti   chara    cons   pmda   ugpto   DISPO
fjuri 1.0000000 -0.65883470 0.3053153 0.41278201 0.23750091 0.45757124 0.34387239 -0.214916294 0.117180505
fvd -0.6588347 1.0000000 -0.2611640 -0.19356226 -0.09994627 -0.38269757 -0.09415469 0.421981598 0.172067152
UTATO 0.3053153 -0.26116403 1.0000000 0.64907720 0.70821986 0.47423281 0.75421610 0.194187959 0.361802707
sauti 0.4127820 -0.19356226 0.6490772 1.0000000 0.86693241 0.52492831 0.79849730 0.087060287 0.363187391
chara 0.2375009 -0.09994627 0.7082199 0.86693241 1.0000000 0.33781757 0.85536748 0.249407190 0.411339316
cons 0.4575712 -0.38269757 0.4742328 0.52492831 0.33781757 1.0000000 0.37046888 0.248404009 -0.098734453
pmda 0.3438724 -0.09415469 0.7542161 0.79849730 0.85536748 0.37046888 1.0000000 0.123902067 0.294292730
ugpto -0.2149163 0.42198160 0.1941880 0.08706029 0.24940719 0.24840401 0.12390207 1.000000000 0.004721011
DISPO 0.117180505 0.172067152 0.361802707 0.363187391 0.411339316 -0.098734453 0.294292730 0.004721011 1.000000000

```

```
DISPO 0.1171805 0.17206715 0.3618027 0.36318739 0.41133932 -0.09873445 0.29429273 0.004721011 1.000000000
```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```
> reorg2008[,3]<-reorg2008[,3]*16
```

```
> reorg2008[,5]<-reorg2008[,5]/1000
```

```
> reorg2008[,6]<-reorg2008[,6]/10
```

```
> reorg2008[,7]<-reorg2008[,7]/1000
```

```
> reorg2008[,9]<-reorg2008[,9]/1000
```

```
> reorg2008acp<-princomp(reorg2008)
```

```
> summary(reorg2008acp)
```

```
Importance of components:
```

|                        | Comp.1      | Comp.2      | Comp.3      | Comp.4      | Comp.5      | Comp.6       | Comp.7      | Comp.8      |
|------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Standard deviation     | 166.0437857 | 55.97998680 | 44.31703591 | 37.19139621 | 19.20369580 | 15.666941489 | 8.130471869 | 6.101102318 |
| Proportion of Variance | 0.7929486   | 0.09012917  | 0.05648605  | 0.03978183  | 0.01060643  | 0.007059407  | 0.001901215 | 0.001070573 |
| Cumulative Proportion  | 0.7929486   | 0.88307774  | 0.93956379  | 0.97934562  | 0.98995205  | 0.997011458  | 0.998912673 | 0.999983246 |

```
Comp.9
```

```
Standard deviation 7.632359e-01
```

```
Proportion of Variance 1.675395e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

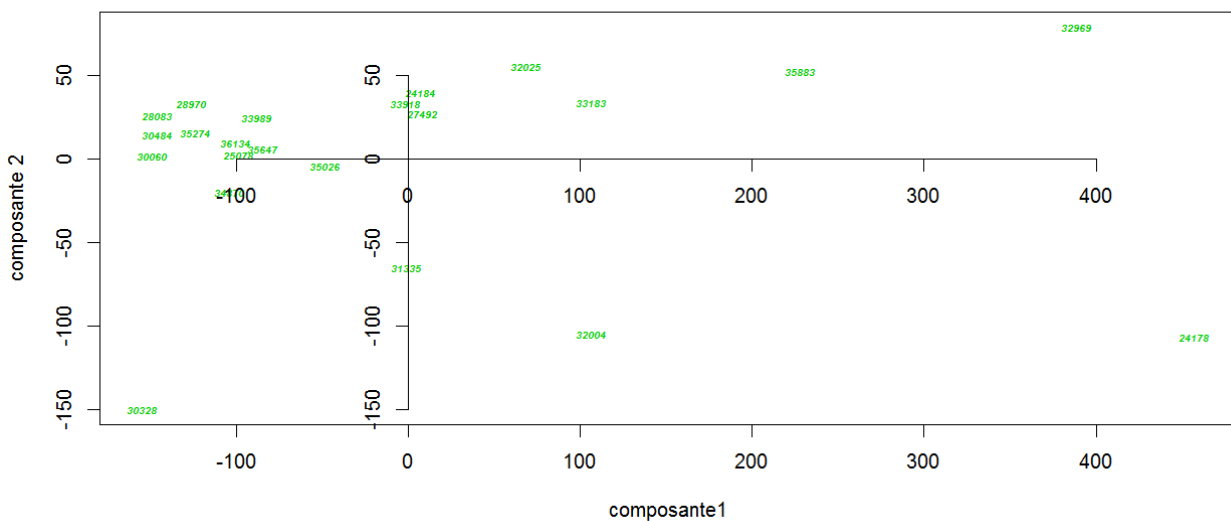
```
> plot(reorg2008acp$scores[,1],reorg2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(reorg2008)[[1]]
```

```
> text(reorg2008acp$scores[,1],reorg2008acp$scores[,2],id,cex=0.5,font=4,col=3)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorganisations OTEX1000 2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2009)<-reorg2009[,1]
```

```
> reorg2009<-reorg2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2009)
```

|          | fjuri  | fvd            | UTATO         | sauti         | chara         | cons            | pmda           |
|----------|--------|----------------|---------------|---------------|---------------|-----------------|----------------|
| Min.     | :0.000 | Min. :0.000    | Min. :1.000   | Min. :37.5    | Min. :16427   | Min. :0.000     | Min. :23445    |
| 1st Qu.: | 0.000  | 1st Qu.:0.000  | 1st Qu.:1.000 | 1st Qu.:92.5  | 1st Qu.:45820 | 1st Qu.:7.812   | 1st Qu.:70040  |
| Median:  | 1.000  | Median :2.275  | Median :1.020 | Median :130.0 | Median :55374 | Median :124.095 | Median :124138 |
| Mean:    | 1.417  | Mean :11.105   | Mean :1.542   | Mean :154.8   | Mean :81681   | Mean :191.974   | Mean :133355   |
| 3rd Qu.: | 3.000  | 3rd Qu.:20.835 | 3rd Qu.:1.758 | 3rd Qu.:225.0 | 3rd Qu.:84164 | 3rd Qu.:274.330 | 3rd Qu.:158910 |
| Max.     | :3.000 | Max. :38.240   | Max. :3.000   | Max. :400.0   | Max. :310271  | Max. :785.620   | Max. :314656   |

|          | ugbto | DISPO        |
|----------|-------|--------------|
| Min.     | :0.00 | Min. :0      |
| 1st Qu.: | 0.00  | 1st Qu.:1635 |
| Median:  | 0.00  | Median :4590 |
| Mean:    | 11.67 | Mean :34279  |



3rd Qu.: 6.25 3rd Qu.: 27583

Max. :87.50 Max. :212199

> cor(reorg2009)

```
      fjury  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjury 1.0000000 -0.7483928 0.15215493 0.3690398 0.165910690 0.386712839 0.4241976 -0.44467025 -0.3174974
fvd -0.7483928 1.0000000 -0.38710969 -0.3194998 -0.187427216 -0.464470056 -0.4260397 0.50106527 0.5550489
UTATO 0.1521549 -0.3871097 1.00000000 0.5641694 0.609327394 0.334117448 0.7205058 -0.07108488 -0.1323962
sauti 0.3690398 -0.3194998 0.56416940 1.00000000 0.919741533 0.301661927 0.8215240 0.08112160 -0.2196931
chara 0.1659107 -0.1874272 0.60932739 0.9197415 1.000000000 0.007652303 0.8114667 0.06249804 -0.1715484
cons 0.3867128 -0.4644701 0.33411745 0.3016619 0.007652303 1.000000000 0.3598743 -0.13084329 -0.2832031
pmda 0.4241976 -0.4260397 0.72050579 0.8215240 0.811466712 0.359874333 1.0000000 -0.14309648 -0.1833102
ugpto -0.4446703 0.5010653 -0.07108488 0.0811216 0.062498042 -0.130843291 -0.1430965 1.00000000 0.4278541
DISPO -0.3174974 0.5550489 -0.13239620 -0.2196931 -0.171548399 -0.283203126 -0.1833102 0.42785406 1.0000000
```

> #ACP (dizaines m<sup>2</sup>, centaines h, milliers ch, €)

> reorg2009[,3]<-reorg2009[,3]\*16

> reorg2009[,5]<-reorg2009[,5]/1000

> reorg2009[,6]<-reorg2009[,6]/10

> reorg2009[,7]<-reorg2009[,7]/1000

> reorg2009[,9]<-reorg2009[,9]/1000

> reorg2009acp<-princomp(reorg2009)

> summary(reorg2009acp)

Importance of components:

```
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 139.7330182 61.2568365 40.6639752 29.76767520 19.05107270 10.988995771 9.850482872 5.653041697
Proportion of Variance 0.7387427 0.1419725 0.0625626 0.03352625 0.01373201 0.004568895 0.003671218 0.001209092
Cumulative Proportion 0.7387427 0.8807152 0.9432778 0.97680407 0.99053608 0.995104973 0.998776191 0.999985283
```

Comp.9

Standard deviation 6.236801e-01

Proportion of Variance 1.471699e-05

Cumulative Proportion 1.000000e+00

> #Représentation graphique

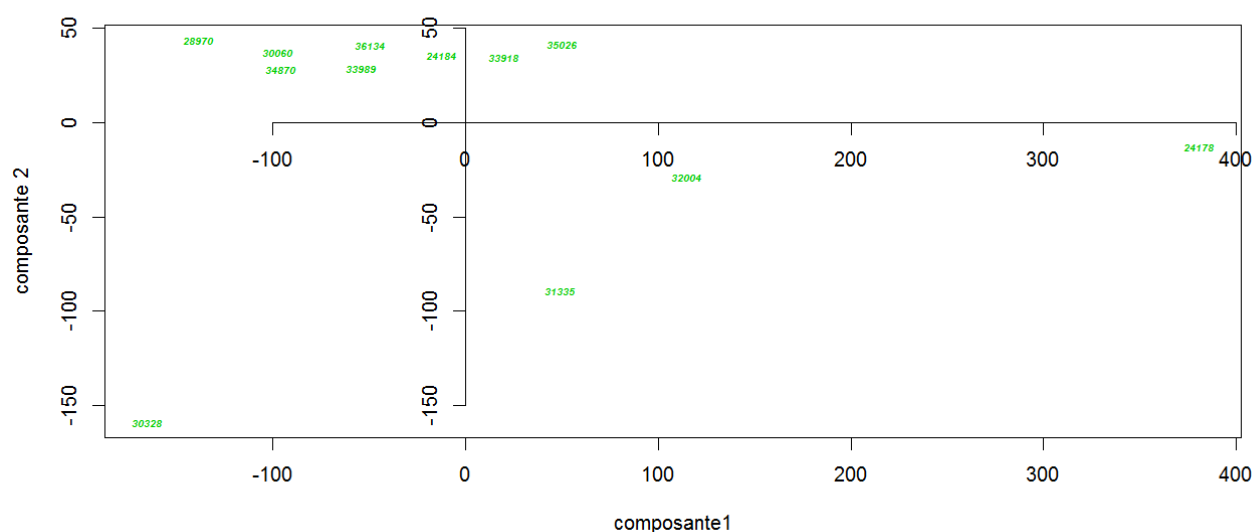
> plot(reorg2009acp\$scores[,1],reorg2009acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(reorg2009)[[1]]

> text(reorg2009acp\$scores[,1],reorg2009acp\$scores[,2],id,cex=0.5,font=4,col=3)

> axis(1,pos=0)

> axis(2,pos=0)



> rupt2000<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2000.csv', header=T, dec=',', sep=',')

> rownames(rupt2000)<-rupt2000[,1]

> rupt2000<-rupt2000[,4:12]

> #Etude sommaire

> summary(rupt2000)

```

fjuri   fvd     UTATO   sauti   chara   cons     pmda
Min. :0.000 Min. :0.0000 Min. :0.920 Min. :17.5 Min. :12781 Min. : 0.0 Min. : 0
1st Qu.:1.000 1st Qu.:0.0000 1st Qu.:1.423 1st Qu.:105.0 1st Qu.:44578 1st Qu.:29.7 1st Qu.:77510
Median :2.000 Median :0.0000 Median :2.000 Median :165.0 Median :67142 Median :104.9 Median :135850
Mean :1.467 Mean :7.1623 Mean :2.200 Mean :171.1 Mean :73313 Mean :180.9 Mean :154698
3rd Qu.:2.000 3rd Qu.:0.6825 3rd Qu.:2.360 3rd Qu.:225.0 3rd Qu.:96550 3rd Qu.:259.6 3rd Qu.:189500
Max. :3.000 Max. :88.5700 Max. :9.590 Max. :400.0 Max. :278331 Max. :1445.9 Max. :680152

```

```

ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2167
Median : 0.00 Median : 11243
Mean :12.53 Mean :25553
3rd Qu.: 2.50 3rd Qu.:36267
Max. :127.50 Max. :226830

```

```
> cor(rupt2000)
```

```

      fjuri   fvd     UTATO   sauti   chara   cons     pmda   ugbto   DISPO
fjuri 1.000000000 -0.45563123 0.09843578 0.1139693 0.07502133 -0.007746299 0.05004046 -0.02001246 -0.05347099
fvd   -0.455631230 1.000000000 -0.16116353 -0.1479535 -0.12697861 0.234656065 -0.14968823 0.05472687 0.02171232
UTATO 0.098435779 -0.16116353 1.000000000 0.3771657 0.69282433 0.221944252 0.49368865 0.04023672 0.21369116
sauti 0.113969318 -0.14795352 0.37716569 1.0000000 0.77245589 0.138454046 0.71539325 0.20178608 0.29390670
chara 0.075021329 -0.12697861 0.69282433 0.7724559 1.0000000 0.169028516 0.77305814 0.05519473 0.25747887
cons  -0.007746299 0.23465607 0.22194425 0.1384540 0.16902852 1.000000000 0.13172525 0.11609501 0.13842858
pmda  0.050040464 -0.14968823 0.49368865 0.7153933 0.77305814 0.131725249 1.00000000 0.03230302 0.12389740
ugbto -0.020012462 0.05472687 0.04023672 0.2017861 0.05519473 0.116095011 0.03230302 1.00000000 0.13960178
DISPO -0.053470990 0.02171232 0.21369116 0.2939067 0.25747887 0.138428583 0.12389740 0.13960178 1.00000000

```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```

> rupt2000[,3]<-rupt2000[,3]*16
> rupt2000[,5]<-rupt2000[,5]/1000
> rupt2000[,6]<-rupt2000[,6]/10
> rupt2000[,7]<-rupt2000[,7]/1000
> rupt2000[,9]<-rupt2000[,9]/1000
> rupt2000acp<-princomp(rupt2000)
> summary(rupt2000acp)

```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 136.3578928 53.7791771 34.14127423 27.50522580 24.50430512 21.18060750 16.18867400 11.142260419
Proportion of Variance 0.7484138 0.1164152 0.04691813 0.03045171 0.02416941 0.01805752 0.01054882 0.004997213
Cumulative Proportion 0.7484138 0.8648290 0.91174710 0.94219880 0.96636821 0.98442573 0.99497455 0.999971759

```

```
      Comp.9
```

```

Standard deviation 8.376183e-01
Proportion of Variance 2.824057e-05
Cumulative Proportion 1.000000e+00

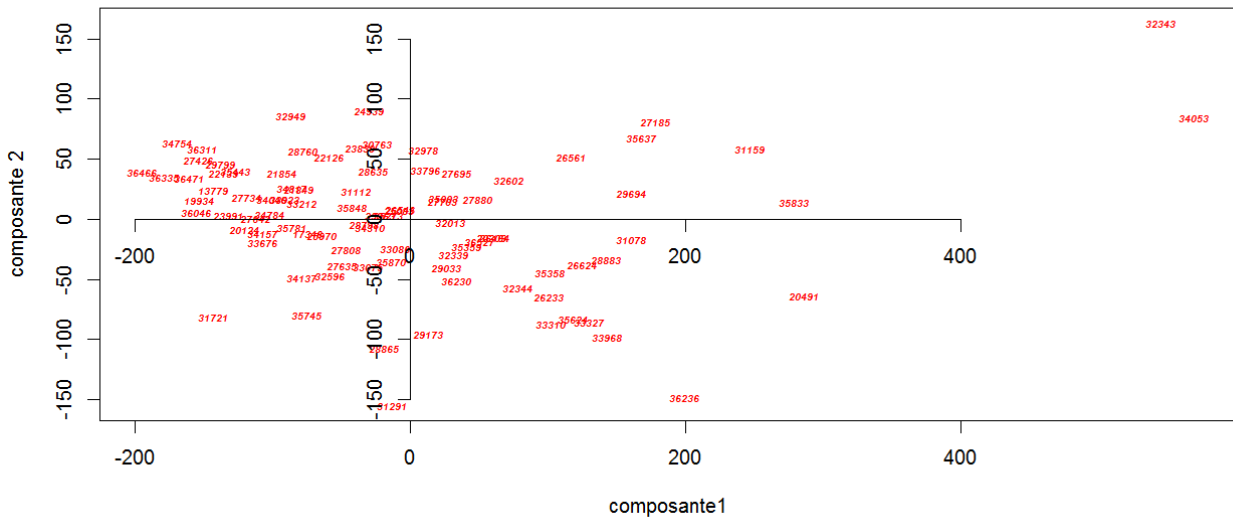
```

```
> #Représentation graphique
```

```

> plot(rupt2000acp$scores[,1],rupt2000acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2000)[[1]]
> text(rupt2000acp$scores[,1],rupt2000acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2001.csv', header=T, dec=',', sep=';')
> rownames(rupt2001)<-rupt2001[,1]
> rupt2001<-rupt2001[,4:12]
> #Etude sommaire
> summary(rupt2001)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. :0.00 Min. :0.950 Min. :17.5 Min. :14293 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.00 1st Qu.:1.278 1st Qu.:105.0 1st Qu.: 46273 1st Qu.: 23.89 1st Qu.: 82629
Median :2.000 Median :0.00 Median :2.000 Median :165.0 Median : 67216 Median :101.42 Median :149301
Mean :1.522 Mean : 6.79 Mean :2.132 Mean :171.5 Mean : 77069 Mean :170.21 Mean :165762
3rd Qu.:2.000 3rd Qu.: 0.00 3rd Qu.:2.320 3rd Qu.:225.0 3rd Qu.: 99859 3rd Qu.: 234.76 3rd Qu.:213475
Max. :3.000 Max. :88.57 Max. :9.590 Max. :400.0 Max. :283694 Max. :1791.38 Max. :626044
      ugpto      DISPO
Min. : 0.00 Min. : 0.0
1st Qu.: 0.00 1st Qu.: 799.5
Median : 0.00 Median :13213.0
Mean :12.67 Mean :27736.0
3rd Qu.: 2.50 3rd Qu.:38513.5
Max. :132.50 Max. :206930.0
> cor(rupt2001)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.000000000 -0.42950698 0.106093380 0.1336704 0.126381883 0.01682436 -0.001528188 -0.016331338 -0.01366318
fvd -0.429506985 1.000000000 -0.161650189 -0.1567694 -0.133629675 0.31157481 0.019804948 0.076166952 -0.01743534
UTATO 0.106093380 -0.16165019 1.000000000 0.3824332 0.710275753 0.15940459 0.471208247 0.007774614 0.30708095
sauti 0.133670438 -0.15676944 0.382433206 1.0000000 0.771769003 0.16731030 0.711835411 0.188450062 0.23746138
chara 0.126381883 -0.13362968 0.710275753 0.7717690 1.000000000 0.18106456 0.728278295 0.009997999 0.30764706
cons 0.016824364 0.31157481 0.159404593 0.1673103 0.181064560 1.000000000 0.299865179 0.142572776 0.09395761
pmda -0.001528188 0.01980495 0.471208247 0.7118354 0.728278295 0.29986518 1.000000000 -0.006042924 0.16976521
ugpto -0.016331338 0.07616695 0.007774614 0.1884501 0.009997999 0.14257278 -0.006042924 1.000000000 0.16552911
DISPO -0.013663183 -0.01743534 0.307080951 0.2374614 0.307647062 0.09395761 0.169765212 0.165529113 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> rupt2001[,3]<-rupt2001[,3]*16
> rupt2001[,5]<-rupt2001[,5]/1000
> rupt2001[,6]<-rupt2001[,6]/10
> rupt2001[,7]<-rupt2001[,7]/1000
> rupt2001[,9]<-rupt2001[,9]/1000
> rupt2001acp<-princomp(rupt2001)
> summary(rupt2001acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 136.1565487 53.7882557 37.61565659 29.98649729 24.08267811 21.51310824 15.296531944 11.096746835

```

```

Proportion of Variance 0.7372212 0.1150524 0.05626756 0.03575792 0.02306377 0.01840463 0.009304793 0.004896797
Cumulative Proportion 0.7372212 0.8522736 0.90854121 0.94429913 0.96736290 0.98576753 0.995072323 0.999969121
Comp.9

```

```
Standard deviation 8.812004e-01
```

```
Proportion of Variance 3.087949e-05
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

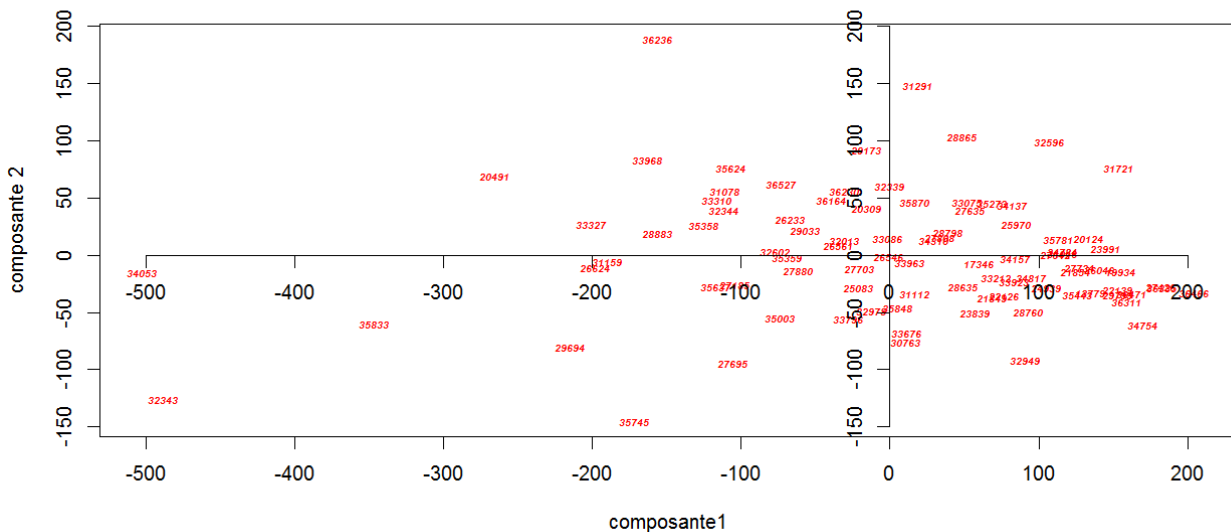
```
> plot(rupt2001acp$scores[,1],rupt2001acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2001)[[1]]
```

```
> text(rupt2001acp$scores[,1],rupt2001acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2002.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2002)<-rupt2002[,1]
```

```
> rupt2002<-rupt2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2002)
```

```

      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. :17.5 Min. :20011 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.:1.765 1st Qu.:105.0 1st Qu.: 45513 1st Qu.: 21.61 1st Qu.: 88269
Median :2.000 Median : 0.000 Median :2.000 Median :165.0 Median : 67058 Median : 96.73 Median :133499
Mean :1.734 Mean : 8.358 Mean :2.368 Mean :175.6 Mean : 74398 Mean :185.00 Mean :155259
3rd Qu.:3.000 3rd Qu.: 0.910 3rd Qu.:2.555 3rd Qu.:225.0 3rd Qu.: 90900 3rd Qu.: 282.51 3rd Qu.:184682
Max. :4.000 Max. :100.000 Max. :8.500 Max. :400.0 Max. :336026 Max. :1760.34 Max. :623894

```

```

      ugpto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1292
Median : 0.00 Median :12531
Mean :13.86 Mean :29774
3rd Qu.: 2.50 3rd Qu.:44249
Max. :185.00 Max. :234178

```

```
> cor(rupt2002)
```

```

      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.000000000 -0.41675123 0.009687774 0.04543364 -0.04464213 -0.05926285 -0.12650601 -0.05576310 -0.06531469
fvd -0.416751232 1.000000000 -0.113069678 -0.14663586 -0.11439477 0.28184383 -0.12960014 0.04951115 -0.07518942
UTATO 0.009687774 -0.11306968 1.000000000 0.39398410 0.67706289 0.07054988 0.35027960 0.07759485 -0.08729370
sauti 0.045433641 -0.14663586 0.393984102 1.000000000 0.68823166 0.08718204 0.67953387 0.23850792 0.06286548
chara -0.044642125 -0.11439477 0.677062895 0.68823166 1.000000000 0.07111039 0.72122701 0.04244721 -0.06245648
cons -0.059262850 0.28184383 0.070549880 0.08718204 0.07111039 1.000000000 0.05097355 0.25366624 -0.08099550
pmda -0.126506014 -0.12960014 0.350279604 0.67953387 0.72122701 0.05097355 1.000000000 -0.04951231 -0.10553230
ugpto -0.055763098 0.04951115 0.077594847 0.23850792 0.04244721 0.25366624 -0.04951231 1.000000000 0.18999706
DISPO -0.065314692 -0.075189422 -0.087293703 -0.062865483 -0.062456484 -0.080995505 -0.105532306 0.189997061 1.000000000

```

```

DISPO -0.065314693 -0.07518942 -0.087293697 0.06286548 -0.06245648 -0.08099550 -0.10553230 0.18999706 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> rupt2002[,3]<-rupt2002[,3]*16
> rupt2002[,5]<-rupt2002[,5]/1000
> rupt2002[,6]<-rupt2002[,6]/10
> rupt2002[,7]<-rupt2002[,7]/1000
> rupt2002[,9]<-rupt2002[,9]/1000
> rupt2002acp<-princomp(rupt2002)
> summary(rupt2002acp)

```

Importance of components:

|                        | Comp.1      | Comp.2     | Comp.3      | Comp.4      | Comp.5      | Comp.6      | Comp.7      | Comp.8      |
|------------------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Standard deviation     | 130.3171103 | 57.4174569 | 40.25528860 | 32.32787718 | 30.43657160 | 24.13245023 | 18.12560717 | 13.59485061 |
| Proportion of Variance | 0.6801723   | 0.1320395  | 0.06490257  | 0.04185722  | 0.03710287  | 0.02332485  | 0.01315834  | 0.00740227  |
| Cumulative Proportion  | 0.6801723   | 0.8122118  | 0.87711435  | 0.91897157  | 0.95607444  | 0.97939929  | 0.99255763  | 0.99995990  |

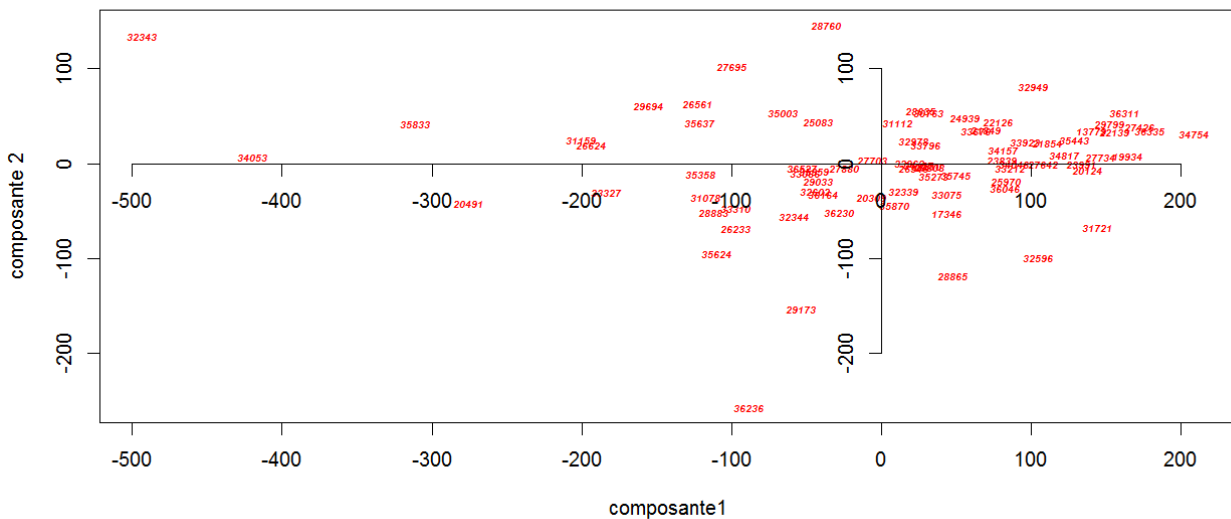
Comp.9

|                        |              |
|------------------------|--------------|
| Standard deviation     | 1.0005572627 |
| Proportion of Variance | 0.0000400959 |
| Cumulative Proportion  | 1.0000000000 |

```

> #Représentation graphique
> plot(rupt2002acp$scores[,1],rupt2002acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2002)[[1]]
> text(rupt2002acp$scores[,1],rupt2002acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2003.csv', header=T, dec=',', sep=';')
> rownames(rupt2003)<-rupt2003[,1]
> rupt2003<-rupt2003[,4:12]
> #Etude sommaire
> summary(rupt2003)

```

| fjuri         | fvd           | UTATO         | sauti         | chara         | cons          | pmda           |
|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Min. :0.000   | Min. :0.000   | Min. :1.000   | Min. :17.5    | Min. :18404   | Min. :0.0     | Min. :0        |
| 1st Qu.:2.000 | 1st Qu.:0.000 | 1st Qu.:2.000 | 1st Qu.:107.5 | 1st Qu.:49522 | 1st Qu.:32.9  | 1st Qu.:96138  |
| Median :2.000 | Median :0.000 | Median :2.000 | Median :175.0 | Median :63800 | Median :128.1 | Median :134894 |
| Mean :2.435   | Mean :9.357   | Mean :2.515   | Mean :185.0   | Mean :73711   | Mean :210.8   | Mean :150366   |
| 3rd Qu.:3.000 | 3rd Qu.:1.060 | 3rd Qu.:2.830 | 3rd Qu.:225.0 | 3rd Qu.:93352 | 3rd Qu.:306.2 | 3rd Qu.:188155 |
| Max. :4.000   | Max. :90.480  | Max. :9.630   | Max. :400.0   | Max. :246794  | Max. :1563.7  | Max. :450725   |

```

  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 7103
Median : 0.00 Median : 24697
Mean :15.12 Mean : 36520

```

3rd Qu.: 2.50 3rd Qu.: 49375  
 Max. :185.00 Max. :342809

```
> cor(rupt2003)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.00000000 -0.26019623 0.1369853138 0.09691855 -0.09189247 0.059587641 -0.06396846 -0.0569879114 0.013488848
fvd -0.26019623 1.00000000 -0.1918442858 -0.21271782 -0.19688481 0.234570295 -0.11203850 0.0507932857 -0.113019009
UTATO 0.13698531 -0.19184429 1.0000000000 0.30392262 0.66150343 -0.055202613 0.42990763 -0.0003759056 -0.003792654
sauti 0.09691855 -0.21271782 0.3039226227 1.00000000 0.70983180 0.063859412 0.65103606 0.2096356537 0.173784389
chara -0.09189247 -0.19688481 0.6615034341 0.70983180 1.00000000 0.073373809 0.70350923 0.2027878248 0.129438342
cons 0.05958764 0.23457030 -0.0552026132 0.06385941 0.07337381 1.00000000 0.17140032 0.2200009993 -0.008741981
pmda -0.06396846 -0.11203850 0.4299076342 0.65103606 0.70350923 0.171400324 1.00000000 0.0368881770 -0.099519232
ugpto -0.05698791 0.05079329 -0.0003759056 0.20963565 0.20278782 0.220000999 0.03688818 1.0000000000 0.186962965
DISPO 0.01348885 -0.11301901 -0.0037926541 0.17378439 0.12943834 -0.008741981 -0.09951923 0.1869629648 1.000000000
```

> #ACP (dizaines m<sup>2</sup>, centaines h, milliers ch, €)

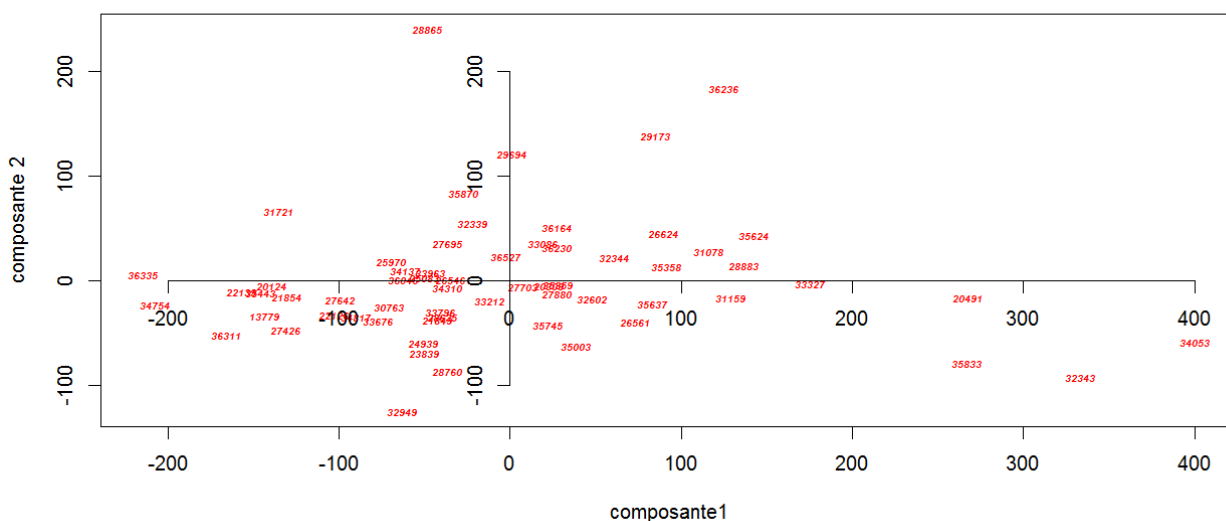
```
> rupt2003[,3]<-rupt2003[,3]*16
> rupt2003[,5]<-rupt2003[,5]/1000
> rupt2003[,6]<-rupt2003[,6]/10
> rupt2003[,7]<-rupt2003[,7]/1000
> rupt2003[,9]<-rupt2003[,9]/1000
> rupt2003acp<-princomp(rupt2003)
> summary(rupt2003acp)
```

Importance of components:

|                        | Comp.1      | Comp.2     | Comp.3      | Comp.4      | Comp.5      | Comp.6      | Comp.7      | Comp.8       |
|------------------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Standard deviation     | 121.3113700 | 60.3519497 | 42.22830837 | 35.89829279 | 29.54444305 | 23.38746216 | 19.41886323 | 13.842032858 |
| Proportion of Variance | 0.6283615   | 0.1555210  | 0.07614018  | 0.05502425  | 0.03726989  | 0.02335462  | 0.01610105  | 0.008180998  |
| Cumulative Proportion  | 0.6283615   | 0.7838825  | 0.86002271  | 0.91504697  | 0.95231686  | 0.97567148  | 0.99177252  | 0.999953523  |

Comp.9  
 Standard deviation 1.043316e+00  
 Proportion of Variance 4.647701e-05  
 Cumulative Proportion 1.000000e+00

```
> #Représentation graphique
> plot(rupt2003acp$scores[,1],rupt2003acp$scores[,2],type="n",xlab="composante 1",ylab="composante 2")
> id<-dimnames(rupt2003)[[1]]
> text(rupt2003acp$scores[,1],rupt2003acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)
```



```
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2004.csv', header=T, dec=',', sep=',')
> rownames(rupt2004)<-rupt2004[,1]
> rupt2004<-rupt2004[,4:12]
> #Etude sommaire
> summary(rupt2004)
```

```

fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. :28602 Min. :0.00 Min. :38895
1st Qu.:1.250 1st Qu.:0.000 1st Qu.:1.857 1st Qu.:117.5 1st Qu.:56268 1st Qu.:86.86 1st Qu.:111813
Median :2.000 Median :0.000 Median :2.000 Median :180.0 Median :69719 Median :170.24 Median :150480
Mean :1.846 Mean :8.015 Mean :2.499 Mean :187.2 Mean :85762 Mean :239.71 Mean :159676
3rd Qu.:2.000 3rd Qu.:2.348 3rd Qu.:2.820 3rd Qu.:225.0 3rd Qu.:105281 3rd Qu.:339.14 3rd Qu.:175807
Max. :5.000 Max. :64.710 Max. :8.040 Max. :400.0 Max. :229614 Max. :740.33 Max. :429957

```

```

ugbto   DISPO
Min. :0.00 Min. :0
1st Qu.:0.00 1st Qu.:4193
Median :0.00 Median :13296
Mean :14.71 Mean :28063
3rd Qu.:2.50 3rd Qu.:24729
Max. :175.00 Max. :125124

```

```
> cor(rupt2004)
```

```

      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.0000000 -0.5059803 -0.28072827 -0.13977400 -0.27590999 -0.10821926 -0.32074579 -0.32276851 -0.1847261
fvd   -0.5059803 1.0000000 -0.21717433 -0.33409454 -0.26950729 -0.11742246 -0.13661893 0.19568189 -0.2435760
UTATO -0.2807283 -0.2171743 1.0000000 0.30446756 0.81137174 -0.03379842 0.46311585 -0.03255954 0.3851870
sauti -0.1397740 -0.3340945 0.30446756 1.0000000 0.68878084 0.02647701 0.83961956 -0.03230164 0.4409419
chara -0.2759100 -0.2695073 0.81137174 0.68878084 1.0000000 -0.03578670 0.69688228 0.04936682 0.5177855
cons  -0.1082193 -0.1174225 -0.03379842 0.02647701 -0.03578670 1.0000000 -0.02953243 0.50163020 -0.1039032
pmda  -0.3207458 -0.1366189 0.46311585 0.83961956 0.69688228 -0.02953243 1.0000000 -0.07795046 0.3461687
ugbto -0.3227685 0.19568189 -0.03255954 -0.03230164 0.04936682 0.50163020 -0.07795046 1.0000000 0.3331439
DISPO -0.1847261 -0.2435760 0.38518701 0.44094193 0.51778546 -0.10390321 0.34616867 0.33314387 1.0000000

```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```

> rupt2004[,3]<-rupt2004[,3]*16
> rupt2004[,5]<-rupt2004[,5]/1000
> rupt2004[,6]<-rupt2004[,6]/10
> rupt2004[,7]<-rupt2004[,7]/1000
> rupt2004[,9]<-rupt2004[,9]/1000
> rupt2004acp<-princomp(rupt2004)
> summary(rupt2004acp)

```

```
Importance of components:
```

```

      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 124.9438898 45.67179976 39.43703240 34.62811624 26.77108643 17.72013282 11.367351749 8.848193823
Proportion of Variance 0.7197307 0.09616926 0.07170484 0.05528378 0.03304243 0.01447685 0.005957425 0.003609518
Cumulative Proportion 0.7197307 0.81589999 0.88760483 0.94288861 0.97593104 0.99040789 0.996365311 0.999974830

      Comp.9
Standard deviation 7.388810e-01
Proportion of Variance 2.517033e-05
Cumulative Proportion 1.000000e+00

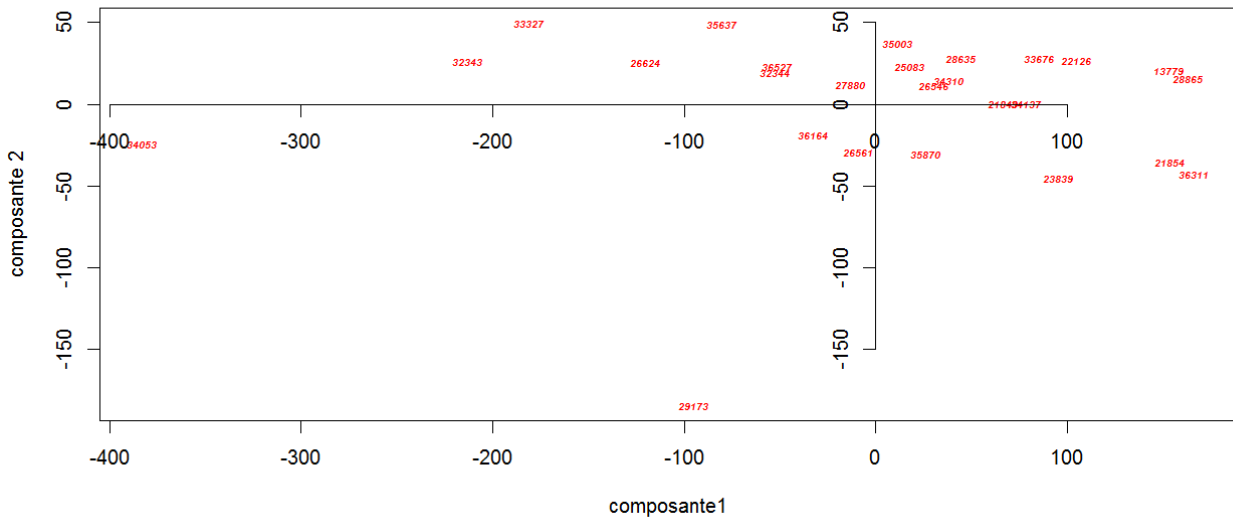
```

```
> #Représentation graphique
```

```

> plot(rupt2004acp$scores[,1],rupt2004acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2004)[[1]]
> text(rupt2004acp$scores[,1],rupt2004acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2005.csv', header=T, dec=',', sep=',')
> rownames(rupt2005)<-rupt2005[,1]
> rupt2005<-rupt2005[,4:12]
> #Etude sommaire
> summary(rupt2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. :29921 Min. : 0.00 Min. :42173
1st Qu.:2.000 1st Qu.: 0.000 1st Qu.:2.000 1st Qu.:155.0 1st Qu.: 67928 1st Qu.: 93.38 1st Qu.:132594
Median :2.000 Median :0.000 Median :2.040 Median :195.0 Median : 75922 Median :140.95 Median :164903
Mean :1.952 Mean : 2.033 Mean :2.721 Mean :202.5 Mean : 95984 Mean :211.24 Mean :201327
3rd Qu.:3.000 3rd Qu.: 0.000 3rd Qu.:3.000 3rd Qu.:225.0 3rd Qu.:127201 3rd Qu.:319.64 3rd Qu.:231236
Max. :3.000 Max. :25.760 Max. :7.010 Max. :400.0 Max. :236478 Max. :637.58 Max. :562238
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 206
Median : 0.00 Median :25462
Mean : 19.17 Mean :38066
3rd Qu.: 2.50 3rd Qu.:75560
Max. :175.00 Max. :93009
> cor(rupt2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.00000000 -0.64943006 -0.42215118 -0.2216896 -0.39677421 0.01198155 -0.30443373 -0.03034865 0.10277411
fvd -0.64943006 1.00000000 -0.02869078 -0.1413771 -0.08383431 -0.01337318 -0.00565190 -0.02885704 -0.20043373
UTATO -0.42215118 -0.02869078 1.00000000 0.1828431 0.72076756 -0.13392026 0.28325874 -0.11504102 -0.15015877
sauti -0.22168962 -0.14137714 0.18284309 1.00000000 0.67383150 -0.29198139 0.82100294 -0.12766140 0.36277044
chara -0.39677421 -0.08383431 0.72076756 0.6738315 1.00000000 -0.19939077 0.57787072 -0.07205548 0.20051407
cons 0.01198155 -0.01337318 -0.13392026 -0.2919814 -0.19939077 1.00000000 -0.18497987 0.69467893 -0.29132212
pmda -0.30443373 -0.00565190 0.28325874 0.8210029 0.57787072 -0.18497987 1.00000000 -0.26661481 0.03329122
ugpto -0.03034865 -0.02885704 -0.11504102 -0.1276614 -0.07205548 0.69467893 -0.26661481 1.00000000 0.10389236
DISPO 0.10277411 -0.20043373 -0.15015877 0.3627704 0.20051407 -0.29132212 0.03329122 0.10389236 1.00000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> rupt2005[,3]<-rupt2005[,3]*16
> rupt2005[,5]<-rupt2005[,5]/1000
> rupt2005[,6]<-rupt2005[,6]/10
> rupt2005[,7]<-rupt2005[,7]/1000
> rupt2005[,9]<-rupt2005[,9]/1000
> rupt2005acp<-princomp(rupt2005)
> summary(rupt2005acp)
Importance of components:
  Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7 Comp.8
Standard deviation 145.853940 53.643596 42.9895090 37.90162602 24.64421433 11.34775765 9.008515151 5.422929698

```



Proportion of Variance 0.752173 0.101746 0.0653441 0.05079221 0.02147392 0.00455304 0.002869378 0.001039799  
 Cumulative Proportion 0.752173 0.853919 0.9192631 0.97005526 0.99152918 0.99608222 0.998951599 0.999991398  
 Comp.9

Standard deviation 4.932337e-01

Proportion of Variance 8.601751e-06

Cumulative Proportion 1.000000e+00

> #Représentation graphique

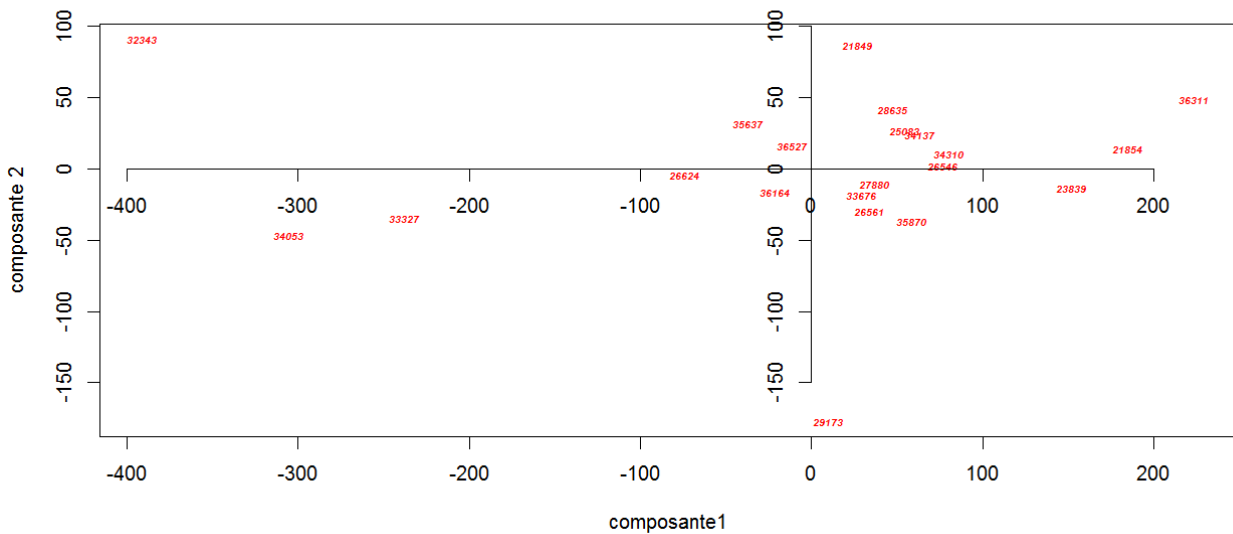
> plot(rupt2005acp\$scores[,1],rupt2005acp\$scores[,2],type="n",xlab="composante1",ylab="composante 2")

> id<-dimnames(rupt2005)[[1]]

> text(rupt2005acp\$scores[,1],rupt2005acp\$scores[,2],id,cex=0.5,font=4,col=2)

> axis(1,pos=0)

> axis(2,pos=0)



> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2006.csv', header=T, dec=',', sep=',')

> rownames(rupt2006)<-rupt2006[,1]

> rupt2006<-rupt2006[,4:12]

> #Etude sommaire

> summary(rupt2006)

| fjuri         | fvd           | UTATO         | sauti         | chara          | cons           | pmda           |
|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Min. :0.000   | Min. :0.000   | Min. :1.000   | Min. :17.5    | Min. :55455    | Min. :46.59    | Min. :39477    |
| 1st Qu.:1.000 | 1st Qu.:0.000 | 1st Qu.:2.000 | 1st Qu.:177.5 | 1st Qu.:73340  | 1st Qu.:83.08  | 1st Qu.:144078 |
| Median :2.000 | Median :0.000 | Median :2.595 | Median :210.0 | Median :91672  | Median :109.83 | Median :166483 |
| Mean :1.857   | Mean :3.419   | Mean :2.863   | Mean :219.8   | Mean :107272   | Mean :168.96   | Mean :209083   |
| 3rd Qu.:2.750 | 3rd Qu.:0.000 | 3rd Qu.:3.000 | 3rd Qu.:262.5 | 3rd Qu.:133829 | 3rd Qu.:232.35 | 3rd Qu.:242325 |
| Max. :4.000   | Max. :25.760  | Max. :6.630   | Max. :400.0   | Max. :223078   | Max. :421.49   | Max. :520468   |

ugbto DISPO

| ugbto         | DISPO         |
|---------------|---------------|
| Min. :0.000   | Min. :0       |
| 1st Qu.:0.000 | 1st Qu.:2247  |
| Median :0.000 | Median :37790 |
| Mean :14.107  | Mean :38156   |
| 3rd Qu.:1.875 | 3rd Qu.:61673 |
| Max. :165.000 | Max. :105938  |

> cor(rupt2006)

|       | fjuri      | fvd          | UTATO       | sauti       | chara       | cons         | pmda        | ugbto       | DISPO       |
|-------|------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| fjuri | 1.0000000  | -0.690909835 | -0.11002359 | -0.28713872 | -0.24728234 | -0.337748944 | -0.44315075 | -0.28326333 | 0.17405280  |
| fvd   | -0.6909098 | 1.000000000  | -0.03199328 | -0.22508964 | -0.26199862 | -0.008335255 | 0.03962715  | -0.03278364 | -0.33423076 |
| UTATO | -0.1100236 | -0.031993282 | 1.000000000 | 0.09964206  | 0.59668132  | 0.029656642  | 0.20921300  | 0.04209097  | 0.12343409  |
| sauti | -0.2871387 | -0.225089639 | 0.09964206  | 1.000000000 | 0.65896970  | 0.051377389  | 0.77697008  | 0.12901721  | 0.30626719  |
| chara | -0.2472823 | -0.261998617 | 0.59668132  | 0.65896970  | 1.000000000 | 0.017652287  | 0.63218457  | 0.15784954  | 0.11322437  |
| cons  | -0.3377489 | -0.008335255 | 0.02965664  | 0.05137739  | 0.01765229  | 1.000000000  | 0.08116219  | 0.65077239  | -0.26870879 |
| pmda  | -0.4431508 | 0.039627151  | 0.20921300  | 0.77697008  | 0.63218457  | 0.081162193  | 1.000000000 | -0.11936212 | -0.03331758 |
| ugbto | -0.2832633 | -0.032783635 | 0.04209097  | 0.12901721  | 0.15784954  | 0.650772387  | -0.11936212 | 1.000000000 | 0.11305377  |

```
DISPO 0.1740528 -0.334230758 0.12343409 0.30626719 0.11322437 -0.268708793 -0.03331758 0.11305377 1.00000000
```

```
> #ACP (dizaines m², centaines h, milliers ch, €)
```

```
> rupt2006[,3]<-rupt2006[,3]*16
```

```
> rupt2006[,5]<-rupt2006[,5]/1000
```

```
> rupt2006[,6]<-rupt2006[,6]/10
```

```
> rupt2006[,7]<-rupt2006[,7]/1000
```

```
> rupt2006[,9]<-rupt2006[,9]/1000
```

```
> rupt2006acp<-princomp(rupt2006)
```

```
> summary(rupt2006acp)
```

```
Importance of components:
```

```
Comp.1 Comp.2 Comp.3 Comp.4 Comp.5 Comp.6 Comp.7 Comp.8
```

```
Standard deviation 146.9090487 57.5320702 40.2292339 34.38122008 26.53262547 13.181480067 8.121553346 4.8675598241
```

```
Proportion of Variance 0.7530391 0.1154889 0.0564682 0.04124421 0.02456297 0.006062458 0.002301434 0.0008266906
```

```
Cumulative Proportion 0.7530391 0.8685280 0.9249962 0.96624041 0.99080338 0.996865839 0.999167274 0.9999939645
```

```
Comp.9
```

```
Standard deviation 4.159089e-01
```

```
Proportion of Variance 6.035548e-06
```

```
Cumulative Proportion 1.000000e+00
```

```
> #Représentation graphique
```

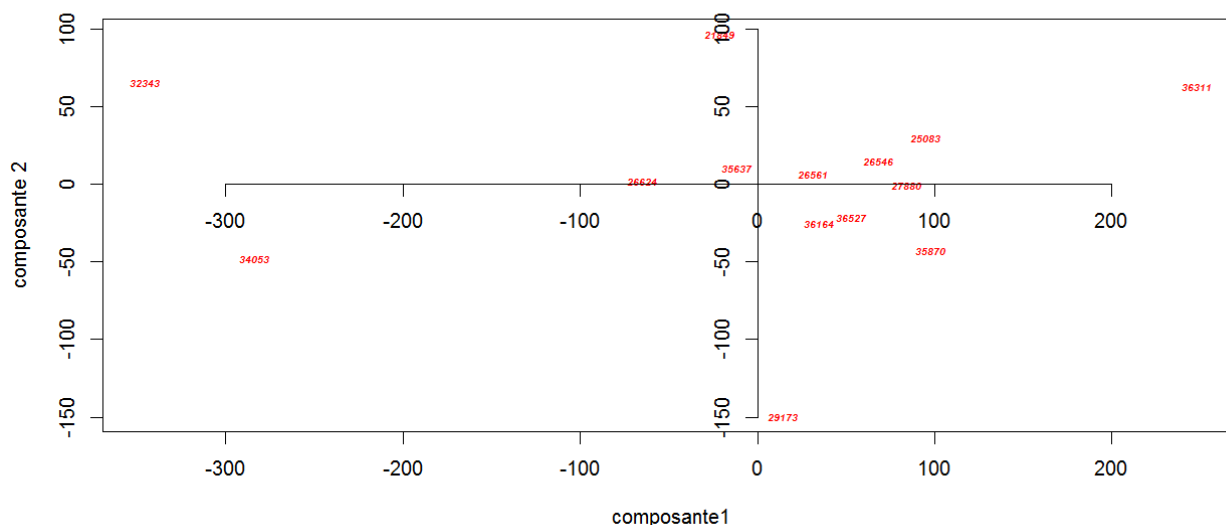
```
> plot(rupt2006acp$scores[,1],rupt2006acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
```

```
> id<-dimnames(rupt2006)[[1]]
```

```
> text(rupt2006acp$scores[,1],rupt2006acp$scores[,2],id,cex=0.5,font=4,col=2)
```

```
> axis(1,pos=0)
```

```
> axis(2,pos=0)
```



```
> rupt2007<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2007.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2007)<-rupt2007[,1]
```

```
> rupt2007<-rupt2007[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2007)
```

```
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.0 Min. :0.000 Min. :1.310 Min. :145.0 Min. :62920 Min. :25.50 Min. :124000
1st Qu.:1.0 1st Qu.:0.000 1st Qu.:2.000 1st Qu.:187.5 1st Qu.:74539 1st Qu.:56.35 1st Qu.:172094
Median :1.5 Median :0.000 Median :2.440 Median :210.0 Median :110535 Median :147.25 Median :207433
Mean :1.4 Mean :5.036 Mean :2.877 Mean :243.5 Mean :119199 Mean :170.73 Mean :215010
3rd Qu.:2.0 3rd Qu.:4.223 3rd Qu.:3.000 3rd Qu.:275.0 3rd Qu.:147536 3rd Qu.:298.96 3rd Qu.:244024
Max. :3.0 Max. :25.760 Max. :7.000 Max. :400.0 Max. :238960 Max. :339.85 Max. :358017
  ugbto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 0
Median : 0.00 Median : 28702
Mean :19.25 Mean :50503
```

3rd Qu.: 0.00 3rd Qu.: 76499  
Max. :165.00 Max. :171729

> cor(rupt2007)

```
      fjuri   fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.00000000 -0.79062982 -0.31890906 -0.01851002 -0.1686487 -0.04800739 -0.38760177 -0.23141496 0.56376036
fvd -0.79062982 1.00000000 0.07998813 -0.40735294 -0.2544759 -0.26504304 0.06004391 -0.10150733 -0.32339467
UTATO -0.31890906 0.07998813 1.00000000 0.53501907 0.7120918 -0.01988640 0.78590639 0.06546126 -0.06050599
sauti -0.01851002 -0.40735294 0.53501907 1.00000000 0.8450346 -0.04657268 0.73028998 0.06120889 -0.07042902
chara -0.16864871 -0.25447586 0.71209181 0.84503459 1.00000000 -0.19398759 0.68676059 0.18518962 0.05533210
cons -0.04800739 -0.26504304 -0.01988640 -0.04657268 -0.1939876 1.00000000 -0.10347498 0.49584710 -0.43212146
pmda -0.38760177 0.06004391 0.78590639 0.73028998 0.6867606 -0.10347498 1.00000000 -0.18831098 -0.28163652
ugpto -0.23141496 -0.10150733 0.06546126 0.06120889 0.1851896 0.49584710 -0.18831098 1.00000000 0.00925153
DISPO 0.56376036 -0.32339467 -0.06050599 -0.07042902 0.0553321 -0.43212146 -0.28163652 0.00925153 1.00000000
```

> #ACP (dizaines m<sup>2</sup>, centaines h, milliers ch, €)

```
> rupt2007[,3]<-rupt2007[,3]*16
> rupt2007[,5]<-rupt2007[,5]/1000
> rupt2007[,6]<-rupt2007[,6]/10
> rupt2007[,7]<-rupt2007[,7]/1000
> rupt2007[,9]<-rupt2007[,9]/1000
> rupt2007acp<-princomp(rupt2007)
> summary(rupt2007acp)
```

Importance of components:

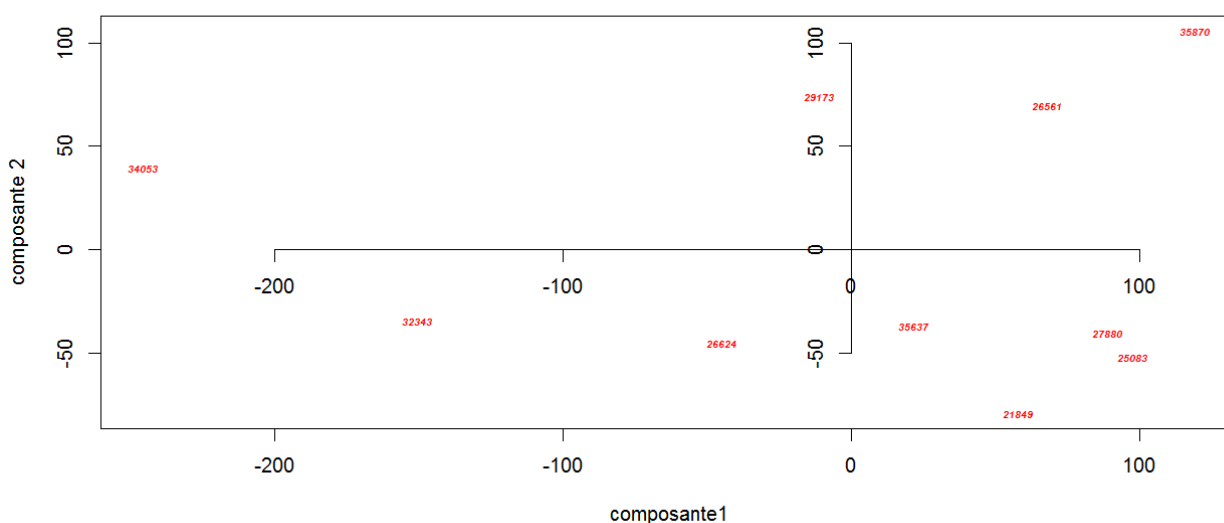
|                        | Comp.1      | Comp.2     | Comp.3     | Comp.4     | Comp.5     | Comp.6       | Comp.7      | Comp.8       |
|------------------------|-------------|------------|------------|------------|------------|--------------|-------------|--------------|
| Standard deviation     | 111.9526762 | 61.8979801 | 52.4785494 | 35.1940755 | 21.4011569 | 11.620964840 | 7.901988076 | 3.3882241285 |
| Proportion of Variance | 0.5961371   | 0.1822343  | 0.1309908  | 0.0589137  | 0.0217847  | 0.006423349  | 0.002969955 | 0.0005460362 |
| Cumulative Proportion  | 0.5961371   | 0.7783714  | 0.9093622  | 0.9682759  | 0.9900606  | 0.996483948  | 0.999453903 | 0.999999392  |

Comp.9

Standard deviation 3.573870e-02  
Proportion of Variance 6.075119e-08  
Cumulative Proportion 1.000000e+00

> #Représentation graphique

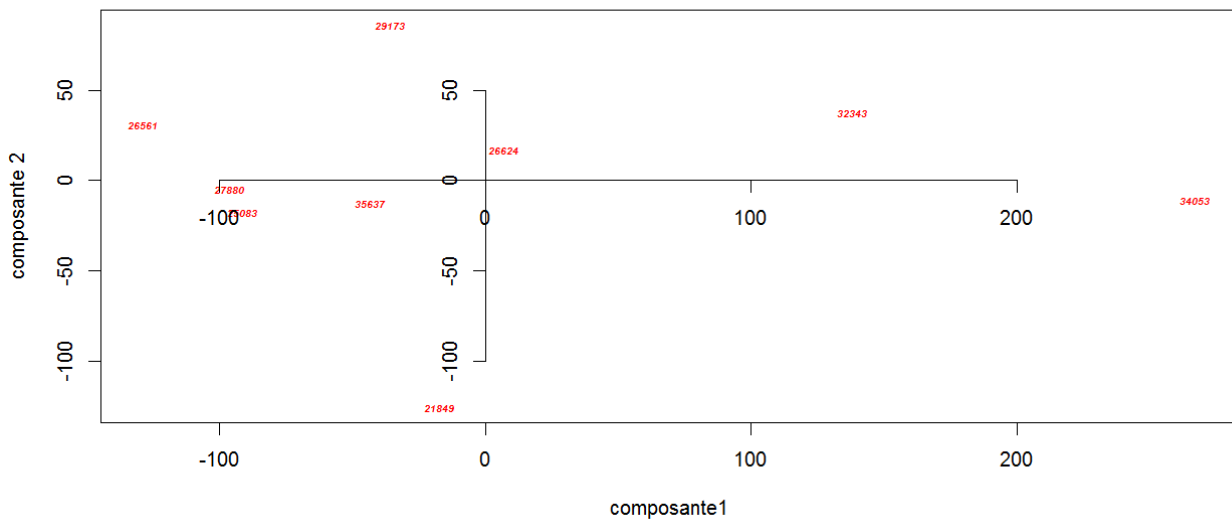
```
> plot(rupt2007acp$scores[,1],rupt2007acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2007)[[1]]
> text(rupt2007acp$scores[,1],rupt2007acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)
```



```

> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2008.csv', header=T, dec=',', sep=',')
> rownames(rupt2008)<-rupt2008[,1]
> rupt2008<-rupt2008[,4:12]
> #Etude sommaire
> summary(rupt2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.00 Min. :1.780 Min. :.145 Min. :77592 Min. : 0.00 Min. :89658
1st Qu.:1.000 1st Qu.:0.00 1st Qu.:2.000 1st Qu.:.185 1st Qu.:81266 1st Qu.:48.93 1st Qu.:155724
Median :3.000 Median :0.00 Median :2.970 Median :.225 Median :107220 Median :111.81 Median :185695
Mean :2.333 Mean :4.73 Mean :3.107 Mean :.250 Mean :118904 Mean :135.70 Mean :205656
3rd Qu.:3.000 3rd Qu.:0.63 3rd Qu.:3.000 3rd Qu.:.275 3rd Qu.:126568 3rd Qu.:270.85 3rd Qu.:270632
Max. :4.000 Max. :22.97 Max. :7.000 Max. :.400 Max. :235585 Max. :276.41 Max. :385387
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 0
Median : 0.00 Median :12821
Mean :16.94 Mean :31352
3rd Qu.: 7.50 3rd Qu.:53282
Max. :117.50 Max. :90783
> cor(rupt2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.000000000 -0.266205358 0.236091703 0.26208095 0.26477783 0.07844314 0.007984394 -0.491858852 -0.12958182
fvd -0.266205358 1.000000000 -0.087241627 -0.51188581 -0.26142759 -0.52083494 0.064439076 -0.009523765 -0.14015463
UTATO 0.236091703 -0.087241627 1.000000000 0.48368163 0.72918478 -0.31170981 0.811105653 0.005768689 0.18230885
sauti 0.262080950 -0.511885810 0.483681626 1.00000000 0.79491787 0.09437903 0.637888075 -0.015776461 -0.01349194
chara 0.264777828 -0.261427594 0.729184784 0.79491787 1.00000000 -0.44265052 0.802588388 -0.305640313 0.05726462
cons 0.078443139 -0.520834940 -0.311709806 0.09437903 -0.44265052 1.00000000 -0.334728369 0.346004790 -0.15370842
pmda 0.007984394 0.064439076 0.811105653 0.63788807 0.80258839 -0.33472837 1.000000000 -0.134723930 -0.21557131
ugpto -0.491858852 -0.009523765 0.005768689 -0.01577646 -0.30564031 0.34600479 -0.134723930 1.000000000 0.49454622
DISPO -0.129581825 -0.140154630 0.182308854 -0.01349194 0.05726462 -0.15370842 -0.215571311 0.494546216 1.000000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> rupt2008[,3]<-rupt2008[,3]*16
> rupt2008[,5]<-rupt2008[,5]/1000
> rupt2008[,6]<-rupt2008[,6]/10
> rupt2008[,7]<-rupt2008[,7]/1000
> rupt2008[,9]<-rupt2008[,9]/1000
> rupt2008acp<-princomp(rupt2008)
> summary(rupt2008acp)
Importance of components:
      Comp.1  Comp.2  Comp.3  Comp.4  Comp.5  Comp.6  Comp.7  Comp.8
Standard deviation 119.1535285 54.2156345 41.49879897 32.59715231 12.10194985 8.673377926 5.391144472 2.2213274830
Proportion of Variance 0.7036402 0.1456753 0.08535085 0.05266185 0.00725851 0.003728321 0.001440452 0.0002445468
Cumulative Proportion 0.7036402 0.8493155 0.93466632 0.98732817 0.99458668 0.998315001 0.999755453 1.0000000000
      Comp.9
Standard deviation 1.324924e-07
Proportion of Variance 8.699995e-19
Cumulative Proportion 1.000000e+00
> #Représentation graphique
> plot(rupt2008acp$scores[,1],rupt2008acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
> id<-dimnames(rupt2008)[[1]]
> text(rupt2008acp$scores[,1],rupt2008acp$scores[,2],id,cex=0.5,font=4,col=2)
> axis(1,pos=0)
> axis(2,pos=0)

```



```

> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Ruptures OTEX1000 2009.csv', header=T, dec=',', sep=',')
> rownames(rupt2009)<-rupt2009[,1]
> rupt2009<-rupt2009[,4:12]
> #Etude sommaire
> summary(rupt2009)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :3.0 Min. :0.000 Min. :1.050 Min. :145.0 Min. :98518 Min. : 0.00 Min. :119449
1st Qu.:3.0 1st Qu.: 0.000 1st Qu.:1.762 1st Qu.:167.5 1st Qu.:104286 1st Qu.: 45.77 1st Qu.:250464
Median :3.5 Median : 0.000 Median :2.500 Median :225.0 Median :113507 Median :118.45 Median :313535
Mean :3.5 Mean : 4.742 Mean :2.482 Mean :242.5 Mean :125545 Mean :121.94 Mean :271348
3rd Qu.:4.0 3rd Qu.: 4.742 3rd Qu.:3.220 3rd Qu.:300.0 3rd Qu.:134765 3rd Qu.:194.63 3rd Qu.:334419
Max. :4.0 Max. :18.970 Max. :3.880 Max. :375.0 Max. :176648 Max. :250.87 Max. :338873
  ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.:17250
Median :13.75 Median :35834
Mean :30.00 Mean :40968
3rd Qu.:43.75 3rd Qu.:59552
Max. :92.50 Max. :92204
> cor(rupt2009)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.5773503 0.01648876 0.91280108 0.3937806 0.9366974 -0.7223761 0.43000178 0.4860065
fvd -0.57735027 1.0000000 0.76022344 -0.62282521 -0.3651669 -0.7212573 0.3978795 -0.03819410 -0.6910819
UTATO 0.01648876 0.7602234 1.00000000 -0.22589474 -0.4536349 -0.1024433 -0.2642837 0.53792008 -0.2277971
sauti 0.91280108 -0.6228252 -0.22589474 1.00000000 0.7327123 0.7747207 -0.3862831 0.02378825 0.2229798
chara 0.39378062 -0.3651669 -0.45363487 0.73271235 1.0000000 0.1607713 0.3439693 -0.65604734 -0.3697066
cons 0.93669738 -0.7212573 -0.10244335 0.77472071 0.1607713 1.0000000 -0.8591396 0.58093788 0.7604939
pmda -0.72237612 0.3978795 -0.26428373 -0.38628307 0.3439693 -0.8591396 1.0000000 -0.91474245 -0.8333195
ugpto 0.43000178 -0.0381941 0.53792008 0.02378825 -0.6560473 0.5809379 -0.9147425 1.0000000 0.6982893
DISPO 0.48600648 -0.6910819 -0.22779711 0.22297982 -0.3697066 0.7604939 -0.8333195 0.69828926 1.0000000
> #ACP (dizaines m², centaines h, milliers ch, €)
> rupt2009[,3]<-rupt2009[,3]*16
> rupt2009[,5]<-rupt2009[,5]/1000
> rupt2009[,6]<-rupt2009[,6]/10
> rupt2009[,7]<-rupt2009[,7]/1000
> rupt2009[,9]<-rupt2009[,9]/1000
> rupt2009acp<-princomp(rupt2009)
Erreur dans princomp.default(rupt2009) :
'princomp' ne peut être utilisé que si le nombre d'unités est supérieur au nombre de variables
> summary(rupt2009acp)
Erreur dans summary(rupt2009acp) : objet 'rupt2009acp' introuvable

```

```
> #Représentation graphique
> plot(rupt2009acp$scores[,1],rupt2009acp$scores[,2],type="n",xlab="composante1",ylab="composante 2")
Erreur dans plot(rupt2009acp$scores[, 1], rupt2009acp$scores[, 2], type = "n", :
  objet 'rupt2009acp' introuvable
> id<-dimnames(rupt2009)[[1]]
> text(rupt2009acp$scores[,1],rupt2009acp$scores[,2],id,cex=0.5,font=4,col=2)
Erreur dans text(rupt2009acp$scores[, 1], rupt2009acp$scores[, 2], id, cex = 0.5, :
  objet 'rupt2009acp' introuvable
> axis(1,pos=0)
Erreur dans axis(1, pos = 0) : plot.new has not been called yet
> axis(2,pos=0)
Erreur dans axis(2, pos = 0) : plot.new has not been called yet
>
```

Convergence des assimilations et des reliquats et défauts des exploitations OTEX 1000

| stable Aa | fvd | UTATO | sauti | chara | cons    | pmda  | ugbto    | DISPO |         |
|-----------|-----|-------|-------|-------|---------|-------|----------|-------|---------|
| 2001      |     | 2,74  | 0,16  | 11,02 | 4593,27 | 18,93 | 9231,55  | 1,72  | 2475,22 |
| 2002      |     | 1,70  | 0,18  | 13,95 | 5913,86 | 23,74 | 13981,51 | 1,57  | 3674,31 |
| 2003      |     | 2,69  | 0,19  | 11,19 | 4844,80 | 24,53 | 9142,23  | 1,91  | 2026,19 |
| 2004      |     | 1,83  | 0,24  | 11,41 | 5181,48 | 33,62 | 11986,50 | 1,81  | 3356,73 |
| 2005      |     | 1,82  | 0,21  | 10,04 | 5215,18 | 23,97 | 11061,97 | 1,89  | 3079,96 |
| 2006      |     | 1,99  | 0,19  | 12,94 | 6106,64 | 24,83 | 19876,39 | 1,81  | 4282,93 |
| 2007      |     | 1,76  | 0,19  | 12,44 | 5401,58 | 22,18 | 13851,98 | 1,03  | 4105,06 |
| 2008      |     | 3,44  | 0,28  | 13,59 | 6800,45 | 33,02 | 14250,92 | 1,71  | 3317,42 |
| 2009      |     | 2,44  | 0,25  | 13,62 | 6313,18 | 35,69 | 16059,95 | 1,60  | 3886,41 |
|           |     | 0,30  | 0,04  | 0,27  | 0,08    | 0,08  | 0,07     | 0,70  | 0,21    |
|           |     | 0,03  | 0,13  | 0,96  | 0,34    | 0,16  | 0,45     | 0,77  | 0,12    |
|           |     | 1,22  | 0,03  | 0,54  | 0,04    | 0,07  | 0,21     | 1,12  | 0,01    |
|           |     | 0,72  | 0,02  | 0,29  | 0,05    | 0,27  | 0,06     | 0,70  | 0,07    |
| st/ré     |     | 0,81  | 0,22  | 0,33  | 0,43    | 0,07  | 0,55     | 0,75  | 0,31    |
|           |     | 0,50  | 0,25  | 0,60  | 0,52    | 0,68  | 0,77     | 0,42  | 2,04    |
| 2006      |     | 1,44  | 1,73  | 1,04  | 0,89    | 0,76  | 0,95     | 0,29  | 1,86    |
| 2007      |     | 1,04  | 1,22  | 0,50  | 0,58    | 1,36  | 0,57     | 0,86  | 1,17    |
|           |     | 0,88  | 0,71  | 0,28  | 0,44    | 0,25  | 0,52     | 0,62  | 0,26    |

| Réorg Aa | fvd | UTATO | sauti | chara | cons      | pmda   | ugbto     | DISPO |           |
|----------|-----|-------|-------|-------|-----------|--------|-----------|-------|-----------|
| 2001     |     | 9,23  | 4,21  | 40,88 | 58943,84  | 228,86 | 127350,91 | 2,44  | 11947,17  |
| 2002     |     | 51,29 | 1,36  | 14,55 | 17162,79  | 148,20 | 31344,45  | 2,05  | 30664,33  |
| 2003     |     | 2,20  | 5,45  | 20,88 | 132568,55 | 337,81 | 44151,67  | 1,70  | 156796,73 |
| 2004     |     | 2,54  | 13,11 | 39,11 | 102141,65 | 124,45 | 210431,77 | 2,60  | 49311,40  |
| 2005     |     | 2,26  | 0,94  | 30,03 | 12052,50  | 338,81 | 20071,77  | 2,53  | 9887,89   |
| 2006     |     | 4,01  | 0,75  | 21,48 | 11712,15  | 36,71  | 25977,84  | 4,32  | 2094,67   |
| 2007     |     | 1,22  | 0,11  | 12,01 | 6077,29   | 29,16  | 14617,86  | 3,52  | 2210,36   |
| 2008     |     | 3,30  | 0,23  | 27,17 | 11717,70  | 24,22  | 24948,67  | 1,99  | 2836,40   |
| 2009     |     | 2,76  | 0,35  | 48,25 | 14208,37  | 141,23 | 30694,99  | 2,57  | 15181,79  |
|          |     | 9,72  | 1,94  | 2,84  | 1,50      | 1,96   | 6,10      | 0,96  | 7,22      |
|          |     | 78,91 | 5,44  | 0,74  | 2,06      | 7,05   | 1,95      | 0,36  | 4,10      |
|          |     | 1,63  | 34,06 | 1,79  | 24,75     | 17,56  | 3,24      | 0,70  | 50,22     |
|          |     | 1,51  | 37,46 | 1,63  | 9,44      | 13,94  | 11,60     | 1,86  | 1,53      |
| ré/ru    |     | 0,37  | 3,76  | 1,77  | 1,57      | 17,36  | 1,25      | 1,50  | 3,16      |
|          |     | 6,80  | 1,97  | 0,88  | 0,85      | 0,80   | 1,03      | 1,67  | 0,56      |
|          |     | 1,18  | 0,65  | 0,92  | 0,81      | 3,60   | 1,10      | 7,18  | 0,82      |
|          |     | 2,37  | 0,77  | 1,03  | 0,71      | 1,65   | 1,01      | 0,29  | 0,19      |
|          |     | 34,50 | 2,06  | 3,22  | 2,32      | 11,51  | 3,69      | 0,51  | 2,76      |

| rupt Aa | fvd | UTATO | sauti | chara | cons     | pmda   | ugbto    | DISPO |          |
|---------|-----|-------|-------|-------|----------|--------|----------|-------|----------|
| 2001    |     | 0,95  | 2,17  | 14,40 | 39316,74 | 116,89 | 20883,69 | 2,54  | 1654,03  |
| 2002    |     | 0,65  | 0,25  | 19,70 | 8347,22  | 21,03  | 16043,74 | 5,73  | 7479,08  |
| 2003    |     | 1,35  | 0,16  | 11,67 | 5356,80  | 19,24  | 13628,34 | 2,44  | 3122,07  |
| 2004    |     | 1,68  | 0,35  | 23,99 | 10817,54 | 8,93   | 18141,21 | 1,40  | 32288,01 |
| 2005    |     | 6,06  | 0,25  | 17,01 | 7677,61  | 19,52  | 16120,71 | 1,69  | 3129,44  |
| 2006    |     | 0,59  | 0,38  | 24,34 | 13820,74 | 46,10  | 25172,30 | 2,59  | 3760,69  |
| 2007    |     | 1,03  | 0,17  | 13,04 | 7488,45  | 8,10   | 13320,51 | 0,49  | 2683,08  |
| 2008    |     | 1,39  | 0,30  | 26,33 | 16614,86 | 14,70  | 24651,46 | 6,78  | 14997,46 |
| 2009    |     | 0,08  | 0,17  | 14,99 | 6136,76  | 12,27  | 8323,53  | 5,05  | 5494,76  |
|         |     | 2,88  | 0,07  | 0,77  | 0,12     | 0,16   | 0,44     | 0,68  | 1,50     |
|         |     | 2,62  | 0,72  | 0,71  | 0,71     | 1,13   | 0,87     | 0,27  | 0,49     |
|         |     | 1,99  | 1,19  | 0,96  | 0,90     | 1,27   | 0,67     | 0,78  | 0,65     |
|         |     | 1,09  | 0,69  | 0,48  | 0,48     | 3,76   | 0,66     | 1,29  | 0,10     |
|         |     | 0,30  | 0,84  | 0,59  | 0,68     | 1,23   | 0,69     | 1,12  | 0,98     |
| st/ru   |     | 3,37  | 0,50  | 0,53  | 0,44     | 0,54   | 0,79     | 0,70  | 1,14     |
|         |     | 1,71  | 1,12  | 0,95  | 0,72     | 2,74   | 1,04     | 2,10  | 1,53     |
|         |     | 2,47  | 0,93  | 0,52  | 0,41     | 2,25   | 0,58     | 0,25  | 0,22     |
| 2009    |     | 30,50 | 1,47  | 0,91  | 1,03     | 2,91   | 1,93     | 0,32  | 0,71     |

| stable Ac | fvd | UTATO | sauti | chara | cons     | pmda   | ugbto    | DISPO |          |
|-----------|-----|-------|-------|-------|----------|--------|----------|-------|----------|
| 2001      |     | 5,31  | 0,34  | 9,84  | 8161,67  | 108,82 | 34933,11 | 2,81  | 20907,93 |
| 2002      |     | 3,96  | 0,49  | 10,95 | 10165,33 | 143,88 | 43993,94 | 3,81  | 19414,90 |
| 2003      |     | 5,49  | 0,40  | 9,59  | 8944,62  | 107,83 | 37836,70 | 3,52  | 23940,38 |
| 2004      |     | 4,66  | 0,56  | 11,07 | 9248,01  | 100,44 | 43670,02 | 3,62  | 27607,77 |
| 2005      |     | 4,44  | 0,36  | 9,31  | 8524,04  | 78,12  | 35851,71 | 4,71  | 22789,43 |
| 2006      |     | 4,62  | 0,37  | 9,99  | 8465,37  | 96,33  | 33511,15 | 4,44  | 25382,98 |
| 2007      |     | 3,02  | 0,41  | 12,44 | 9934,51  | 84,75  | 40034,72 | 2,72  | 31276,62 |
| 2008      |     | 6,25  | 0,60  | 11,83 | 11433,29 | 95,74  | 43364,00 | 4,43  | 33652,45 |
| 2009      |     | 5,40  | 0,57  | 11,45 | 14543,36 | 215,23 | 48730,77 | 2,78  | 28634,94 |

|       |  |      |      |      |      |      |      |      |      |
|-------|--|------|------|------|------|------|------|------|------|
|       |  | 0,58 | 0,08 | 0,25 | 0,14 | 0,37 | 0,27 | 0,56 | 0,65 |
|       |  | 0,08 | 0,31 | 0,82 | 0,59 | 0,71 | 0,78 | 0,88 | 0,43 |
|       |  | 1,92 | 0,07 | 0,45 | 0,07 | 0,19 | 0,65 | 1,78 | 0,21 |
|       |  | 1,59 | 0,04 | 0,31 | 0,09 | 0,56 | 0,20 | 0,43 | 0,60 |
| st/ré |  | 1,46 | 0,36 | 0,31 | 0,72 | 0,22 | 0,89 | 0,56 | 1,10 |
|       |  | 0,64 | 0,59 | 0,49 | 0,99 | 0,86 | 0,81 | 0,56 | 1,00 |
| 2007  |  | 0,34 | 1,86 | 1,12 | 1,22 | 0,84 | 1,25 | 0,32 | 0,65 |
| 2008  |  | 1,59 | 2,50 | 0,42 | 0,73 | 1,27 | 0,76 | 2,39 | 0,97 |
|       |  | 0,58 | 1,68 | 0,23 | 0,87 | 1,40 | 0,67 | 1,55 | 0,48 |

| Réorg Ac | fvd | UTATO | sauti | chara | cons      | pmda   | ugbto     | DISPO |           |
|----------|-----|-------|-------|-------|-----------|--------|-----------|-------|-----------|
| 2001     |     | 9,08  | 4,29  | 39,68 | 60440,72  | 290,72 | 128811,27 | 4,99  | 32068,22  |
| 2002     |     | 51,71 | 1,60  | 13,43 | 17358,61  | 202,32 | 56245,80  | 4,34  | 45348,50  |
| 2003     |     | 2,31  | 5,19  | 20,68 | 128748,61 | 422,09 | 55206,74  | 2,65  | 107400,62 |
| 2004     |     | 2,94  | 13,40 | 35,31 | 102279,96 | 179,95 | 216900,29 | 8,45  | 46229,45  |
| 2005     |     | 3,05  | 1,01  | 30,00 | 11776,45  | 356,71 | 40436,27  | 8,41  | 20694,58  |
| 2006     |     | 7,19  | 0,63  | 20,56 | 8549,75   | 111,66 | 41382,96  | 7,88  | 25376,17  |
| 2007     |     | 8,79  | 0,22  | 11,09 | 8150,61   | 100,49 | 31940,66  | 8,56  | 47891,35  |
| 2008     |     | 3,92  | 0,24  | 28,23 | 15557,15  | 75,11  | 57291,31  | 1,85  | 34778,89  |
| 2009     |     | 9,33  | 0,34  | 50,34 | 16629,95  | 153,30 | 73157,81  | 1,79  | 59117,86  |

|       |      |        |       |      |      |       |      |      |      |
|-------|------|--------|-------|------|------|-------|------|------|------|
|       |      | 2,54   | 1,96  | 2,59 | 1,55 | 2,11  | 2,22 | 1,29 | 1,36 |
|       |      | 12,03  | 2,25  | 0,89 | 1,52 | 1,93  | 1,09 | 0,79 | 1,28 |
|       |      | 0,15   | 12,07 | 2,39 | 9,19 | 3,85  | 0,80 | 0,80 | 3,77 |
|       |      | 1,13   | 21,61 | 2,26 | 7,13 | 1,86  | 4,21 | 3,95 | 1,13 |
| ré/ru | 2005 | 0,13   | 1,60  | 2,04 | 1,29 | 6,43  | 0,54 | 1,33 | 0,64 |
|       | 2006 | 4,73   | 0,70  | 0,89 | 0,81 | 2,48  | 1,23 | 3,84 | 1,18 |
|       | 2007 | 7,33   | 0,67  | 0,85 | 0,88 | 2,02  | 0,42 | 9,73 | 1,46 |
|       | 2008 | 1,57   | 0,75  | 1,33 | 0,71 | 0,92  | 1,60 | 0,21 | 2,04 |
|       | 2009 | 116,63 | 0,56  | 3,36 | 1,56 | 11,28 | 0,73 | 0,31 | 2,05 |

| rupt Ac | fvd | UTATO | sauti | chara | cons     | pmda   | ugbto     | DISPO |          |
|---------|-----|-------|-------|-------|----------|--------|-----------|-------|----------|
| 2001    |     | 3,58  | 2,19  | 15,33 | 39044,00 | 138,05 | 58000,20  | 3,88  | 23640,19 |
| 2002    |     | 4,30  | 0,71  | 15,07 | 11420,23 | 104,72 | 51613,08  | 5,47  | 35404,84 |
| 2003    |     | 15,90 | 0,43  | 8,65  | 14009,77 | 109,66 | 69093,62  | 3,31  | 28515,57 |
| 2004    |     | 2,60  | 0,62  | 15,59 | 14338,58 | 96,64  | 51487,32  | 2,14  | 41024,42 |
| 2005    |     | 22,67 | 0,63  | 14,67 | 9146,77  | 55,50  | 74651,42  | 6,30  | 32349,62 |
| 2006    |     | 1,52  | 0,90  | 23,04 | 10601,44 | 45,10  | 33649,92  | 2,05  | 21427,26 |
| 2007    |     | 1,20  | 0,33  | 13,04 | 9290,59  | 49,86  | 76553,68  | 0,88  | 32779,96 |
| 2008    |     | 2,50  | 0,32  | 21,23 | 22014,96 | 81,21  | 35888,97  | 8,78  | 17060,88 |
| 2009    |     | 0,08  | 0,61  | 14,99 | 10672,33 | 13,59  | 100821,39 | 5,78  | 28851,36 |

|       |  |       |      |      |      |       |      |      |      |
|-------|--|-------|------|------|------|-------|------|------|------|
|       |  | 1,48  | 0,16 | 0,64 | 0,21 | 0,79  | 0,60 | 0,72 | 0,88 |
|       |  | 0,92  | 0,69 | 0,73 | 0,89 | 1,37  | 0,85 | 0,70 | 0,55 |
|       |  | 0,28  | 0,84 | 1,08 | 0,61 | 0,71  | 0,52 | 1,42 | 0,80 |
|       |  | 1,79  | 0,90 | 0,71 | 0,64 | 1,04  | 0,85 | 1,69 | 0,67 |
| st/ru |  | 0,20  | 0,57 | 0,63 | 0,93 | 1,41  | 0,48 | 0,75 | 0,70 |
| 2006  |  | 3,04  | 0,41 | 0,43 | 0,80 | 2,14  | 1,00 | 2,17 | 1,18 |
| 2007  |  | 2,52  | 1,24 | 0,95 | 1,07 | 1,70  | 0,52 | 3,09 | 0,95 |
| 2008  |  | 2,50  | 1,88 | 0,56 | 0,52 | 1,18  | 1,21 | 0,50 | 1,97 |
|       |  | 67,50 | 0,93 | 0,76 | 1,36 | 15,84 | 0,48 | 0,48 | 0,99 |



## ANNEXE 12

### Étude alternative de la cohérence des exploitations de l'OTEX 1000 en réorganisation et en rupture sous-échantillon complet

```
> reorg2000<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2000.csv', header=T, dec=',', sep=';')
> rownames(reorg2000)<-reorg2000[,1]
> reorg2000<-reorg2000[,4:12]
> #Etude sommaire
> summary(reorg2000)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.770 Min. : 2.5 Min. :10506 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:75.0 1st Qu.:36732 1st Qu.:35.71 1st Qu.:54751
Median :0.000 Median : 0.91 Median :1.500 Median :115.0 Median :56289 Median :139.28 Median :93823
Mean :1.255 Mean :11.20 Mean :2.135 Mean :126.6 Mean :65821 Mean :259.27 Mean :118088
3rd Qu.:3.000 3rd Qu.:16.67 3rd Qu.:2.500 3rd Qu.:155.0 3rd Qu.:81880 3rd Qu.:368.02 3rd Qu.:155910
Max. :3.000 Max. :100.00 Max. :12.840 Max. :400.0 Max. :406037 Max. :1448.85 Max. :584904
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 912
Median : 0.00 Median : 7175
Mean :16.99 Mean :20312
3rd Qu.:12.50 3rd Qu.:21639
Max. :175.00 Max. :348836
> cor(reorg2000)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.000000000 -0.49968827 0.1921742 0.34935434 0.2700407 0.11275931 0.31258456 -0.0059006393 0.1248068241
fvd -0.499688271 1.000000000 -0.1172042 -0.24788073 -0.1278297 -0.09173423 -0.18911175 -0.0118329874 -0.1450917878
UTATO 0.192174194 -0.11720419 1.0000000 0.07314770 0.6173138 0.35593603 0.37813126 0.0744791033 0.4687136269
sauti 0.349354345 -0.24788073 0.0731477 1.0000000 0.5699908 0.50624041 0.75795156 0.4679167073 0.0669664293
chara 0.270040652 -0.12782974 0.6173138 0.56999083 1.0000000 0.60877021 0.67971454 0.3097567733 0.4720443392
cons 0.112759309 -0.09173423 0.3559360 0.50624041 0.6087702 1.0000000 0.53132237 0.3295680499 0.3289942244
pmda 0.312584557 -0.18911175 0.3781313 0.75795156 0.6797145 0.53132237 1.0000000 0.3615061184 0.0452374753
ugbto -0.005900639 -0.01183299 0.0744791 0.46791671 0.3097568 0.32956805 0.36150612 1.0000000000 0.0009483033
DISPO 0.124806824 -0.14509179 0.4687136 0.06696643 0.4720443 0.32899422 0.04523748 0.0009483033 1.0000000000
>
> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2001.csv', header=T, dec=',', sep=';')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :0.770 Min. : 2.5 Min. : 8544 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.:75.0 1st Qu.:34599 1st Qu.:27.79 1st Qu.:58064
Median :0.000 Median : 0.91 Median :1.500 Median :115.0 Median :59331 Median :116.48 Median :105714
Mean :1.255 Mean :11.32 Mean :2.145 Mean :127.6 Mean :68086 Mean :258.11 Mean :126720
3rd Qu.:3.000 3rd Qu.:17.65 3rd Qu.:2.390 3rd Qu.:155.0 3rd Qu.:83882 3rd Qu.:357.72 3rd Qu.:164451
Max. :3.000 Max. :100.00 Max. :14.000 Max. :400.0 Max. :464294 Max. :1990.61 Max. :670888
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2015
Median : 0.00 Median : 8793
Mean :17.24 Mean :23804
3rd Qu.: 7.50 3rd Qu.:23819
Max. :165.00 Max. :590934
> cor(reorg2001)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.000000000 -0.50597945 0.21213280 0.34051061 0.2786359 0.09884674 0.3165692 -0.02056134 0.10592761
fvd -0.50597945 1.000000000 -0.12336997 -0.24246521 -0.1587876 -0.11537322 -0.1917629 0.01721884 -0.09876953
UTATO 0.21213280 -0.12336997 1.000000000 0.03210119 0.6015814 0.28604215 0.3992342 0.04222395 0.48136861
```

```
sauti 0.34051061 -0.24246521 0.03210119 1.00000000 0.5768638 0.46264053 0.7214691 0.45959491 0.04841659
chara 0.27863592 -0.15878763 0.60158141 0.57686383 1.00000000 0.55191918 0.7091926 0.27955333 0.61428865
cons 0.09884674 -0.11537322 0.28604215 0.46264053 0.5519192 1.00000000 0.5129831 0.33787888 0.24699107
pmda 0.31656921 -0.19176286 0.39923418 0.72146907 0.7091926 0.51298313 1.00000000 0.32482170 0.10812936
ugbto -0.02056134 0.01721884 0.04222395 0.45959491 0.2795533 0.33787888 0.3248217 1.00000000 -0.01900384
DISPO 0.10592761 -0.09876953 0.48136861 0.04841659 0.6142887 0.24699107 0.1081294 -0.01900384 1.00000000
>
```

```
> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2002.csv', header=T, dec=',', sep=';')
> rownames(reorg2002)<-reorg2002[,1]
> reorg2002<-reorg2002[,4:12]
> #Etude sommaire
> summary(reorg2002)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 8832 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 65.0 1st Qu.:36417 1st Qu.: 26.21 1st Qu.:54714
Median :0.000 Median : 1.52 Median :1.540 Median :115.0 Median :58051 Median :108.61 Median :93442
Mean :1.255 Mean :11.84 Mean :2.233 Mean :128.2 Mean :66483 Mean :248.86 Mean :118189
3rd Qu.:3.000 3rd Qu.:19.23 3rd Qu.:2.270 3rd Qu.:165.0 3rd Qu.:79519 3rd Qu.:344.25 3rd Qu.:152583
Max. :3.000 Max. :100.00 Max. :18.000 Max. :400.0 Max. :451616 Max. :2365.17 Max. :721088
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2183
Median : 0.00 Median : 8551
Mean :16.86 Mean :23696
3rd Qu.: 7.50 3rd Qu.:21983
Max. :155.00 Max. :534780
```

```
> cor(reorg2002)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 -0.52964683 0.20741201 0.35161097 0.2489822 0.06897113 0.3616689 -0.04389267 0.14094108
fvd -0.52964683 1.00000000 -0.17706162 -0.23218173 -0.1285372 -0.10127455 -0.1366787 0.03341479 -0.10925831
UTATO 0.20741201 -0.17706162 1.00000000 0.04952833 0.6240830 0.27351827 0.2525105 0.02566975 0.57513910
sauti 0.35161097 -0.23218173 0.04952833 1.00000000 0.5554147 0.48976308 0.7356415 0.43050262 0.12744338
chara 0.24898224 -0.12853719 0.62408301 0.55541466 1.00000000 0.47617470 0.6871487 0.26917483 0.61164838
cons 0.06897113 -0.10127455 0.27351827 0.48976308 0.4761747 1.00000000 0.4947175 0.35432020 0.26963880
pmda 0.36166891 -0.13667867 0.25251047 0.73564155 0.6871487 0.49471746 1.00000000 0.31702807 0.15016818
ugbto -0.04389267 0.03341479 0.02566975 0.43050262 0.2691748 0.35432020 0.3170281 1.00000000 -0.01850724
DISPO 0.14094108 -0.10925831 0.57513910 0.12744338 0.6116484 0.26963880 0.1501682 -0.01850724 1.00000000
>
```

```
> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2003.csv', header=T, dec=',', sep=';')
> rownames(reorg2003)<-reorg2003[,1]
> reorg2003<-reorg2003[,4:12]
> #Etude sommaire
> summary(reorg2003)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 9531 Min. : 0.0 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 75.0 1st Qu.:33355 1st Qu.: 25.9 1st Qu.:53048
Median :0.000 Median : 1.35 Median :1.500 Median :115.0 Median :54860 Median :107.0 Median :97066
Mean :1.255 Mean :11.97 Mean :2.252 Mean :128.8 Mean :64212 Mean :248.7 Mean :114410
3rd Qu.:3.000 3rd Qu.:19.23 3rd Qu.:2.400 3rd Qu.:165.0 3rd Qu.:78101 3rd Qu.:319.3 3rd Qu.:148088
Max. :3.000 Max. :100.00 Max. :21.000 Max. :400.0 Max. :486299 Max. :2879.2 Max. :707114
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1181
Median : 0.00 Median : 7893
Mean :17.41 Mean :28293
3rd Qu.: 7.50 3rd Qu.:27987
Max. :155.00 Max. :1038114
```

```
> cor(reorg2003)
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
```

```

fjuri 1.00000000 -0.53588857 0.234669198 0.35955450 0.2415660 0.1068812 0.33466494 -0.042688408 0.09415163
fvd -0.53588857 1.00000000 -0.178094805 -0.23983095 -0.1521436 -0.1214028 -0.18084123 0.016212358 -0.11176119
UTATO 0.23466920 -0.17809480 1.00000000 0.02595340 0.6803632 0.2548554 0.27292436 0.006134876 0.68031734
sauti 0.35955450 -0.23983095 0.025953398 1.00000000 0.5110023 0.4434574 0.74108063 0.422360786 -0.02174969
chara 0.24156600 -0.15214359 0.680363236 0.51100229 1.0000000 0.4367060 0.67801600 0.264901785 0.64230496
cons 0.10688117 -0.12140281 0.254855380 0.44345743 0.4367060 1.0000000 0.39397116 0.314812184 0.14260760
pmda 0.33466494 -0.18084123 0.272924364 0.74108063 0.6780160 0.3939712 1.00000000 0.304281864 0.08008017
ugbto -0.04268841 0.01621236 0.006134876 0.42236079 0.2649018 0.3148122 0.30428186 1.000000000 -0.05828595
DISPO 0.09415163 -0.11176119 0.680317340 -0.02174969 0.6423050 0.1426076 0.08008017 -0.058285953 1.00000000
>

```

```
> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2004.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2004)<-reorg2004[,1]
```

```
> reorg2004<-reorg2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2004)
```

```

      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 8342 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 75.0 1st Qu.: 34213 1st Qu.: 27.98 1st Qu.: 52656
Median :0.000 Median : 1.35 Median :1.500 Median :115.0 Median : 55452 Median :102.45 Median :103288
Mean :1.255 Mean :12.06 Mean :2.181 Mean :128.5 Mean :66071 Mean :232.86 Mean :121225
3rd Qu.:3.000 3rd Qu.: 19.23 3rd Qu.:2.380 3rd Qu.:165.0 3rd Qu.: 77393 3rd Qu.: 310.69 3rd Qu.:158755
Max. :3.000 Max. :100.00 Max. :21.130 Max. :400.0 Max. :463620 Max. :1838.78 Max. :580703
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1299
Median : 0.00 Median : 9320
Mean :17.99 Mean :26997
3rd Qu.:12.50 3rd Qu.: 24420
Max. :155.00 Max. :854329

```

```
> cor(reorg2004)
```

```

      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 -0.53885393 0.22692000 0.35531727 0.2544719 0.1106089 0.39268652 -0.04970767 0.11655310
fvd -0.53885393 1.00000000 -0.17179304 -0.23370957 -0.1430010 -0.1223075 -0.19037243 0.01732157 -0.11481762
UTATO 0.22692000 -0.17179304 1.00000000 0.03455748 0.6721516 0.2268055 0.26848466 0.00103806 0.72502501
sauti 0.35531727 -0.23370957 0.03455748 1.00000000 0.5568062 0.4552597 0.76827641 0.39690020 -0.01620078
chara 0.25447194 -0.14300104 0.67215165 0.55680621 1.0000000 0.4277535 0.68215334 0.29042799 0.56540655
cons 0.11060888 -0.12230748 0.22680547 0.45525971 0.4277535 1.0000000 0.43651582 0.26438725 0.14653492
pmda 0.39268652 -0.19037243 0.26848466 0.76827641 0.6821533 0.4365158 1.00000000 0.34050963 0.06321538
ugbto -0.04970767 0.01732157 0.00103806 0.39690020 0.2904280 0.2643873 0.34050963 1.00000000 -0.05933138
DISPO 0.11655310 -0.11481762 0.72502501 -0.01620078 0.5654065 0.1465349 0.06321538 -0.05933138 1.00000000
>

```

```
> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2005.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2005)<-reorg2005[,1]
```

```
> reorg2005<-reorg2005[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2005)
```

```

      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 8592 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 75.0 1st Qu.: 33601 1st Qu.: 24.68 1st Qu.: 51537
Median :0.000 Median : 1.35 Median :1.500 Median :115.0 Median : 56584 Median : 97.36 Median : 96765
Mean :1.255 Mean :12.07 Mean :2.146 Mean :129.4 Mean :67215 Mean :239.65 Mean :119360
3rd Qu.:3.000 3rd Qu.: 17.74 3rd Qu.:2.260 3rd Qu.:165.0 3rd Qu.: 80299 3rd Qu.: 317.20 3rd Qu.:158523
Max. :3.000 Max. :100.00 Max. :21.560 Max. :400.0 Max. :485809 Max. :1709.03 Max. :700962
      ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1351
Median : 0.00 Median : 9280
Mean :18.36 Mean :28455
3rd Qu.:17.50 3rd Qu.: 23033

```

```

Max. :165.00 Max. :836343
> cor(reorg2005)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.54202564 0.22295157 0.35228298 0.2411227 0.09787194 0.3479786 -0.074359668 0.101358553
fvd -0.54202564 1.00000000 -0.18336194 -0.23785488 -0.1398804 -0.12923557 -0.1684582 0.029828806 -0.083819997
UTATO 0.22295157 -0.18336194 1.00000000 0.02549896 0.6753983 0.20426605 0.2964302 0.016311183 0.734944789
sauti 0.35228298 -0.23785488 0.02549896 1.00000000 0.5585007 0.45823552 0.7723806 0.389620751 0.020132694
chara 0.24112273 -0.13988044 0.67539827 0.55850066 1.0000000 0.44878829 0.7362880 0.293719781 0.601698791
cons 0.09787194 -0.12923557 0.20426605 0.45823552 0.4487883 1.00000000 0.4782850 0.288632854 0.191145111
pmda 0.34797861 -0.16845816 0.29643018 0.77238062 0.7362880 0.47828495 1.0000000 0.343843056 0.193913853
ugpto -0.07435967 0.02982881 0.01631118 0.38962075 0.2937198 0.28863285 0.3438431 1.000000000 0.005207771
DISPO 0.10135855 -0.08382000 0.73494479 0.02013269 0.6016988 0.19114511 0.1939139 0.005207771 1.000000000
>

```

```

> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2006.csv', header=T, dec=',', sep=';')
> rownames(reorg2006)<-reorg2006[,1]
> reorg2006<-reorg2006[,4:12]
> #Etude sommaire
> summary(reorg2006)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.00 Min. : 2.5 Min. : 9233 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.00 1st Qu.: 75.0 1st Qu.: 32974 1st Qu.: 18.27 1st Qu.: 53540
Median :0.000 Median : 1.35 Median :1.50 Median :115.0 Median :54113 Median : 85.30 Median :104270
Mean :1.255 Mean :12.74 Mean :2.16 Mean :129.9 Mean :65963 Mean :226.12 Mean :124565
3rd Qu.:3.000 3rd Qu.:17.74 3rd Qu.:2.25 3rd Qu.:165.0 3rd Qu.: 79572 3rd Qu.: 306.46 3rd Qu.:150378
Max. :3.000 Max. :100.00 Max. :22.54 Max. :400.0 Max. :524968 Max. :1575.84 Max. :719959
      ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 1377
Median : 0.00 Median : 9727
Mean :18.67 Mean : 36717
3rd Qu.:12.50 3rd Qu.: 36725
Max. :185.00 Max. :1435133

```

```

> cor(reorg2006)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugpto   DISPO
fjuri 1.00000000 -0.53387237 0.2139307944 0.364027933 0.2423646 0.08403016 0.3695839 -0.0696914138 0.09525819
fvd -0.53387237 1.00000000 -0.1913989394 -0.261253412 -0.1590252 -0.11268590 -0.1734260 0.0225492983 -0.05732147
UTATO 0.21393079 -0.19139894 1.0000000000 -0.003349694 0.6817973 0.19125560 0.2577365 0.0002003495 0.76236251
sauti 0.36402793 -0.26125341 -0.0033496944 1.000000000 0.5207655 0.45116988 0.7663172 0.3820338944 0.00665650
chara 0.24236463 -0.15902521 0.6817973108 0.520765472 1.0000000 0.41107197 0.7291381 0.2596318902 0.69843342
cons 0.08403016 -0.11268590 0.1912556032 0.451169878 0.4110720 1.00000000 0.4329452 0.3461624328 0.18120209
pmda 0.36958394 -0.17342595 0.2577364511 0.766317244 0.7291381 0.43294522 1.0000000 0.3256889139 0.23875355
ugpto -0.06969141 0.02254930 0.0002003495 0.382033894 0.2596319 0.34616243 0.3256889 1.0000000000 0.01919075
DISPO 0.09525819 -0.05732147 0.7623625072 0.006656500 0.6984334 0.18120209 0.2387536 0.0191907533 1.00000000
>

```

```

> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2007.csv', header=T, dec=',', sep=';')
> rownames(reorg2007)<-reorg2007[,1]
> reorg2007<-reorg2007[,4:12]
> #Etude sommaire
> summary(reorg2007)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. : 5945 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 75.0 1st Qu.: 33957 1st Qu.: 14.96 1st Qu.: 56978
Median :0.000 Median : 1.35 Median :1.500 Median :115.0 Median :53417 Median : 91.33 Median :108730
Mean :1.255 Mean :13.35 Mean :2.222 Mean :131.4 Mean :67050 Mean :228.96 Mean :124673
3rd Qu.:3.000 3rd Qu.:22.73 3rd Qu.:2.410 3rd Qu.:165.0 3rd Qu.: 78385 3rd Qu.: 315.29 3rd Qu.:157129
Max. :3.000 Max. :100.00 Max. :20.630 Max. :400.0 Max. :562728 Max. :1661.27 Max. :684207
      ugpto   DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3003

```

Median : 0.00 Median : 13775  
Mean : 19.27 Mean : 45521  
3rd Qu.: 12.50 3rd Qu.: 43525  
Max. : 245.00 Max. : 1423342

```
> cor(reorg2007)
      fjuri   fvd  UTATO   sauti  chara   cons   pmda  ugbto  DISPO
fjuri 1.00000000 -0.55509596 0.20924020 0.37446595 0.2553591 0.1342640 0.3963039 -0.06420665 0.13364057
fvd -0.55509596 1.00000000 -0.19105458 -0.24675819 -0.1617268 -0.1340605 -0.1839274 0.04205154 -0.09040996
UTATO 0.20924020 -0.19105458 1.00000000 -0.02835389 0.6717607 0.2941129 0.2576975 -0.01055678 0.67857324
sauti 0.37446595 -0.24675819 -0.02835389 1.00000000 0.4941914 0.4127738 0.7688229 0.38497545 0.04022960
chara 0.25535910 -0.16172682 0.67176073 0.49419144 1.0000000 0.4064022 0.6750485 0.23514108 0.71643563
cons 0.13426402 -0.13406047 0.29411290 0.41277380 0.4064022 1.0000000 0.4792582 0.33449842 0.12960290
pmda 0.39630387 -0.18392740 0.25769747 0.76882291 0.6750485 0.4792582 1.0000000 0.30895230 0.19165808
ugbto -0.06420665 0.04205154 -0.01055678 0.38497545 0.2351411 0.3344984 0.3089523 1.00000000 -0.01745598
DISPO 0.13364057 -0.09040996 0.67857324 0.04022960 0.7164356 0.1296029 0.1916581 -0.01745598 1.00000000
>
```

```
> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2008.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2008)<-reorg2008[,1]
```

```
> reorg2008<-reorg2008[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2008)
```

```
      fjuri   fvd  UTATO   sauti  chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. : 1.000 Min. : 2.5 Min. : 7937 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 75.0 1st Qu.: 35531 1st Qu.: 16.76 1st Qu.: 60299
Median :0.000 Median : 1.35 Median : 1.550 Median :115.0 Median : 57975 Median : 94.04 Median :107393
Mean :1.255 Mean : 14.28 Mean : 2.297 Mean :132.3 Mean : 69528 Mean : 221.22 Mean :132901
3rd Qu.:3.000 3rd Qu.: 23.33 3rd Qu.: 2.420 3rd Qu.:165.0 3rd Qu.: 79217 3rd Qu.: 293.51 3rd Qu.:170410
Max. :3.000 Max. :100.00 Max. :25.150 Max. :400.0 Max. :474348 Max. :1755.22 Max. :876100
```

```
      ugbto  DISPO
```

```
Min. : 0.0 Min. : 0
```

```
1st Qu.: 0.0 1st Qu.: 2411
```

```
Median : 0.0 Median :12983
```

```
Mean :19.4 Mean :38650
```

```
3rd Qu.: 7.5 3rd Qu.: 35646
```

```
Max. :215.0 Max. :990922
```

```
> cor(reorg2008)
```

```
      fjuri   fvd  UTATO   sauti  chara   cons   pmda  ugbto  DISPO
fjuri 1.00000000 -0.55428419 0.18622589 0.38045519 0.2353747 0.18256791 0.3387630 -0.06086721 0.11158653
fvd -0.55428419 1.00000000 -0.17896981 -0.26846039 -0.1400143 -0.17495157 -0.1453020 0.03934771 -0.08190064
UTATO 0.18622589 -0.17896981 1.00000000 -0.03752416 0.6143879 0.31943344 0.2758649 -0.02333064 0.69261292
sauti 0.38045519 -0.26846039 -0.03752416 1.00000000 0.5659386 0.37202084 0.7710129 0.36102490 0.01294732
chara 0.23537470 -0.14001434 0.61438793 0.56593861 1.0000000 0.36156432 0.7897942 0.30064164 0.52223620
cons 0.18256791 -0.17495157 0.31943344 0.37202084 0.3615643 1.0000000 0.3836166 0.31982098 0.08926886
pmda 0.33876301 -0.14530203 0.27586490 0.77101287 0.7897942 0.38361659 1.0000000 0.35514540 0.19722284
ugbto -0.06086721 0.03934771 -0.02333064 0.36102490 0.3006416 0.31982098 0.3551454 1.00000000 -0.02856404
DISPO 0.11158653 -0.08190064 0.69261292 0.01294732 0.5222362 0.08926886 0.1972228 -0.02856404 1.00000000
>
```

```
> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorg OTEX1000 2009.csv', header=T, dec=',', sep=';')
```

```
> rownames(reorg2009)<-reorg2009[,1]
```

```
> reorg2009<-reorg2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2009)
```

```
      fjuri   fvd  UTATO   sauti  chara   cons   pmda
Min. :0.000 Min. : 0.00 Min. : 1.000 Min. : 2.5 Min. : 9082 Min. : 0.00 Min. : 0
```

```
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 75.0 1st Qu.: 38028 1st Qu.: 20.16 1st Qu.: 60166
```

```
Median :0.000 Median : 1.35 Median : 1.580 Median :115.0 Median : 67782 Median : 92.32 Median :124395
```

```
Mean :1.255 Mean : 14.54 Mean : 2.336 Mean :133.2 Mean : 82212 Mean : 263.21 Mean :143928
```

```
3rd Qu.:3.000 3rd Qu.: 23.91 3rd Qu.: 2.690 3rd Qu.:165.0 3rd Qu.: 95116 3rd Qu.: 315.30 3rd Qu.:185774
```

```
Max. :3.000 Max. :100.00 Max. :20.660 Max. :400.0 Max. :542807 Max. :2240.11 Max. :974953
```

```

  ugbto      DISPO
Min. : 0.0 Min. : 0
1st Qu.: 0.0 1st Qu.: 4225
Median : 0.0 Median : 14578
Mean : 18.8 Mean : 37617
3rd Qu.: 7.5 3rd Qu.: 35436
Max. :265.0 Max. :966659
> cor(reorg2009)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.55418373 0.22615489 0.36948250 0.2533185 0.1626267 0.3765642 -0.06920160 0.09974389
fvd -0.55418373 1.00000000 -0.19672084 -0.26885327 -0.1366192 -0.1755011 -0.1348194 0.02577398 -0.07058581
UTATO 0.22615489 -0.19672084 1.00000000 -0.02540537 0.5847185 0.3813955 0.2641801 -0.02804340 0.66124285
sauti 0.36948250 -0.26885327 -0.02540537 1.00000000 0.5922579 0.3385290 0.7475133 0.38938257 0.01166505
chara 0.25331854 -0.13661919 0.58471853 0.59225789 1.0000000 0.4638525 0.7286241 0.27203845 0.53100943
cons 0.16262668 -0.17550115 0.38139545 0.33852895 0.4638525 1.0000000 0.4202051 0.32475890 0.19912708
pmda 0.37656417 -0.13481942 0.26418010 0.74751327 0.7286241 0.4202051 1.0000000 0.37121043 0.19598048
ugbto -0.06920160 0.02577398 -0.02804340 0.38938257 0.2720385 0.3247589 0.3712104 1.0000000 0.00272439
DISPO 0.09974389 -0.07058581 0.66124285 0.01166505 0.5310094 0.1991271 0.1959805 0.00272439 1.00000000
>

```

```

> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2009.csv', header=T, dec=',', sep=';')
> rownames(rupt2009)<-rupt2009[,1]
> rupt2009<-rupt2009[,4:12]
> #Etude sommaire
> summary(rupt2009)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. : 8192 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.:0.000 1st Qu.:1.008 1st Qu.:125.0 1st Qu.: 59431 1st Qu.: 29.73 1st Qu.: 97668
Median :3.000 Median :0.000 Median :2.000 Median :175.0 Median : 79442 Median :109.45 Median :159893
Mean :3.144 Mean :5.637 Mean :2.192 Mean :189.3 Mean : 91301 Mean :246.48 Mean :171408
3rd Qu.:4.000 3rd Qu.:0.735 3rd Qu.:2.487 3rd Qu.:275.0 3rd Qu.:118082 3rd Qu.:301.19 3rd Qu.:253465
Max. :5.000 Max. :90.480 Max. :8.940 Max. :400.0 Max. :289835 Max. :2050.44 Max. :563244

```

```

  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 4600
Median : 0.00 Median : 18151
Mean : 13.53 Mean : 30721
3rd Qu.: 0.00 3rd Qu.: 34892
Max. :142.50 Max. :189676
> cor(rupt2009)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.13880952 0.1396117 0.1011225 0.08042891 0.12879920 0.03150055 0.09391838 0.13178480
fvd -0.13880952 1.00000000 -0.1230780 -0.1486574 -0.17164007 0.03000323 -0.06507225 -0.03307625 -0.04070054
UTATO 0.13961167 -0.12307797 1.0000000 0.4824719 0.55912309 0.34911452 0.49215010 0.18986688 0.05535250
sauti 0.10112255 -0.14865736 0.4824719 1.0000000 0.77874987 0.33005495 0.66169717 0.26845560 0.16807155
chara 0.08042891 -0.17164007 0.5591231 0.7787499 1.0000000 0.34185709 0.59710048 0.11001163 0.22067859
cons 0.12879920 0.03000323 0.3491145 0.3300549 0.34185709 1.0000000 0.42276607 0.26581997 -0.04713377
pmda 0.03150055 -0.06507225 0.4921501 0.6616972 0.59710048 0.42276607 1.0000000 0.19340675 0.09474121
ugbto 0.09391838 -0.03307625 0.1898669 0.2684556 0.11001163 0.26581997 0.19340675 1.0000000 0.11801005
DISPO 0.13178480 -0.04070054 0.0553525 0.1680715 0.22067859 -0.04713377 0.09474121 0.11801005 1.00000000
>

```

```

> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2001.csv', header=T, dec=',', sep=';')
> rownames(rupt2001)<-rupt2001[,1]
> rupt2001<-rupt2001[,4:12]
> #Etude sommaire
> summary(rupt2001)

```

```

      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.00 Min. :0.950 Min. :17.5 Min. :14293 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.:0.00 1st Qu.:1.278 1st Qu.:105.0 1st Qu.: 46273 1st Qu.: 23.89 1st Qu.: 82629
Median :2.000 Median :0.00 Median :2.000 Median :165.0 Median : 67216 Median :101.42 Median :149301

```

Mean :1.522 Mean :6.79 Mean :2.132 Mean :171.5 Mean :77069 Mean :170.21 Mean :165762  
3rd Qu.:2.000 3rd Qu.:0.00 3rd Qu.:2.320 3rd Qu.:225.0 3rd Qu.:99859 3rd Qu.:234.76 3rd Qu.:213475  
Max. :3.000 Max. :88.57 Max. :9.590 Max. :400.0 Max. :283694 Max. :1791.38 Max. :626044

ugbto DISPO  
Min. : 0.00 Min. : 0.0  
1st Qu.: 0.00 1st Qu.: 799.5  
Median : 0.00 Median : 13213.0  
Mean : 12.67 Mean : 27736.0  
3rd Qu.: 2.50 3rd Qu.: 38513.5  
Max. :132.50 Max. :206930.0

> cor(rupt2001)

```
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.000000000 -0.42950698 0.106093380 0.1336704 0.126381883 0.01682436 -0.001528188 -0.016331338 -0.01366318
fvd -0.429506985 1.000000000 -0.161650189 -0.1567694 -0.133629675 0.31157481 0.019804948 0.076166952 -0.01743534
UTATO 0.106093380 -0.16165019 1.000000000 0.3824332 0.710275753 0.15940459 0.471208247 0.007774614 0.30708095
sauti 0.133670438 -0.15676944 0.382433206 1.0000000 0.771769003 0.16731030 0.711835411 0.188450062 0.23746138
chara 0.126381883 -0.13362968 0.710275753 0.7717690 1.000000000 0.18106456 0.728278295 0.009997999 0.30764706
cons 0.016824364 0.31157481 0.159404593 0.1673103 0.181064560 1.000000000 0.299865179 0.142572776 0.09395761
pmda -0.001528188 0.01980495 0.471208247 0.7118354 0.728278295 0.29986518 1.000000000 -0.006042924 0.16976521
ugbto -0.016331338 0.07616695 0.007774614 0.1884501 0.009997999 0.14257278 -0.006042924 1.000000000 0.16552911
DISPO -0.013663183 -0.01743534 0.307080951 0.2374614 0.307647062 0.09395761 0.169765212 0.165529113 1.00000000
>
```

> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2002.csv', header=T, dec=',', sep=';')

> rownames(rupt2002)<-rupt2002[,1]

> rupt2002<-rupt2002[,4:12]

> #Etude sommaire

> summary(rupt2002)

```
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. : 0.000 Min. :1.000 Min. :17.5 Min. :12811 Min. : 0.00 Min. : 0
1st Qu.:1.000 1st Qu.: 0.000 1st Qu.:1.600 1st Qu.:107.5 1st Qu.:43504 1st Qu.:24.85 1st Qu.:80678
Median :2.000 Median : 0.000 Median :2.000 Median :165.0 Median :68157 Median :128.72 Median :129969
Mean :1.822 Mean : 7.352 Mean :2.332 Mean :175.6 Mean :74525 Mean :191.77 Mean :149704
3rd Qu.:3.000 3rd Qu.: 0.000 3rd Qu.:2.770 3rd Qu.:225.0 3rd Qu.:92619 3rd Qu.:282.90 3rd Qu.:181933
Max. :4.000 Max. :100.000 Max. :8.500 Max. :400.0 Max. :336026 Max. :1760.34 Max. :623894
```

ugbto DISPO

Min. : 0.00 Min. : 0

1st Qu.: 0.00 1st Qu.: 1378

Median : 0.00 Median : 10174

Mean : 13.33 Mean : 28332

3rd Qu.: 2.50 3rd Qu.: 44480

Max. :185.00 Max. :234178

> cor(rupt2002)

```
      fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.000000000 -0.40353517 0.03631204 0.09940298 0.02200682 -0.01101327 -0.09550757 -0.04399385 -0.07122588
fvd -0.40353517 1.000000000 -0.09812845 -0.13502901 -0.10852160 0.25656790 -0.10337572 0.05407842 -0.05982927
UTATO 0.03631204 -0.09812845 1.000000000 0.42479310 0.68502674 0.08628057 0.38115759 0.07689528 -0.05234043
sauti 0.09940298 -0.13502901 0.42479310 1.000000000 0.70870122 0.07443959 0.66748928 0.21131260 0.08775330
chara 0.02200682 -0.10852160 0.68502674 0.70870122 1.000000000 0.08066258 0.71295493 0.05927722 -0.01955255
cons -0.01101327 0.25656790 0.08628057 0.07443959 0.08066258 1.000000000 0.03713437 0.23266340 -0.07486569
pmda -0.09550757 -0.10337572 0.38115759 0.66748928 0.71295493 0.03713437 1.000000000 -0.03089670 -0.07651898
ugbto -0.04399385 0.05407842 0.07689528 0.21131260 0.05927722 0.23266340 -0.03089670 1.000000000 0.20340886
DISPO -0.07122588 -0.05982927 -0.05234043 0.08775330 -0.01955255 -0.07486569 -0.07651898 0.20340886 1.00000000
>
```

> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2003.csv', header=T, dec=',', sep=';')

> rownames(rupt2003)<-rupt2003[,1]

> rupt2003<-rupt2003[,4:12]

> #Etude sommaire

> summary(rupt2003)

```
      fjuri   fvd   UTATO   sauti   chara   cons   pmda
```

```
Min. :0.0 Min. :0.000 Min. :1.000 Min. :17.5 Min. :18246 Min. : 0.00 Min. : 0
1st Qu.:2.0 1st Qu.:0.000 1st Qu.:1.843 1st Qu.:115.0 1st Qu.:43800 1st Qu.:25.75 1st Qu.:79369
Median:3.0 Median:0.000 Median:2.000 Median:170.0 Median:63596 Median:128.09 Median:122251
Mean :2.6 Mean :6.856 Mean :2.407 Mean :178.2 Mean :71578 Mean :203.64 Mean :135866
3rd Qu.:3.0 3rd Qu.:0.000 3rd Qu.:2.788 3rd Qu.:225.0 3rd Qu.:93352 3rd Qu.:313.24 3rd Qu.:172399
Max. :4.0 Max. :90.480 Max. :9.630 Max. :400.0 Max. :246794 Max. :1563.67 Max. :450725
```

```
ugbto DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3397
Median : 0.00 Median : 21263
Mean :13.39 Mean :34471
3rd Qu.: 2.50 3rd Qu.: 47913
Max. :185.00 Max. :342809
```

```
> cor(rupt2003)
      fjuri   fvd  UTATO   sauti  chara   cons   pmda   ugbto  DISPO
fjuri 1.00000000 -0.24997708 0.09205130 0.05330454 -0.0933034 0.04938631 -0.102157429 -0.04011817 -0.030205348
fvd -0.24997708 1.00000000 -0.15239874 -0.17550775 -0.1706775 0.18967617 -0.060597022 0.05518186 -0.078491145
UTATO 0.09205130 -0.15239874 1.00000000 0.37454881 0.6495573 0.02798819 0.473336472 0.05411870 0.030022087
sauti 0.05330454 -0.17550775 0.37454881 1.00000000 0.7388083 0.10175697 0.637174801 0.22151359 0.168804784
chara -0.09330340 -0.17067754 0.64955727 0.73880830 1.00000000 0.14248438 0.683115383 0.20330366 0.164365900
cons 0.04938631 0.18967617 0.02798819 0.10175697 0.1424844 1.00000000 0.171559864 0.23338480 -0.012248620
pmda -0.10215743 -0.06059702 0.47333647 0.63717480 0.6831154 0.17155986 1.00000000 0.09021298 -0.004603261
ugbto -0.04011817 0.05518186 0.05411870 0.22151359 0.2033037 0.23338480 0.090212976 1.00000000 0.106067107
DISPO -0.03020535 -0.07849115 0.03002209 0.16880478 0.1643659 -0.01224862 -0.004603261 0.10606711 1.000000000
>
```

```
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2004.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2004)<-rupt2004[,1]
```

```
> rupt2004<-rupt2004[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2004)
```

```
      fjuri   fvd  UTATO   sauti  chara   cons   pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. :11886 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.:0.000 1st Qu.:1.637 1st Qu.:115.0 1st Qu.:42640 1st Qu.:37.08 1st Qu.:72987
Median :3.000 Median :0.000 Median :2.000 Median :165.0 Median :64004 Median :132.25 Median :144409
Mean :2.722 Mean :6.794 Mean :2.380 Mean :178.3 Mean :73117 Mean :221.84 Mean :143173
3rd Qu.:3.000 3rd Qu.:0.000 3rd Qu.:2.632 3rd Qu.:225.0 3rd Qu.:100869 3rd Qu.:286.92 3rd Qu.:188922
Max. :5.000 Max. :90.480 Max. :8.810 Max. :400.0 Max. :229614 Max. :1938.94 Max. :429957
```

```
ugbto DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 2478
Median : 0.00 Median : 16403
Mean :12.83 Mean :30468
3rd Qu.: 2.50 3rd Qu.: 33461
Max. :175.00 Max. :406984
```

```
> cor(rupt2004)
      fjuri   fvd  UTATO   sauti  chara   cons   pmda   ugbto  DISPO
fjuri 1.00000000 -0.22762242 -0.03984066 -0.02208243 -0.1852863 3.160301e-02 -0.1556736 -0.08543242 3.346917e-02
fvd -0.22762242 1.00000000 -0.14369390 -0.17076723 -0.1654378 1.445901e-01 -0.1573167 0.06368872 -1.249038e-01
UTATO -0.03984066 -0.14369390 1.00000000 0.39425163 0.6943352 6.700240e-02 0.5140965 0.06122721 1.217441e-01
sauti -0.02208243 -0.17076723 0.39425163 1.00000000 0.7280738 2.709000e-01 0.6825750 0.19527147 1.637994e-01
chara -0.18528631 -0.16543776 0.69433521 0.72807381 1.0000000 1.237136e-01 0.7397942 0.18294151 3.134462e-01
cons 0.03160301 0.14459013 0.06700240 0.27090004 0.1237136 1.000000e+00 0.1443299 0.12387200 8.853297e-05
pmda -0.15567357 -0.15731665 0.51409654 0.68257501 0.7397942 1.443299e-01 1.0000000 0.14615579 1.873125e-01
ugbto -0.08543242 0.06368872 0.06122721 0.19527147 0.1829415 1.238720e-01 0.1461558 1.00000000 1.494523e-01
DISPO 0.03346917 -0.12490381 0.12174411 0.16379944 0.3134462 8.853297e-05 0.1873125 0.14945228 1.000000e+00
>
```

```
> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2005.csv', header=T, dec=',', sep=';')
```

```
> rownames(rupt2005)<-rupt2005[,1]
```

```
> rupt2005<-rupt2005[,4:12]
```



```

> #Etude sommaire
> summary(rupt2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.0000 Min. :1.000 Min. :17.5 Min. :11110 Min. : 0.00 Min. : 0
1st Qu.:2.000 1st Qu.:0.0000 1st Qu.:1.357 1st Qu.:115.0 1st Qu.:44793 1st Qu.:30.02 1st Qu.:87817
Median :3.000 Median :0.0000 Median :2.000 Median :170.0 Median :69900 Median :119.33 Median :149222
Mean :2.833 Mean :5.5262 Mean :2.308 Mean :179.1 Mean :75153 Mean :207.55 Mean :156591
3rd Qu.:3.000 3rd Qu.:0.6825 3rd Qu.:2.755 3rd Qu.:225.0 3rd Qu.:97871 3rd Qu.:285.64 3rd Qu.:193383
Max. :5.000 Max. :90.4800 Max. :7.880 Max. :400.0 Max. :236478 Max. :1672.31 Max. :562238

  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 3296
Median : 0.00 Median : 18807
Mean :13.08 Mean :29865
3rd Qu.: 2.50 3rd Qu.: 46086
Max. :175.00 Max. :130266
> cor(rupt2005)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.000000000 -0.08153491 -0.12301074 -0.09738005 -0.2561465 0.041007418 -0.19082189 -0.009715354 -0.024169713
fvd -0.081534914 1.000000000 -0.10702512 -0.13612333 -0.1773414 0.157157448 -0.13249646 -0.022317850 -0.060731331
UTATO -0.123010740 -0.10702512 1.000000000 0.39551208 0.6382879 0.086207507 0.39777499 0.077415802 0.035164307
sauti -0.097380055 -0.13612333 0.39551208 1.000000000 0.7370814 0.269101323 0.70858669 0.183099383 0.259611824
chara -0.256146504 -0.17734144 0.63828787 0.73708136 1.0000000 0.144595340 0.63376705 0.148198065 0.250234356
cons 0.041007418 0.15715745 0.08620751 0.26910132 0.1445953 1.000000000 0.34864448 0.132263273 -0.001800471
pmda -0.190821892 -0.13249646 0.39777499 0.70858669 0.6337670 0.348644481 1.000000000 0.055876808 0.127311739
ugpto -0.009715354 -0.02231785 0.07741580 0.18309938 0.1481981 0.132263273 0.05587681 1.000000000 0.177608305
DISPO -0.024169713 -0.06073133 0.03516431 0.25961182 0.2502344 -0.001800471 0.12731174 0.177608305 1.000000000
>

```

```

> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2006.csv', header=T, dec=',', sep=',')
> rownames(rupt2006)<-rupt2006[,1]
> rupt2006<-rupt2006[,4:12]

```

```

> #Etude sommaire
> summary(rupt2006)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.00 Min. :0.000 Min. :1.000 Min. :17.5 Min. :8591 Min. : 0.00 Min. : 0
1st Qu.:3.00 1st Qu.:0.000 1st Qu.:1.228 1st Qu.:115.0 1st Qu.:45965 1st Qu.:30.76 1st Qu.:84548
Median :3.00 Median :0.000 Median :2.000 Median :170.0 Median :62399 Median :102.73 Median :142931
Mean :2.90 Mean :5.823 Mean :2.232 Mean :182.3 Mean :72180 Mean :199.41 Mean :154700
3rd Qu.:3.75 3rd Qu.:0.910 3rd Qu.:2.788 3rd Qu.:275.0 3rd Qu.:91922 3rd Qu.:283.11 3rd Qu.:212889
Max. :5.00 Max. :90.480 Max. :7.000 Max. :400.0 Max. :223078 Max. :1557.13 Max. :520468

  ugpto    DISPO
Min. : 0.000 Min. : 0
1st Qu.: 0.000 1st Qu.: 4811
Median : 0.000 Median : 17865
Mean :13.167 Mean :32071
3rd Qu.: 1.875 3rd Qu.: 47527
Max. :165.000 Max. :194905
> cor(rupt2006)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.000000000 -0.109083289 -0.05247897 -0.1002861 -0.2382471 0.05826003 -0.21438693 -0.010825259 0.02477193
fvd -0.10908329 1.000000000 -0.08433182 -0.1466307 -0.1478502 0.15412113 -0.01642254 -0.003001798 -0.05089373
UTATO -0.05247897 -0.08433182 1.000000000 0.4251049 0.6181882 0.21706724 0.38622549 0.182811892 0.16783948
sauti -0.10028606 -0.146630749 0.42510490 1.0000000 0.7431099 0.31219287 0.65108911 0.232974787 0.26795672
chara -0.23824713 -0.147850219 0.61818822 0.7431099 1.0000000 0.19703138 0.71016131 0.211962562 0.26199742
cons 0.05826003 0.154121131 0.21706724 0.3121929 0.1970314 1.000000000 0.39937314 0.212986324 -0.02024963
pmda -0.21438693 -0.016422537 0.38622549 0.6510891 0.7101613 0.39937314 1.000000000 0.152794692 0.14578668
ugpto -0.01082526 -0.003001798 0.18281189 0.2329748 0.2119626 0.21298632 0.15279469 1.000000000 0.46319082
DISPO 0.02477193 -0.050893726 0.16783948 0.2679567 0.2619974 -0.02024963 0.14578668 0.463190820 1.000000000
>

```

```

> rupt2007<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2007.csv', header=T, dec=',', sep=',')
> rownames(rupt2007)<-rupt2007[,1]
> rupt2007<-rupt2007[,4:12]
> #Etude sommaire
> summary(rupt2007)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. :13771 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.:0.000 1st Qu.:1.062 1st Qu.:125.0 1st Qu.:42875 1st Qu.:40.78 1st Qu.:78060
Median :3.000 Median :0.000 Median :2.000 Median :170.0 Median :63654 Median :97.73 Median :157854
Mean :2.911 Mean :5.775 Mean :2.205 Mean :184.5 Mean :71670 Mean :211.63 Mean :156282
3rd Qu.:3.750 3rd Qu.:0.910 3rd Qu.:2.438 3rd Qu.:275.0 3rd Qu.:95721 3rd Qu.:322.12 3rd Qu.:214738
Max. :5.000 Max. :90.480 Max. :8.000 Max. :400.0 Max. :238960 Max. :1347.16 Max. :433830
  ugpto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 9192
Median : 0.00 Median :24143
Mean :13.64 Mean :42296
3rd Qu.: 0.00 3rd Qu.:62395
Max. :165.00 Max. :243184
> cor(rupt2007)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.000000000 -0.12628508 -0.04900109 -0.09356105 -0.2732467 0.104409698 -0.13085558 -0.001965265 0.105560169
fvd -0.126285083 1.000000000 -0.08999654 -0.14475716 -0.1391918 0.119390670 -0.03726352 -0.021010383 -0.066204745
UTATO 0.049001090 -0.08999654 1.000000000 0.38426874 0.5714950 0.208135995 0.41778539 0.198127039 0.023908701
sauti -0.093561045 -0.14475716 0.38426874 1.000000000 0.7643353 0.327259847 0.68639665 0.273092135 0.175016505
chara -0.273246704 -0.13919184 0.57149505 0.76433531 1.000000000 0.299709952 0.67944945 0.242370323 0.171776766
cons 0.104409698 0.11939067 0.20813600 0.32725985 0.2997100 1.000000000 0.46518435 0.259553391 0.006306526
pmda -0.130855579 -0.03726352 0.41778539 0.68639665 0.6794494 0.465184346 1.000000000 0.181919300 0.028550398
ugpto -0.001965265 -0.02101038 0.19812704 0.27309214 0.2423703 0.259553391 0.18191930 1.000000000 0.181804927
DISPO 0.105560169 -0.06620475 0.02390870 0.17501651 0.1717768 0.006306526 0.02855040 0.181804927 1.000000000
>

```

```

> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2008.csv', header=T, dec=',', sep=',')
> rownames(rupt2008)<-rupt2008[,1]
> rupt2008<-rupt2008[,4:12]
> #Etude sommaire
> summary(rupt2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.0000 Min. :1.000 Min. :17.5 Min. :13152 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.:0.0000 1st Qu.:1.042 1st Qu.:125.0 1st Qu.:49861 1st Qu.:26.54 1st Qu.:97862
Median :3.000 Median :0.0000 Median :2.000 Median :175.0 Median :71670 Median :97.26 Median :155303
Mean :3.033 Mean :5.7064 Mean :2.214 Mean :187.3 Mean :77610 Mean :205.49 Mean :168638
3rd Qu.:4.000 3rd Qu.:0.4725 3rd Qu.:2.490 3rd Qu.:275.0 3rd Qu.:94126 3rd Qu.:277.12 3rd Qu.:236087
Max. :5.000 Max. :90.4800 Max. :8.630 Max. :400.0 Max. :235585 Max. :1077.66 Max. :492078
  ugpto    DISPO
Min. : 0.000 Min. : 0
1st Qu.: 0.000 1st Qu.: 4728
Median : 0.000 Median :21977
Mean :13.306 Mean :35811
3rd Qu.: 1.875 3rd Qu.:45567
Max. :147.500 Max. :282340
> cor(rupt2008)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugpto    DISPO
fjuri 1.000000000 -0.11707146 0.06338712 -0.004569411 -0.06027059 0.09124482 -0.05700437 -0.009401064 0.04590272
fvd -0.117071464 1.000000000 -0.08112765 -0.156708914 -0.16305197 0.06584927 -0.03209661 -0.014009865 -0.01646881
UTATO 0.063387125 -0.08112765 1.000000000 0.451719325 0.61276337 0.15121309 0.49168784 0.121459317 0.01913395
sauti -0.004569411 -0.15670891 0.45171932 1.000000000 0.78864847 0.29990211 0.65028373 0.262505110 0.11700661
chara -0.060270593 -0.16305197 0.61276337 0.788648474 1.000000000 0.25341789 0.70003502 0.166502657 0.13157920
cons 0.091244820 0.06584927 0.15121309 0.299902107 0.25341789 1.000000000 0.41516769 0.297894395 0.02844723
pmda -0.057004366 -0.03209661 0.49168784 0.650283733 0.70003502 0.41516769 1.000000000 0.188242537 0.09657575
ugpto -0.009401064 -0.01400986 0.12145932 0.262505110 0.16650266 0.29789439 0.18824254 1.000000000 0.16787504

```

```

DISPO 0.045902722 -0.01646881 0.01913395 0.117006607 0.13157920 0.02844723 0.09657575 0.167875038 1.00000000
>
> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Rupt OTEX1000 2009.csv', header=T, dec=',', sep=',')
> rownames(rupt2009)<-rupt2009[,1]
> rupt2009<-rupt2009[,4:12]
> #Etude sommaire
> summary(rupt2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :17.5 Min. : 8192 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.: 0.000 1st Qu.:1.008 1st Qu.:125.0 1st Qu.: 59431 1st Qu.: 29.73 1st Qu.: 97668
Median :3.000 Median : 0.000 Median :2.000 Median :175.0 Median : 79442 Median :109.45 Median :159893
Mean :3.144 Mean : 5.637 Mean :2.192 Mean :189.3 Mean : 91301 Mean :246.48 Mean :171408
3rd Qu.:4.000 3rd Qu.: 0.735 3rd Qu.:2.487 3rd Qu.:275.0 3rd Qu.:118082 3rd Qu.: 301.19 3rd Qu.:253465
Max. :5.000 Max. :90.480 Max. :8.940 Max. :400.0 Max. :289835 Max. :2050.44 Max. :563244
  ugbto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 4600
Median : 0.00 Median :18151
Mean :13.53 Mean :30721
3rd Qu.: 0.00 3rd Qu.:34892
Max. :142.50 Max. :189676
> cor(rupt2009)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugbto    DISPO
fjuri 1.00000000 -0.13880952 0.1396117 0.1011225 0.08042891 0.12879920 0.03150055 0.09391838 0.13178480
fvd -0.13880952 1.00000000 -0.1230780 -0.1486574 -0.17164007 0.03000323 -0.06507225 -0.03307625 -0.04070054
UTATO 0.13961167 -0.12307797 1.0000000 0.4824719 0.55912309 0.34911452 0.49215010 0.18986688 0.05535250
sauti 0.10112255 -0.14865736 0.4824719 1.0000000 0.77874987 0.33005495 0.66169717 0.26845560 0.16807155
chara 0.08042891 -0.17164007 0.5591231 0.7787499 1.0000000 0.34185709 0.59710048 0.11001163 0.22067859
cons 0.12879920 0.03000323 0.3491145 0.3300549 0.34185709 1.0000000 0.42276607 0.26581997 -0.04713377
pmda 0.03150055 -0.06507225 0.4921501 0.6616972 0.59710048 0.42276607 1.0000000 0.19340675 0.09474121
ugbto 0.09391838 -0.03307625 0.1898669 0.2684556 0.11001163 0.26581997 0.19340675 1.0000000 0.11801005
DISPO 0.13178480 -0.04070054 0.0553525 0.1680715 0.22067859 -0.04713377 0.09474121 0.11801005 1.00000000
>

```

## ANNEXE 13

Étude alternative de la cohérence des exploitations de l'OTEX 1000 en réorganisation et en rupture seules

```

> reorg2001<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2001.csv', header=T, dec=',', sep=',')
> rownames(reorg2001)<-reorg2001[,1]
> reorg2001<-reorg2001[,4:12]
> #Etude sommaire
> summary(reorg2001)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. :22.5 Min. :15116 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.: 1.000 1st Qu.: 75.0 1st Qu.: 33163 1st Qu.: 62.35 1st Qu.: 61992
Median :0.000 Median : 2.17 Median :1.680 Median :115.0 Median :61437 Median :180.93 Median :95052
Mean :1.152 Mean :13.72 Mean :2.359 Mean :140.3 Mean :72531 Mean :344.48 Mean :144329
3rd Qu.:2.000 3rd Qu.:22.73 3rd Qu.: 2.730 3rd Qu.:175.0 3rd Qu.: 79202 3rd Qu.: 457.11 3rd Qu.:147393
Max. :3.000 Max. :77.78 Max. :11.250 Max. :400.0 Max. :318131 Max. :1990.61 Max. :670888
  ugbto    DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 493
Median : 0.00 Median : 9812
Mean :25.76 Mean :18750
3rd Qu.: 47.50 3rd Qu.:21452
Max. :165.00 Max. :134210
> cor(reorg2001)
  fjuri    fvd    UTATO    sauti    chara    cons    pmda    ugbto    DISPO

```

```
fjuri 1.00000000 -0.458779176 0.081117224 0.446181119 0.2865289 0.12375028 0.334365513 -0.0367464 0.360282475
fvd -0.45877918 1.000000000 0.040404470 -0.03357982 0.1410844 0.03281976 -0.004021237 0.1949830 -0.187682059
UTATO 0.08111722 0.040404470 1.000000000 0.23795681 0.6319251 0.40316029 0.633860622 0.1009774 -0.004243899
sauti 0.44618119 -0.033579821 0.237956814 1.00000000 0.7428924 0.62149301 0.725603153 0.5738772 0.476925136
chara 0.28652889 0.141084434 0.631925053 0.74289239 1.0000000 0.59786087 0.929823190 0.5134176 0.259419698
cons 0.12375028 0.032819763 0.403160291 0.62149301 0.5978609 1.00000000 0.558922901 0.4250087 0.070123798
pmda 0.33436551 -0.004021237 0.633860622 0.72560315 0.9298232 0.55892290 1.000000000 0.4549489 0.257795500
ugbto -0.03674640 0.194982974 0.100977396 0.57387725 0.5134176 0.42500873 0.454948882 1.0000000 0.114811340
DISPO 0.36028247 -0.187682059 -0.004243899 0.47692514 0.2594197 0.07012380 0.257795500 0.1148113 1.000000000
>
```

```
> reorg2002<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2002.csv', header=T, dec=',', sep=',')
```

```
> rownames(reorg2002)<-reorg2002[,1]
```

```
> reorg2002<-reorg2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2002)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 2.5 Min. :29160 Min. : 0.42 Min. : 7946
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 72.5 1st Qu.: 36667 1st Qu.: 22.24 1st Qu.: 49762
Median :0.500 Median : 0.00 Median :1.950 Median : 85.0 Median : 43093 Median : 57.58 Median : 84669
Mean :1.312 Mean :15.34 Mean :1.883 Mean :100.2 Mean :50770 Mean :162.59 Mean :100242
3rd Qu.:3.000 3rd Qu.: 31.30 3rd Qu.:2.138 3rd Qu.:135.0 3rd Qu.: 62226 3rd Qu.:245.86 3rd Qu.:141678
Max. :3.000 Max. :100.00 Max. :4.440 Max. :225.0 Max. :101717 Max. :782.98 Max. :267626
      ugbto      DISPO
Min. : 0.000 Min. : 122
1st Qu.: 0.000 1st Qu.: 4121
Median : 0.000 Median :11666
Mean : 7.344 Mean :20722
3rd Qu.: 0.000 3rd Qu.:19144
Max. :67.500 Max. :122615
```

```
> cor(reorg2002)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugbto      DISPO
fjuri 1.00000000 -0.54809271 -0.19223623 0.3801902 0.3184146 -0.04892356 0.34990367 0.44089936 0.21181959
fvd -0.54809271 1.00000000 0.12228066 -0.4387905 -0.2908528 -0.18046849 -0.38174384 -0.21098643 0.05276466
UTATO -0.19223623 0.12228066 1.00000000 -0.3514025 -0.3086449 -0.04371366 -0.38626973 -0.11982856 0.01285759
sauti 0.38019017 -0.43879048 -0.35140245 1.00000000 0.5792423 0.35014136 0.57951791 0.26602610 0.21340760
chara 0.31841456 -0.29085276 -0.30864492 0.5792423 1.0000000 0.19154038 0.66581606 -0.07815450 -0.27261096
cons -0.04892356 -0.18046849 -0.04371366 0.3501414 0.1915404 1.00000000 -0.06347910 0.09202152 0.29111422
pmda 0.34990367 -0.38174384 -0.38626973 0.5795179 0.6658161 -0.06347910 1.00000000 -0.09061464 -0.15867771
ugbto 0.44089936 -0.21098643 -0.11982856 0.2660261 -0.0781545 0.09202152 -0.09061464 1.00000000 0.68582602
DISPO 0.21181959 0.05276466 0.01285759 0.2134076 -0.2726110 0.29111422 -0.15867771 0.68582602 1.00000000
>
```

```
> reorg2003<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2003.csv', header=T, dec=',', sep=',')
```

```
> rownames(reorg2003)<-reorg2003[,1]
```

```
> reorg2003<-reorg2003[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2003)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. : 7.50 Min. :15334 Min. : 0.00 Min. : 0
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 37.50 1st Qu.: 22322 1st Qu.: 15.24 1st Qu.: 44582
Median :0.000 Median : 2.17 Median :1.500 Median : 55.00 Median : 40530 Median : 77.67 Median : 80900
Mean :1.111 Mean :20.35 Mean :3.954 Mean :70.56 Mean :87159 Mean :254.88 Mean :77938
3rd Qu.:2.000 3rd Qu.:46.67 3rd Qu.:2.360 3rd Qu.:115.00 3rd Qu.: 46836 3rd Qu.: 289.74 3rd Qu.:101682
Max. :3.000 Max. :68.42 Max. :21.000 Max. :155.00 Max. :486299 Max. :1036.99 Max. :147795
      ugbto      DISPO
Min. :0.0000 Min. : 30
1st Qu.:0.0000 1st Qu.: 1052
Median :0.0000 Median : 3194
Mean :0.8333 Mean :120454
3rd Qu.:2.5000 3rd Qu.: 6384
```

```

Max. :2.5000 Max. :1038114
> cor(reorg2003)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.0000000 -0.6995393 0.3457310 0.44263038 0.34104328 0.1923035 0.7091026 -0.6108472 0.2491035
fvd -0.6995393 1.0000000 -0.3880372 -0.46139140 -0.37286190 -0.5215653 -0.8288066 0.4831566 -0.2907989
UTATO 0.3457310 -0.3880372 1.0000000 -0.17492022 0.97727811 0.8034300 0.5412532 -0.3395201 0.9835562
sauti 0.4426304 -0.4613914 -0.1749202 1.0000000 -0.01838539 0.1080609 0.5413694 -0.3772220 -0.1373949
chara 0.3410433 -0.3728619 0.9772781 -0.01838539 1.0000000 0.8106653 0.5996545 -0.3305989 0.9901100
cons 0.1923035 -0.5215653 0.8034300 0.10806092 0.81066531 1.0000000 0.6056236 -0.4507068 0.7997125
pmda 0.7091026 -0.8288066 0.5412532 0.54136941 0.59965451 0.6056236 1.0000000 -0.5029633 0.4953469
ugbto -0.6108472 0.4831566 -0.3395201 -0.37722201 -0.33059889 -0.4507068 -0.5029633 1.0000000 -0.2569512
DISPO 0.2491035 -0.2907989 0.9835562 -0.13739492 0.99011004 0.7997125 0.4953469 -0.2569512 1.0000000
>

> reorg2004<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2004.csv', header=T, dec=',', sep=',')
> rownames(reorg2004)<-reorg2004[,1]
> reorg2004<-reorg2004[,4:12]
> #Etude sommaire
> summary(reorg2004)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. :17.5 Min. :16124 Min. : 6.54 Min. : 0
1st Qu.:0.000 1st Qu.:0.00 1st Qu.:1.000 1st Qu.:90.0 1st Qu.:47932 1st Qu.:49.73 1st Qu.:83255
Median :0.000 Median :0.91 Median :1.970 Median :135.0 Median :71636 Median :105.17 Median :127848
Mean :1.261 Mean :11.75 Mean :2.670 Mean :145.9 Mean :74998 Mean :195.93 Mean :128380
3rd Qu.:3.000 3rd Qu.:16.55 3rd Qu.:2.815 3rd Qu.:195.0 3rd Qu.:88113 3rd Qu.:240.34 3rd Qu.:173932
Max. :3.000 Max. :69.70 Max. :10.000 Max. :275.0 Max. :184492 Max. :1005.21 Max. :266473
      ugbto  DISPO
Min. :0.0 Min. : 0
1st Qu.:0.0 1st Qu.: 0
Median :0.0 Median :9042
Mean :21.3 Mean :34221
3rd Qu.:50.0 3rd Qu.:38239
Max. :107.5 Max. :331432
> cor(reorg2004)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.0000000 -0.56847686 0.4777564 0.10774463 0.10979775 -0.264728331 0.25469954 -0.106879394 0.16290748
fvd -0.5684769 1.00000000 -0.3255266 -0.06481052 -0.07894921 0.117936381 -0.09148597 -0.079917479 -0.21950520
UTATO 0.4777564 -0.32552655 1.0000000 -0.23237945 0.20889195 -0.278191001 0.33919485 -0.171866561 0.47890883
sauti 0.1077446 -0.06481052 -0.2323794 1.00000000 0.73625622 0.408677560 0.63842000 0.183175930 -0.11165756
chara 0.1097977 -0.07894921 0.2088919 0.73625622 1.00000000 0.350949461 0.83800910 0.112148221 -0.01196886
cons -0.2647283 0.11793638 -0.2781910 0.40867756 0.35094946 1.00000000 0.05949043 0.001597605 -0.02096445
pmda 0.2546995 -0.09148597 0.3391948 0.63842000 0.83800910 0.059490426 1.00000000 0.120865069 -0.10237723
ugbto -0.1068794 -0.07991748 -0.1718666 0.18317593 0.11214822 0.001597605 0.12086507 1.000000000 -0.16740039
DISPO 0.1629075 -0.21950520 0.4789088 -0.11165756 -0.01196886 -0.020964450 -0.10237723 -0.167400386 1.00000000
>

> reorg2005<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2005.csv', header=T, dec=',', sep=',')
> rownames(reorg2005)<-reorg2005[,1]
> reorg2005<-reorg2005[,4:12]
> #Etude sommaire
> summary(reorg2005)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0 Min. :0.000 Min. :1.000 Min. :27.50 Min. :10274 Min. :0.000 Min. :12562
1st Qu.:0 1st Qu.:0.000 1st Qu.:1.000 1st Qu.:75.62 1st Qu.:35608 1st Qu.:1.585 1st Qu.:68674
Median :0 Median :2.630 Median :1.355 Median :105.00 Median :45646 Median :35.805 Median :94827
Mean :1 Mean :8.011 Mean :1.709 Mean :108.54 Mean :49129 Mean :256.375 Mean :109123
3rd Qu.:2 3rd Qu.:12.425 3rd Qu.:2.248 3rd Qu.:132.50 3rd Qu.:65976 3rd Qu.:89.108 3rd Qu.:158193
Max. :3 Max. :29.410 Max. :3.000 Max. :225.00 Max. :97667 Max. :1689.700 Max. :228394
      ugbto  DISPO
Min. :0.00 Min. : 0
1st Qu.:0.00 1st Qu.:4010

```

```
Median : 0.00 Median :16875
Mean :16.67 Mean :27586
3rd Qu.:30.00 3rd Qu.:36803
Max. :67.50 Max. :95521
```

```
> cor(reorg2005)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.6425567 0.6080470 0.6757570 0.7806411 0.344972346 0.77319005 -0.22696949 0.642263147
fvd -0.6425567 1.0000000 -0.7068975 -0.5100900 -0.5952802 -0.373757247 -0.58528878 0.14432632 -0.589587639
UTATO 0.6080470 -0.7068975 1.0000000 0.6157534 0.7384838 0.352291848 0.57163326 0.33136606 0.763085691
sauti 0.6757570 -0.5100900 0.6157534 1.0000000 0.9477067 0.178759167 0.74365395 0.14151150 0.785684942
chara 0.7806411 -0.5952802 0.7384838 0.9477067 1.0000000 0.252990424 0.80438595 0.15475612 0.783284859
cons 0.3449723 -0.3737572 0.3522918 0.1787592 0.2529904 1.000000000 -0.02881822 0.12567373 0.007773626
pmda 0.7731900 -0.5852888 0.5716333 0.7436539 0.8043860 -0.028818220 1.00000000 -0.01168031 0.787051674
ugpto -0.2269695 0.1443263 0.3313661 0.1415115 0.1547561 0.125673726 -0.01168031 1.00000000 0.053693780
DISPO 0.6422631 -0.5895876 0.7630857 0.7856849 0.7832849 0.007773626 0.78705167 0.05369378 1.000000000
>
```

```
> reorg2006<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2006.csv', header=T, dec=',', sep=',')
```

```
> rownames(reorg2006)<-reorg2006[,1]
```

```
> reorg2006<-reorg2006[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2006)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. : 0.00 Min. :1.000 Min. :17.5 Min. : 9233 Min. : 0.09 Min. :20171
1st Qu.:0.000 1st Qu.: 0.00 1st Qu.:1.000 1st Qu.: 62.5 1st Qu.:25488 1st Qu.: 28.34 1st Qu.: 41180
Median :3.000 Median : 0.00 Median :1.415 Median :100.0 Median :43291 Median : 68.03 Median :73377
Mean :1.929 Mean :13.42 Mean :1.880 Mean :110.9 Mean :48431 Mean :121.92 Mean :86744
3rd Qu.:3.000 3rd Qu.:12.50 3rd Qu.:2.000 3rd Qu.:145.0 3rd Qu.:70321 3rd Qu.:183.83 3rd Qu.:120056
Max. :3.000 Max. :100.00 Max. :5.680 Max. :225.0 Max. :111214 Max. :409.43 Max. :198250
```

```
      ugpto  DISPO
```

```
Min. : 0.000 Min. : 0
```

```
1st Qu.: 0.000 1st Qu.: 4080
```

```
Median : 0.000 Median : 6714
```

```
Mean : 5.893 Mean :15340
```

```
3rd Qu.: 2.500 3rd Qu.:15544
```

```
Max. :67.500 Max. :79177
```

```
> cor(reorg2006)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugpto  DISPO
fjuri 1.0000000 -0.6702012 0.523597285 0.7840896 0.7324361 0.53347136 0.7284423 0.21194509 0.164083433
fvd -0.6702012 1.0000000 -0.350915539 -0.6415545 -0.5760077 -0.26188183 -0.5475066 -0.12675042 -0.108396667
UTATO 0.5235973 -0.3509155 1.000000000 0.3380517 0.5078815 0.07497209 0.5238443 0.30337400 -0.000637493
sauti 0.7840896 -0.6415545 0.338051706 1.0000000 0.9440872 0.61051658 0.8943044 0.25571890 0.500254687
chara 0.7324361 -0.5760077 0.507881502 0.9440872 1.0000000 0.56554499 0.9296079 0.31158841 0.544155609
cons 0.5334714 -0.2618818 0.074972091 0.6105166 0.5655450 1.000000000 0.6871423 -0.08439825 0.589669768
pmda 0.7284423 -0.5475066 0.523844334 0.8943044 0.9296079 0.68714233 1.0000000 0.39014568 0.517719000
ugpto 0.2119451 -0.1267504 0.303373996 0.2557189 0.3115884 -0.08439825 0.3901457 1.00000000 -0.196645682
DISPO 0.1640834 -0.1083967 -0.000637493 0.5002547 0.5441556 0.58966977 0.5177190 -0.19664568 1.000000000
>
```

```
> reorg2007<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2007.csv', header=T, dec=',', sep=',')
```

```
> rownames(reorg2007)<-reorg2007[,1]
```

```
> reorg2007<-reorg2007[,4:12]
```

```
> #Etude sommaire
```

```
> summary(reorg2007)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.00 Min. : 0.0000 Min. :1.000 Min. : 75.0 Min. :28353 Min. : 17.54 Min. :60283
```

```
1st Qu.:0.00 1st Qu.: 0.4725 1st Qu.:1.333 1st Qu.:110.0 1st Qu.:49261 1st Qu.: 45.14 1st Qu.:123235
```

```
Median :1.00 Median : 6.6200 Median :1.875 Median :145.0 Median :65775 Median :205.92 Median :138538
```

```
Mean :1.25 Mean :13.1512 Mean :1.834 Mean :170.6 Mean :81942 Mean :329.40 Mean :187744
```

```
3rd Qu.:2.25 3rd Qu.:21.6700 3rd Qu.:2.042 3rd Qu.:180.0 3rd Qu.:96278 3rd Qu.:405.90 3rd Qu.:242307
```

```
Max. :3.00 Max. :38.0000 Max. :3.260 Max. :400.0 Max. :181303 Max. :1186.81 Max. :410518
```

```

  ugbto      DISPO
Min. : 0.00 Min. : 0
1st Qu.: 0.00 1st Qu.: 14240
Median : 0.00 Median : 42136
Mean : 53.75 Mean : 42518
3rd Qu.: 87.50 3rd Qu.: 62722
Max. :245.00 Max. :102102
> cor(reorg2007)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.00000000 -0.5143530 0.17726676 0.4885095 0.5745365 -0.07360882 0.6554391 -0.05551712 0.89776240
fvd -0.51435303 1.0000000 -0.40155219 -0.4664510 -0.5614802 -0.28363747 -0.5455864 -0.21200131 -0.38211070
UTATO 0.17726676 -0.4015522 1.00000000 0.6362423 0.5344828 0.68874178 0.6004832 0.85792870 -0.02103543
sauti 0.48850946 -0.4664510 0.63624234 1.0000000 0.9508733 0.81929669 0.9653435 0.69752260 0.38347253
chara 0.57453654 -0.5614802 0.53448275 0.9508733 1.0000000 0.68846694 0.9789764 0.62990164 0.48923174
cons -0.07360882 -0.2836375 0.68874178 0.8192967 0.6884669 1.00000000 0.6737841 0.82753771 -0.13697339
pmda 0.65543906 -0.5455864 0.60048324 0.9653435 0.9789764 0.67378413 1.0000000 0.60834742 0.53939458
ugbto -0.05551712 -0.2120013 0.85792870 0.6975226 0.6299016 0.82753771 0.6083474 1.00000000 -0.17208883
DISPO 0.89776240 -0.3821107 -0.02103543 0.3834725 0.4892317 -0.13697339 0.5393946 -0.17208883 1.00000000
>
> reorg2008<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2008.csv', header=T, dec=',', sep=',')
> rownames(reorg2008)<-reorg2008[,1]
> reorg2008<-reorg2008[,4:12]
> #Etude sommaire
> summary(reorg2008)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.0 Min. :0.000 Min. :1.000 Min. :37.5 Min. :19173 Min. :0.00 Min. :36044
1st Qu.:0.0 1st Qu.:1.567 1st Qu.:1.012 1st Qu.:87.5 1st Qu.:34269 1st Qu.:71.97 1st Qu.:67879
Median :0.0 Median :12.280 Median :1.375 Median :125.0 Median :56659 Median :189.03 Median :122812
Mean :0.8 Mean :15.140 Mean :1.607 Mean :137.2 Mean :67988 Mean :210.01 Mean :187854
3rd Qu.:1.5 3rd Qu.:23.765 3rd Qu.:2.067 3rd Qu.:207.5 3rd Qu.:104390 3rd Qu.:325.94 3rd Qu.:239593
Max. :3.0 Max. :42.220 Max. :2.840 Max. :225.0 Max. :130951 Max. :532.82 Max. :551574
      ugbto      DISPO
Min. : 0.00 Min. : 805
1st Qu.: 0.00 1st Qu.: 2835
Median : 3.75 Median :10262
Mean : 28.25 Mean :16074
3rd Qu.: 26.25 3rd Qu.:23915
Max. :122.50 Max. :53155
> cor(reorg2008)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.00000000 -0.65592366 0.7370647 0.38428199 0.5619640 0.5400397 0.5988412 -0.001753389 0.26807065
fvd -0.655923663 1.00000000 -0.2087574 -0.05680651 -0.1892876 -0.3836548 -0.0673964 0.196557138 0.15174956
UTATO 0.737064718 -0.20875743 1.0000000 0.79496052 0.8976976 0.7847489 0.9278398 0.417162531 0.53620663
sauti 0.384281989 -0.05680651 0.7949605 1.0000000 0.8648111 0.6314131 0.8558111 0.302850081 0.29112997
chara 0.561964036 -0.18928758 0.8976976 0.86481114 1.0000000 0.8710585 0.8255771 0.488589558 0.38014194
cons 0.540039661 -0.38365484 0.7847489 0.63141315 0.8710585 1.0000000 0.5964964 0.654503982 0.19219459
pmda 0.598841194 -0.06739640 0.9278398 0.85581105 0.8255771 0.5964964 1.0000000 0.183299524 0.64001024
ugbto -0.001753389 0.19655714 0.4171625 0.30285008 0.4885896 0.6545040 0.1832995 1.000000000 0.03367585
DISPO 0.268070654 0.15174956 0.5362066 0.29112997 0.3801419 0.1921946 0.6400102 0.033675852 1.00000000
>
> reorg2009<-read.table('C:/Users/Bureau LGH/Desktop/Réorg seules OTEX1000 2009.csv', header=T, dec=',', sep=',')
> rownames(reorg2009)<-reorg2009[,1]
> reorg2009<-reorg2009[,4:12]
> #Etude sommaire
> summary(reorg2009)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. :0.000 Min. :1.000 Min. :37.5 Min. :16427 Min. :0.000 Min. :23445
1st Qu.:0.000 1st Qu.:0.000 1st Qu.:1.000 1st Qu.:92.5 1st Qu.:45820 1st Qu.:7.812 1st Qu.:70040
Median :1.000 Median :2.275 Median :1.020 Median :130.0 Median :55374 Median :124.095 Median :124138

```

```
Mean :1.417 Mean :11.105 Mean :1.542 Mean :154.8 Mean :81681 Mean :191.974 Mean :133355
3rd Qu.:3.000 3rd Qu.:20.835 3rd Qu.:1.758 3rd Qu.:225.0 3rd Qu.: 84164 3rd Qu.:274.330 3rd Qu.:158910
Max. :3.000 Max. :38.240 Max. :3.000 Max. :400.0 Max. :310271 Max. :785.620 Max. :314656
```

```
ugbto DISPO
Min. :0.00 Min. : 0
1st Qu.:0.00 1st Qu.: 1635
Median :0.00 Median : 4590
Mean :11.67 Mean :34279
3rd Qu.:6.25 3rd Qu.: 27583
Max. :87.50 Max. :212199
```

```
> cor(reorg2009)
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.0000000 -0.7483928 0.15215493 0.3690398 0.165910690 0.386712839 0.4241976 -0.44467025 -0.3174974
fvd -0.7483928 1.0000000 -0.38710969 -0.3194998 -0.187427216 -0.464470056 -0.4260397 0.50106527 0.5550489
UTATO 0.1521549 -0.3871097 1.0000000 0.5641694 0.609327394 0.334117448 0.7205058 -0.07108488 -0.1323962
sauti 0.3690398 -0.3194998 0.5641694 1.0000000 0.919741533 0.301661927 0.8215240 0.08112160 -0.2196931
chara 0.1659107 -0.1874272 0.60932739 0.9197415 1.000000000 0.007652303 0.8114667 0.06249804 -0.1715484
cons 0.3867128 -0.4644701 0.33411745 0.3016619 0.007652303 1.000000000 0.35987433 -0.13084329 -0.2832031
pmda 0.4241976 -0.4260397 0.72050579 0.8215240 0.811466712 0.359874333 1.0000000 -0.14309648 -0.1833102
ugbto -0.4446703 0.5010653 -0.07108488 0.0811216 0.062498042 -0.130843291 -0.1430965 1.00000000 0.4278541
DISPO -0.3174974 0.5550489 -0.13239620 -0.2196931 -0.171548399 -0.283203126 -0.1833102 0.42785406 1.0000000
>
```

```
> rupt2001<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2001.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2001)<-rupt2001[,1]
```

```
> rupt2001<-rupt2001[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2001)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
Min. :0.000 Min. :0.00 Min. :0.970 Min. :32.5 Min. :14293 Min. : 3.50 Min. :28707
1st Qu.:1.500 1st Qu.:0.00 1st Qu.:1.025 1st Qu.:120.0 1st Qu.:40691 1st Qu.:96.91 1st Qu.:65695
Median :3.000 Median :0.00 Median :1.570 Median :145.0 Median :68618 Median :221.54 Median :102571
Mean :2.182 Mean :0.13 Mean :1.797 Mean :163.9 Mean :75440 Mean :200.95 Mean :124577
3rd Qu.:3.000 3rd Qu.:0.00 3rd Qu.:2.065 3rd Qu.:210.0 3rd Qu.:107766 3rd Qu.:280.81 3rd Qu.:182743
Max. :3.000 Max. :1.43 Max. :3.820 Max. :325.0 Max. :141824 Max. :413.05 Max. :262803
```

```
      ugbto  DISPO
Min. :0.000 Min. : 0.0
1st Qu.:0.000 1st Qu.: 541.5
Median :0.000 Median :5026.0
Mean :9.545 Mean :13917.9
3rd Qu.:5.000 3rd Qu.:16277.5
Max. :62.500 Max. :57903.0
```

```
> cor(rupt2001)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda  ugbto  DISPO
fjuri 1.0000000 0.21700927 0.359492465 0.25213402 0.41817656 0.3579757 0.248909810 0.312635465 0.4192821
fvd 0.2170093 1.00000000 -0.266189253 0.04199832 -0.09424899 -0.2975840 -0.091621620 0.379581244 -0.2354973
UTATO 0.3594925 -0.26618925 1.000000000 0.64896509 0.71915969 0.4009386 0.616158701 0.007959391 0.7673226
sauti 0.2521340 0.04199832 0.648965092 1.00000000 0.90951743 0.6159582 0.588124780 0.016685874 0.5051181
chara 0.4181766 -0.09424899 0.719159693 0.90951743 1.00000000 0.7405641 0.530641745 0.170384969 0.6764265
cons 0.3579757 -0.29758397 0.400938611 0.61595820 0.74056412 1.0000000 0.158179527 0.109485545 0.5601254
pmda 0.2489098 -0.09162162 0.616158701 0.58812478 0.53064175 0.1581795 1.000000000 -0.001078348 0.4352614
ugbto 0.3126355 0.37958124 0.007959391 0.01668587 0.17038497 0.1094855 -0.001078348 1.000000000 0.4398190
DISPO 0.4192821 -0.23549726 0.767322625 0.50511805 0.67642651 0.5601254 0.435261364 0.439818978 1.0000000
>
```

```
> rupt2002<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2002.csv', header=T, dec=',', sep=',')
```

```
> rownames(rupt2002)<-rupt2002[,1]
```

```
> rupt2002<-rupt2002[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2002)
```

```
      fjuri  fvd  UTATO  sauti  chara  cons  pmda
```



```

Min. :0 Min. :0.000 Min. :1.000 Min. :55.0 Min. :32219 Min. : 0.00 Min. :15100
1st Qu.:3 1st Qu.:0.000 1st Qu.:1.600 1st Qu.:115.0 1st Qu.:46779 1st Qu.:14.85 1st Qu.:56182
Median :3 Median :0.000 Median :2.000 Median :135.0 Median :57432 Median :50.86 Median :106142
Mean :3 Mean :2.086 Mean :2.312 Mean :152.1 Mean :64176 Mean :172.84 Mean :106106
3rd Qu.:4 3rd Qu.:0.000 3rd Qu.:2.590 3rd Qu.:175.0 3rd Qu.:82891 3rd Qu.:303.14 3rd Qu.:162673
Max. :4 Max. :30.000 Max. :6.100 Max. :275.0 Max. :122247 Max. :770.14 Max. :192150
  ugbto      DISPO
Min. :0.000 Min. : 0
1st Qu.:0.000 1st Qu.:1266
Median :0.000 Median :9054
Mean :9.265 Mean :32152
3rd Qu.:0.000 3rd Qu.:33631
Max. :82.500 Max. :194295
> cor(rupt2002)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 0.2576171 -0.03004574 0.03018092 -0.408345873 -0.151079136 -0.3819354 0.2126226 -0.125740387
fvd 0.25761711 1.00000000 -0.19388698 -0.36512048 -0.314924244 -0.189170680 -0.3480250 -0.1163320 -0.016924401
UTATO -0.03004574 -0.1938870 1.00000000 0.42059633 0.320633335 0.580331540 0.3284579 0.6300953 -0.091889455
sauti 0.03018092 -0.3651205 0.42059633 1.00000000 0.772707971 0.526895761 0.6685895 0.5180690 0.054321349
chara -0.40834587 -0.3149242 0.32063334 0.77270797 1.00000000 0.517637648 0.7502716 0.1132040 -0.002675967
cons -0.15107914 -0.1891707 0.58033154 0.52689576 0.517637648 1.00000000 0.3496585 0.4146806 -0.007721939
pmda -0.38193538 -0.3480250 0.32845786 0.66858953 0.750271623 0.349658517 1.0000000 0.3566018 0.101674638
ugbto 0.21262255 -0.1163320 0.63009527 0.51806901 0.113204044 0.414680630 0.3566018 1.0000000 -0.206899612
DISPO -0.12574039 -0.0169244 -0.09188945 0.05432135 -0.002675967 -0.007721939 0.1016746 -0.2068996 1.000000000
>
> rupt2003<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2003.csv', header=T, dec=',', sep=';')
> rownames(rupt2003)<-rupt2003[,1]
> rupt2003<-rupt2003[,4:12]
> #Etude sommaire
> summary(rupt2003)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda
Min. :0.000 Min. :0.00 Min. :1.000 Min. :22.5 Min. :18404 Min. : 0.00 Min. : 0
1st Qu.:3.000 1st Qu.:0.00 1st Qu.:2.000 1st Qu.:105.0 1st Qu.:37950 1st Qu.:18.19 1st Qu.:88566
Median :3.000 Median :0.00 Median :2.005 Median :175.0 Median :56421 Median :99.09 Median :134567
Mean :3.167 Mean :10.14 Mean :2.514 Mean :181.5 Mean :65987 Mean :195.65 Mean :141511
3rd Qu.:4.000 3rd Qu.:0.96 3rd Qu.:2.865 3rd Qu.:237.5 3rd Qu.:89162 3rd Qu.:293.35 3rd Qu.:193452
Max. :4.000 Max. :90.48 Max. :9.630 Max. :400.0 Max. :174612 Max. :1563.67 Max. :355640
  ugbto      DISPO
Min. : 0.0 Min. : 0
1st Qu.: 0.0 1st Qu.:10294
Median : 0.0 Median :24079
Mean :15.0 Mean :30470
3rd Qu.: 2.5 3rd Qu.:47440
Max. :127.5 Max. :83596
> cor(rupt2003)
      fjuri   fvd  UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 -0.232727512 0.22741428 0.1395277 0.09182731 0.20305796 0.07577356 0.05999581 0.151273965
fvd -0.23272751 1.000000000 -0.155582564 -0.1287436 -0.15997960 0.34496689 -0.10947565 -0.02860062 0.001746778
UTATO 0.22741428 -0.155582564 1.00000000 0.3328079 0.63767490 -0.10448453 0.51453803 0.03917580 -0.067539942
sauti 0.13952773 -0.128743565 0.33280786 1.0000000 0.76779419 0.11507429 0.57548966 0.41123117 0.246665164
chara 0.09182731 -0.159979603 0.63767490 0.7677942 1.00000000 0.05968547 0.65584302 0.30748334 0.235630101
cons 0.20305796 0.344966886 -0.10448453 0.1150743 0.05968547 1.00000000 0.23734538 0.01805645 0.215082470
pmda 0.07577356 -0.109475647 0.51453803 0.5754897 0.65584302 0.23734538 1.00000000 0.16997594 -0.073899194
ugbto 0.05999581 -0.028600621 0.03917580 0.4112312 0.30748334 0.01805645 0.16997594 1.00000000 0.337994824
DISPO 0.15127397 0.001746778 -0.06753994 0.2466652 0.23563010 0.21508247 -0.07389919 0.33799482 1.000000000
>
> rupt2004<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2004.csv', header=T, dec=',', sep=';')
> rownames(rupt2004)<-rupt2004[,1]
> rupt2004<-rupt2004[,4:12]

```

```

> #Etude sommaire
> summary(rupt2004)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto
Min. :3.0 Min. :0.00 Min. :1.00 Min. :75 Min. :28602 Min. : 0.00 Min. :38895 Min. :0.0
1st Qu.:3.0 1st Qu.:0.00 1st Qu.:1.00 1st Qu.:95 1st Qu.:38307 1st Qu.:43.03 1st Qu.:72402 1st Qu.:0.0
Median :3.0 Median :0.00 Median :1.00 Median :105 Median :49688 Median :47.77 Median :111808 Median :0.0
Mean :3.4 Mean :8.19 Mean :1.26 Mean :149 Mean :50429 Mean :243.55 Mean :106730 Mean :0.5
3rd Qu.:3.0 3rd Qu.:10.00 3rd Qu.:1.30 3rd Qu.:195 3rd Qu.:50975 3rd Qu.:476.87 3rd Qu.:150789 3rd Qu.:0.0
Max. :5.0 Max. :30.95 Max. :2.00 Max. :275 Max. :84571 Max. :650.10 Max. :159756 Max. :2.5
  DISPO
Min. : 0
1st Qu.: 0
Median : 0
Mean :1763
3rd Qu.:3033
Max. :5784
> cor(rupt2004)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.0000000 -0.34065390 -0.3352119 -0.3587585 -0.57680449 -0.4553719 -0.73807900 1.0000000 -0.3786817
fvd -0.3406539 1.00000000 -0.3280625 -0.4646428 -0.09172058 -0.5079214 -0.06738325 -0.3406539 0.1547761
UTATO -0.3352119 -0.32806253 1.0000000 0.7112820 0.83150094 0.6707336 0.37887439 -0.3352119 0.7733598
sauti -0.3587585 -0.46464281 0.7112820 1.0000000 0.88760846 0.9780343 0.80790669 -0.3587585 0.6794869
chara -0.5768045 -0.09172058 0.8315009 0.8876085 1.00000000 0.8414404 0.77393100 -0.5768045 0.9040818
cons -0.4553719 -0.50792135 0.6707336 0.9780343 0.84144044 1.0000000 0.85454470 -0.4553719 0.5599507
pmda -0.7380790 -0.06738325 0.3788744 0.8079067 0.77393100 0.8545447 1.00000000 -0.7380790 0.5051383
ugbto 1.0000000 -0.34065390 -0.3352119 -0.3587585 -0.57680449 -0.4553719 -0.73807900 1.0000000 -0.3786817
DISPO -0.3786817 0.15477607 0.7733598 0.6794869 0.90408180 0.5599507 0.50513827 -0.3786817 1.0000000
>
> rupt2005<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2005.csv', header=T, dec=',', sep=';')
> rownames(rupt2005)<-rupt2005[,1]
> rupt2005<-rupt2005[,4:12]
> #Etude sommaire
> summary(rupt2005)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda
Min. :2.000 Min. :0.00 Min. :1.000 Min. :85.0 Min. :29921 Min. : 0.00 Min. :79860
1st Qu.:3.000 1st Qu.:0.00 1st Qu.:1.405 1st Qu.:115.0 1st Qu.:57471 1st Qu.:50.94 1st Qu.:126251
Median :3.000 Median :0.00 Median :2.000 Median :155.0 Median :67187 Median :140.95 Median :163277
Mean :2.857 Mean :0.42 Mean :1.699 Mean :172.1 Mean :66593 Mean :239.79 Mean :175306
3rd Qu.:3.000 3rd Qu.:0.00 3rd Qu.:2.000 3rd Qu.:180.0 3rd Qu.:70608 3rd Qu.:399.06 3rd Qu.:182290
Max. :3.000 Max. :2.94 Max. :2.080 Max. :375.0 Max. :112885 Max. :637.58 Max. :366921
  ugbto   DISPO
Min. : 0.00 Min. : 206
1st Qu.: 0.00 1st Qu.:24541
Median : 0.00 Median :38436
Mean :26.43 Mean :44509
3rd Qu.:31.25 3rd Qu.:65422
Max. :122.50 Max. :92994
> cor(rupt2005)
  fjuri   fvd   UTATO   sauti   chara   cons   pmda   ugbto   DISPO
fjuri 1.00000000 0.16666667 -0.3067573 -0.1025641 -0.06708652 0.4179470 0.02039806 0.2410590 -0.5757896
fvd 0.16666667 1.00000000 -0.1410211 -0.3910256 -0.21917531 0.4272235 -0.26331393 0.8762819 -0.1984172
UTATO -0.30675734 -0.1410211 1.0000000 0.5067703 0.49321452 -0.7843931 0.31914598 -0.3581206 0.5074948
sauti -0.10256410 -0.3910256 0.5067703 1.0000000 0.94177239 -0.6016999 0.95306177 -0.5655614 0.8043280
chara -0.06708652 -0.2191753 0.4932145 0.9417724 1.00000000 -0.6546495 0.93872059 -0.5277653 0.7995548
cons 0.41794696 0.4272235 -0.7843931 -0.6016999 -0.65464949 1.0000000 -0.50660050 0.7570626 -0.7035619
pmda 0.02039806 -0.2633139 0.3191460 0.9530618 0.93872059 -0.5066005 1.00000000 -0.4747870 0.7863478
ugbto 0.24105897 0.8762819 -0.3581206 -0.5655614 -0.52776529 0.7570626 -0.47478702 1.0000000 -0.4644209
DISPO -0.57578955 -0.1984172 0.5074948 0.8043280 0.79955485 -0.7035619 0.78634779 -0.4644209 1.0000000
>

```

```

> rupt2006<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2006.csv', header=T, dec=',', sep=',')
> rownames(rupt2006)<-rupt2006[,1]
> rupt2006<-rupt2006[,4:12]
> #Etude sommaire
> summary(rupt2006)
  fjuri    fvd  UTATO    sauti    chara    cons    pmda
Min. :3.00 Min. :0 Min. :1.00 Min. :17.5 Min. : 70313 Min. : 52.98 Min. : 39477
1st Qu.:3.00 1st Qu.:0 1st Qu.:1.75 1st Qu.:135.6 1st Qu.: 79393 1st Qu.: 83.07 1st Qu.:118010
Median :3.00 Median :0 Median :2.50 Median :200.0 Median : 87296 Median :106.99 Median :154372
Mean :3.25 Mean :0 Mean :2.75 Mean :160.6 Mean : 88657 Mean :103.81 Mean :129158
3rd Qu.:3.25 3rd Qu.:0 3rd Qu.:3.50 3rd Qu.:225.0 3rd Qu.: 96560 3rd Qu.:127.73 3rd Qu.:165519
Max. :4.00 Max. :0 Max. :5.00 Max. :225.0 Max. :109722 Max. :148.28 Max. :168410
  ugpto    DISPO
Min. :0.000 Min. : 0
1st Qu.:0.000 1st Qu.:20892
Median :0.000 Median :37790
Mean :0.625 Mean :36577
3rd Qu.:0.625 3rd Qu.:53475
Max. :2.500 Max. :70726
> cor(rupt2006)
  fjuri fvd  UTATO sauti chara cons pmda ugpto DISPO
fjuri 1.00000000 NA 0.09759001 0.09750578 -0.7345620 0.2796663 0.3886156 -0.3333333 0.2475232
fvd NA 1 NA NA NA NA NA NA NA
UTATO 0.09759001 NA 1.00000000 -0.95197273 0.5989523 0.7731634 -0.8771467 -0.6831301 -0.8628576
sauti 0.09750578 NA -0.95197273 1.00000000 -0.7036032 -0.8402240 0.9404664 0.4366563 0.7943585
chara -0.73456201 NA 0.59895228 -0.70360324 1.0000000 0.2518106 -0.9002879 -0.2497461 -0.8126569
cons 0.27966629 NA 0.77316343 -0.84022399 0.2518106 1.0000000 -0.6162621 -0.1754673 -0.3707192
pmda 0.38861560 NA -0.87714665 0.94046644 -0.9002879 -0.6162621 1.0000000 0.4309382 0.8929731
ugpto -0.33333333 NA -0.68313005 0.43665633 -0.2497461 -0.1754673 0.4309382 1.0000000 0.7582682
DISPO 0.24752325 NA -0.86285759 0.79435846 -0.8126569 -0.3707192 0.8929731 0.7582682 1.0000000
Message d'avis :
In cor(rupt2006) : l'écart type est nulle
>

```

2007, une seule exploitation.

```

> rupt2008<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2008.csv', header=T, dec=',', sep=',')
> rownames(rupt2008)<-rupt2008[,1]
> rupt2008<-rupt2008[,4:12]
> #Etude sommaire
> summary(rupt2008)
  fjuri    fvd  UTATO    sauti    chara    cons    pmda
Min. :3.0 Min. :0.00 Min. :1.78 Min. :185 Min. : 77592 Min. : 48.93 Min. :135884
1st Qu.:3.0 1st Qu.: 0.00 1st Qu.:2.00 1st Qu.:195 1st Qu.: 81212 1st Qu.: 61.27 1st Qu.:155724
Median :3.0 Median : 0.00 Median :2.97 Median :225 Median : 81266 Median :111.81 Median :185695
Mean :3.4 Mean : 4.72 Mean :3.35 Mean :256 Mean :120445 Mean :153.85 Mean :209843
3rd Qu.:4.0 3rd Qu.: 0.63 3rd Qu.:3.00 3rd Qu.:275 3rd Qu.:126568 3rd Qu.:270.85 3rd Qu.:186525
Max. :4.0 Max. :22.97 Max. :7.00 Max. :400 Max. :235585 Max. :276.41 Max. :385387
  ugpto    DISPO
Min. :0.0 Min. : 0
1st Qu.:0.0 1st Qu.: 0
Median :0.0 Median :12821
Mean :1.5 Mean :19221
3rd Qu.:0.0 3rd Qu.:30000
Max. :7.5 Max. :53282
> cor(rupt2008)
  fjuri fvd  UTATO sauti chara cons pmda ugpto DISPO
fjuri 1.0000000 -0.3940145 0.7060123 0.8475799 0.8204299 -0.5996552 0.6880952 -0.4082483 0.2987685
fvd -0.3940145 1.0000000 -0.3912264 -0.4298071 -0.3008782 -0.4801609 -0.2762472 0.9996427 0.2907011
UTATO 0.7060123 -0.3912264 1.0000000 0.9741080 0.9595706 -0.4466104 0.9925400 -0.4151545 0.7452998
sauti 0.8475799 -0.4298071 0.9741080 1.0000000 0.9794452 -0.5160786 0.9613049 -0.4521651 0.6463243

```

```
chara 0.8204299 -0.3008782 0.9595706 0.9794452 1.0000000 -0.6142148 0.9625134 -0.3250896 0.7205462
cons -0.5996552 -0.4801609 -0.4466104 -0.5160786 -0.6142148 1.0000000 -0.5319340 -0.4626583 -0.6699485
pmda 0.6880952 -0.2762472 0.9925400 0.9613049 0.9625134 -0.5319340 1.0000000 -0.3012517 0.8158847
ugbto -0.4082483 0.9996427 -0.4151545 -0.4521651 -0.3250896 -0.4626583 -0.3012517 1.0000000 0.2657772
DISPO 0.2987685 0.2907011 0.7452998 0.6463243 0.7205462 -0.6699485 0.8158847 0.2657772 1.0000000
>
```

```
> rupt2009<-read.table('C:/Users/Bureau LGH/Desktop/Rup seules OTEX1000 2009.csv', header=T, dec=',', sep=',')
> rownames(rupt2009)<-rupt2009[,1]
```

```
> rupt2009<-rupt2009[,4:12]
```

```
> #Etude sommaire
```

```
> summary(rupt2009)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda
Min. :3.0 Min. :0.000 Min. :1.050 Min. :145.0 Min. :98518 Min. :0.00 Min. :119449
1st Qu.:3.0 1st Qu.:0.000 1st Qu.:1.762 1st Qu.:167.5 1st Qu.:104286 1st Qu.:45.77 1st Qu.:250464
Median :3.5 Median :0.000 Median :2.500 Median :225.0 Median :113507 Median :118.45 Median :313535
Mean :3.5 Mean :4.742 Mean :2.482 Mean :242.5 Mean :125545 Mean :121.94 Mean :271348
3rd Qu.:4.0 3rd Qu.:4.742 3rd Qu.:3.220 3rd Qu.:300.0 3rd Qu.:134765 3rd Qu.:194.63 3rd Qu.:334419
Max. :4.0 Max. :18.970 Max. :3.880 Max. :375.0 Max. :176648 Max. :250.87 Max. :338873

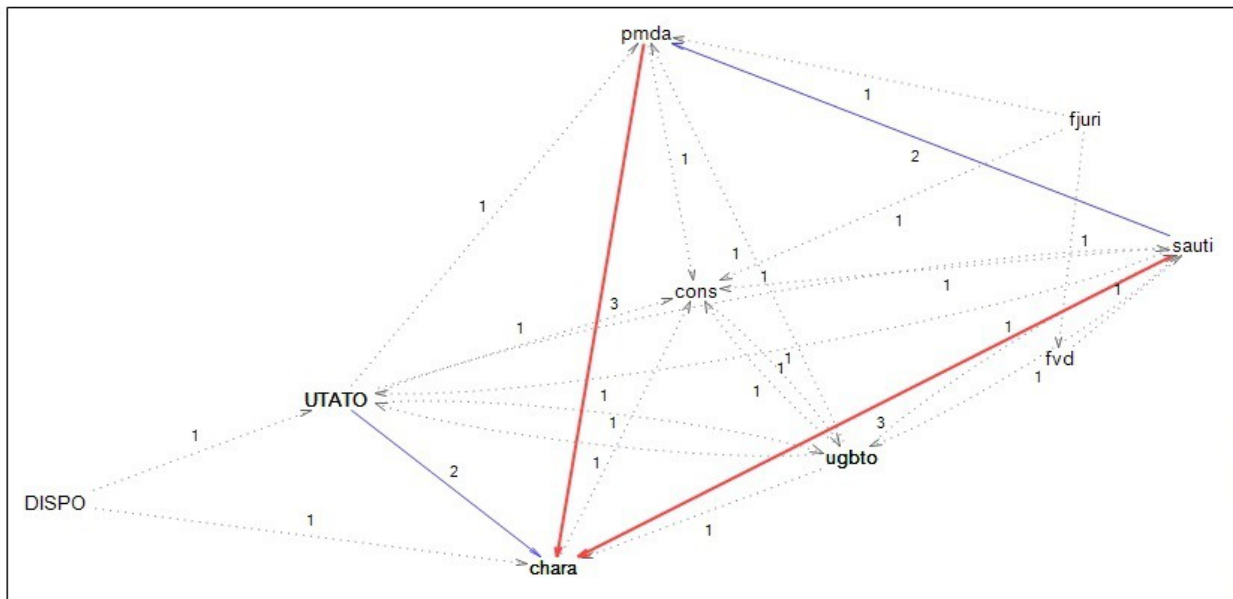
      ugpto      DISPO
Min. :0.00 Min. :0
1st Qu.:0.00 1st Qu.:17250
Median :13.75 Median :35834
Mean :30.00 Mean :40968
3rd Qu.:43.75 3rd Qu.:59552
Max. :92.50 Max. :92204
```

```
> cor(rupt2009)
```

```
      fjuri      fvd      UTATO      sauti      chara      cons      pmda      ugpto      DISPO
fjuri 1.00000000 -0.5773503 0.01648876 0.91280108 0.3937806 0.9366974 -0.7223761 0.43000178 0.4860065
fvd -0.57735027 1.0000000 0.76022344 -0.62282521 -0.3651669 -0.7212573 0.3978795 -0.03819410 -0.6910819
UTATO 0.01648876 0.7602234 1.00000000 -0.22589474 -0.4536349 -0.1024433 -0.2642837 0.53792008 -0.2277971
sauti 0.91280108 -0.6228252 -0.22589474 1.00000000 0.7327123 0.7747207 -0.3862831 0.02378825 0.2229798
chara 0.39378062 -0.3651669 -0.45363487 0.73271235 1.0000000 0.1607713 0.3439693 -0.65604734 -0.3697066
cons 0.93669738 -0.7212573 -0.10244335 0.77472071 0.1607713 1.0000000 -0.8591396 0.58093788 0.7604939
pmda -0.72237612 0.3978795 -0.26428373 -0.38628307 0.3439693 -0.8591396 1.0000000 -0.91474245 -0.8333195
ugbto 0.43000178 -0.0381941 0.53792008 0.02378825 -0.6560473 0.5809379 -0.9147425 1.00000000 0.6982893
DISPO 0.48600648 -0.6910819 -0.22779711 0.22297982 -0.3697066 0.7604939 -0.8333195 0.69828926 1.0000000
>
```

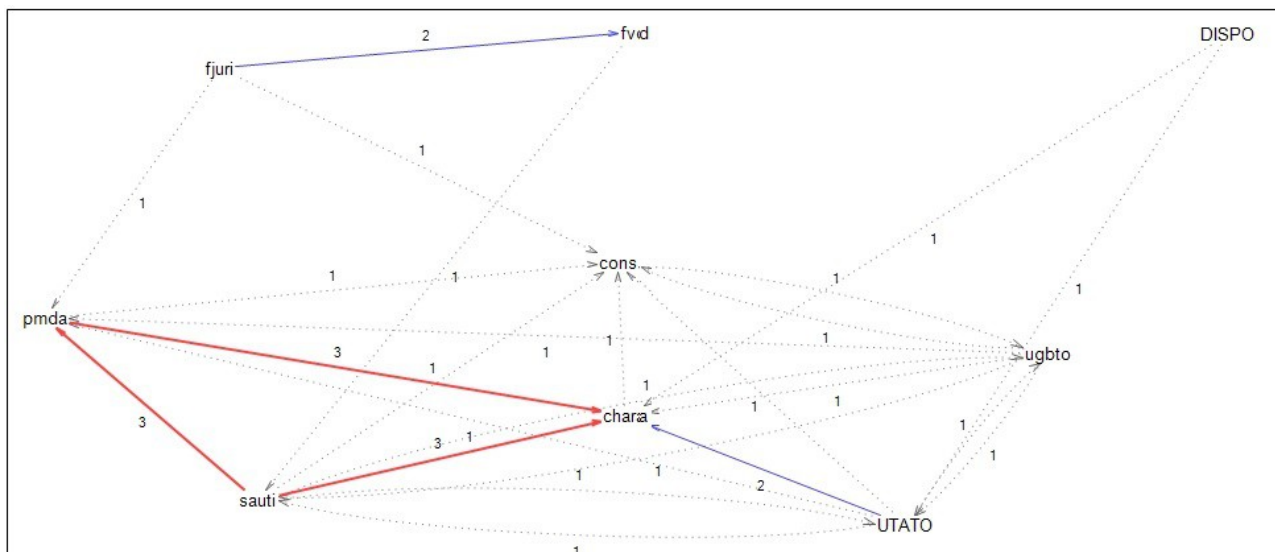
# ANNEXE 14

Chemins de propagation de contrainte par année exploitations « stables » OTEX 1000  
2000

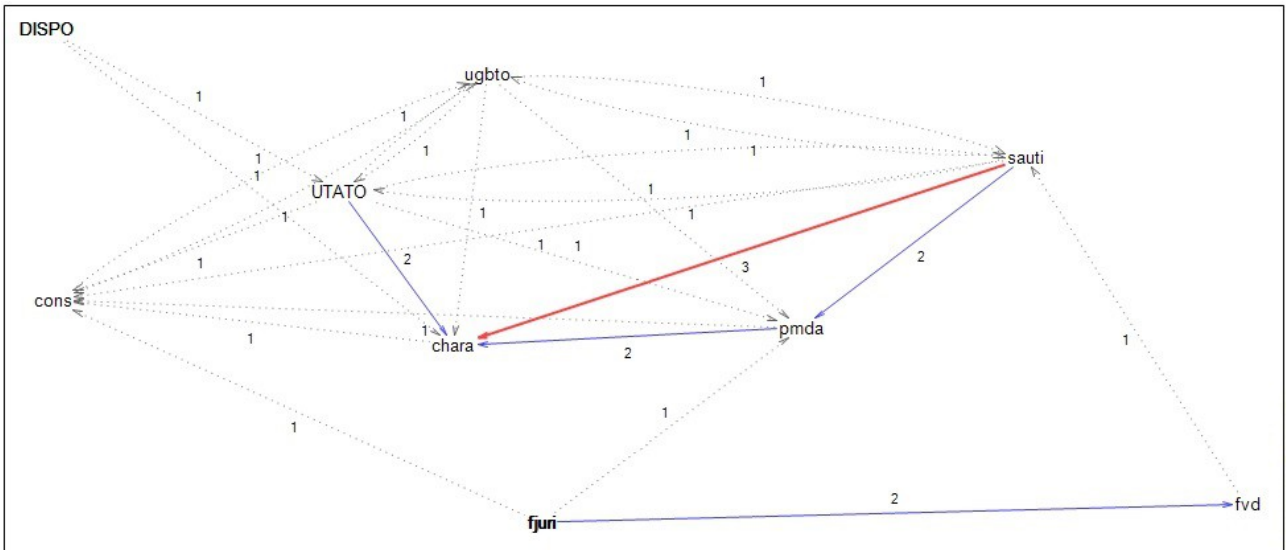


- ..... Influences les plus faibles
- Influences faibles
- Influences moyennes
- Influences relativement importantes
- Influences les plus importantes

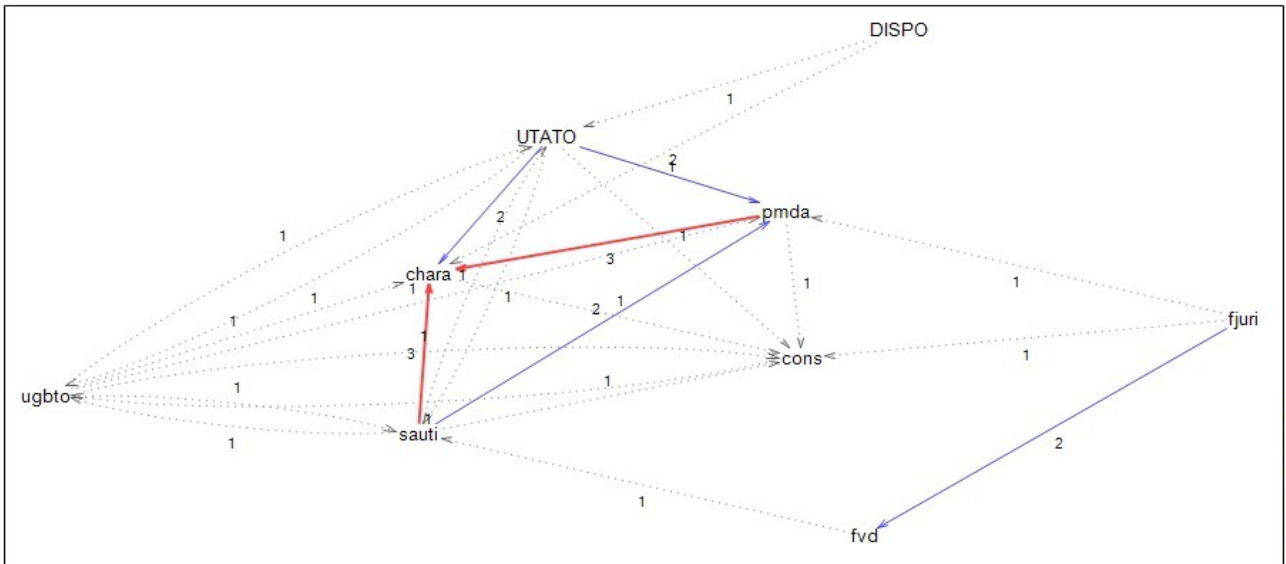
2001



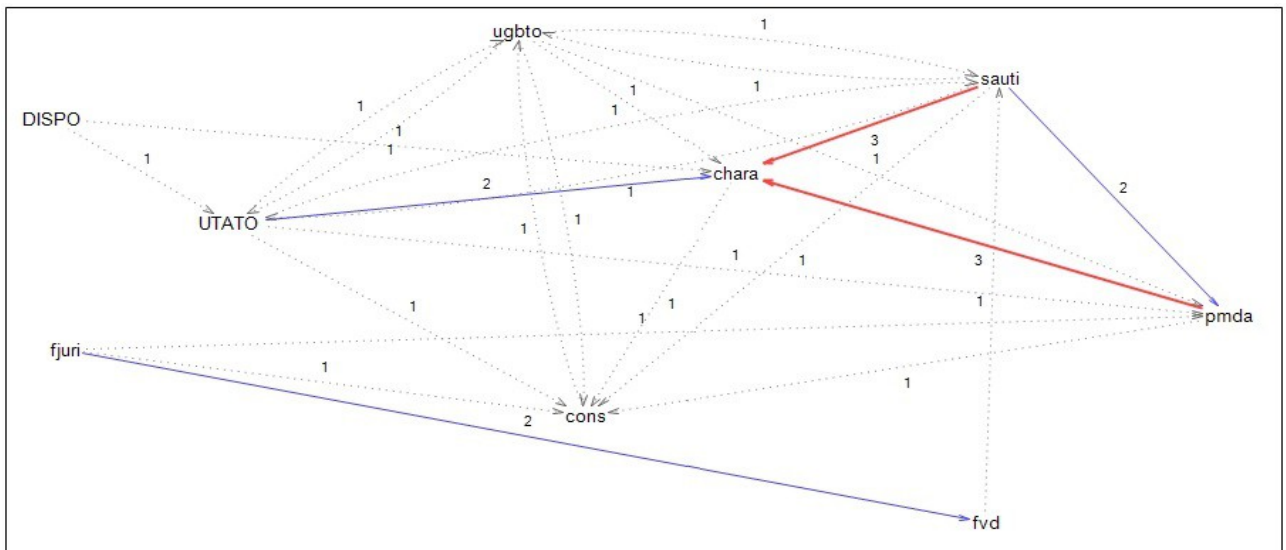
2002



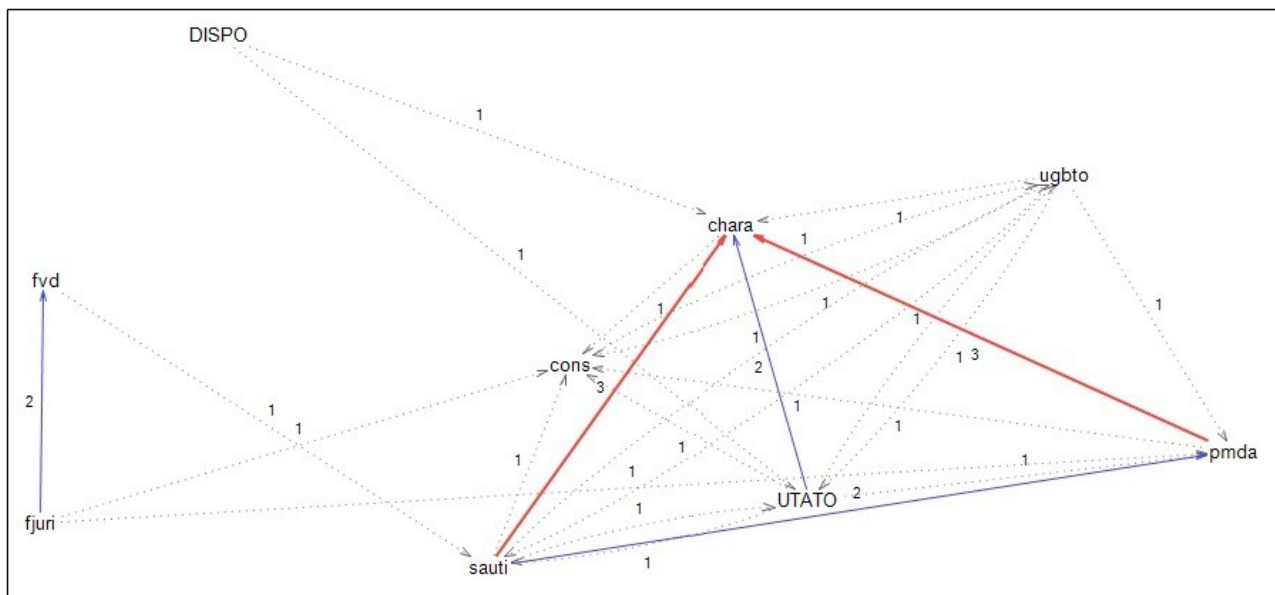
2004



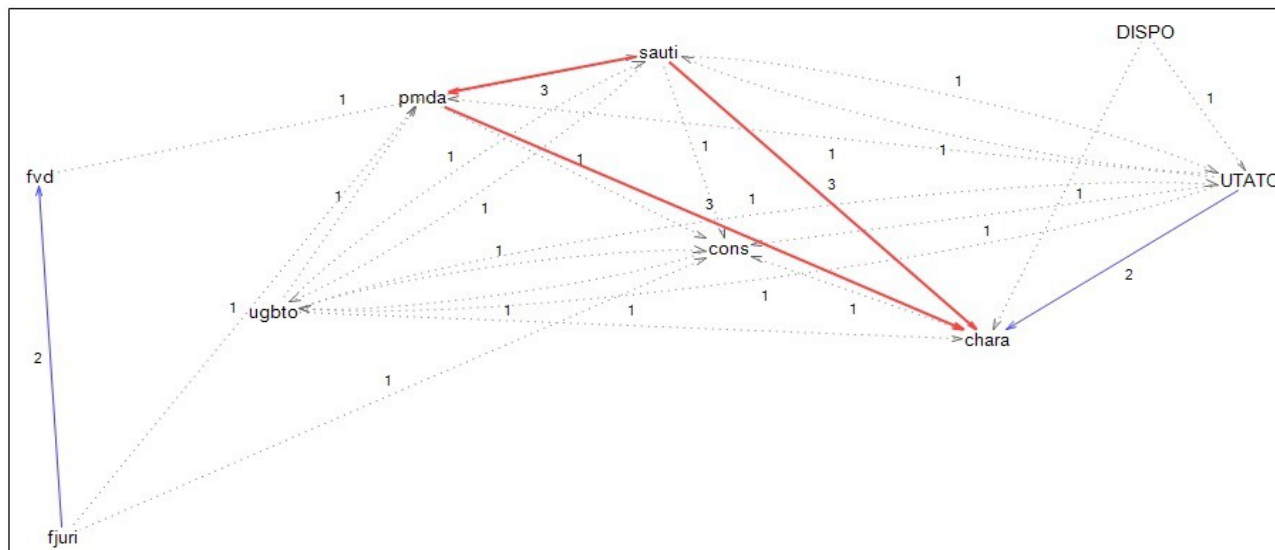
2005



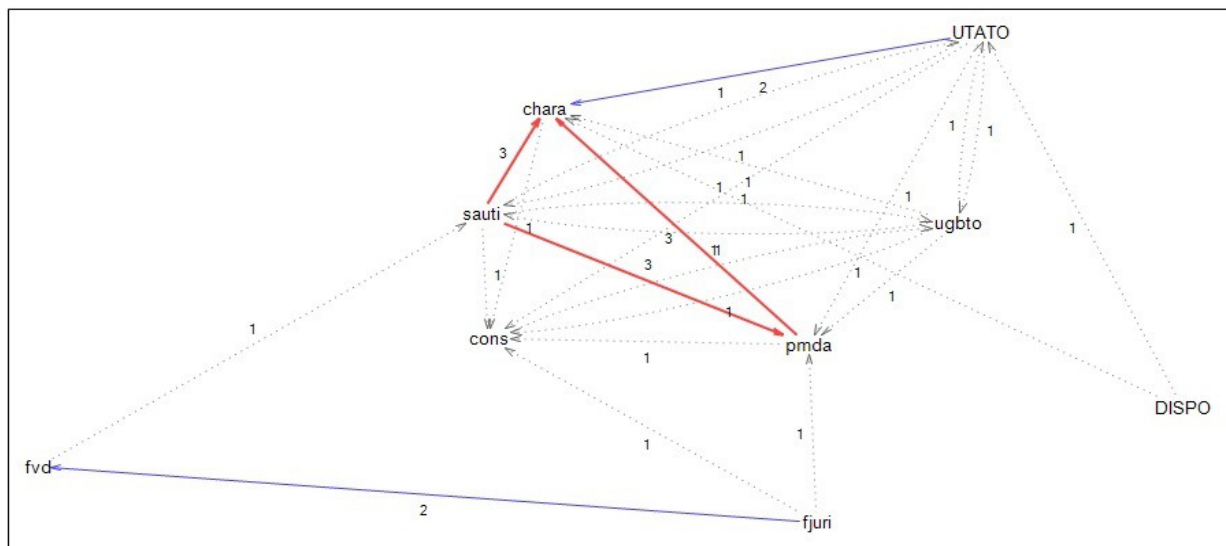
2006



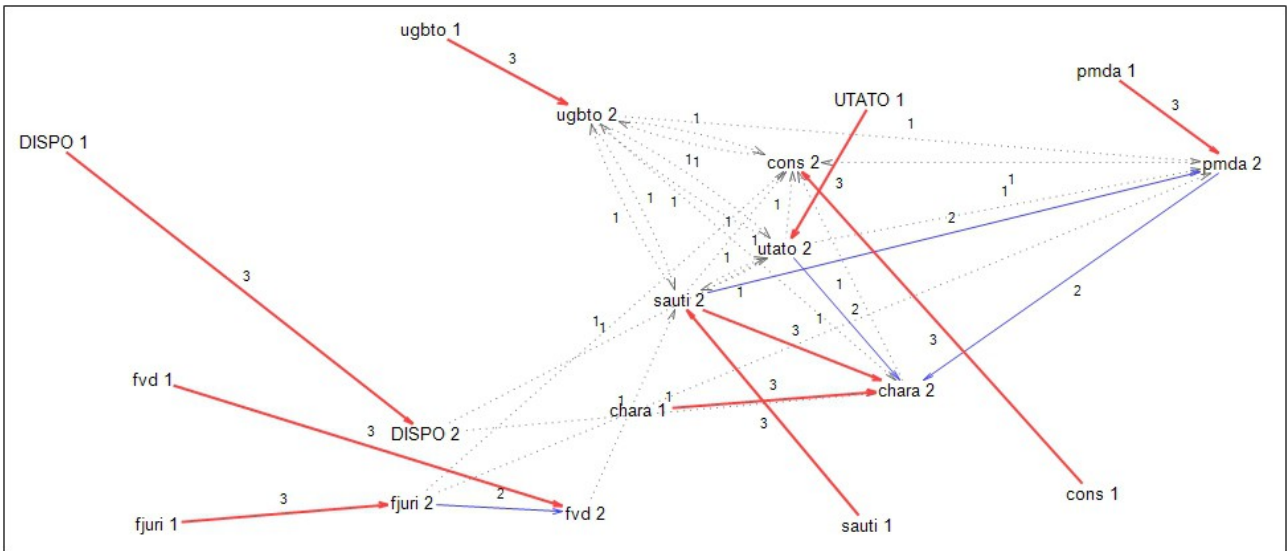
2007



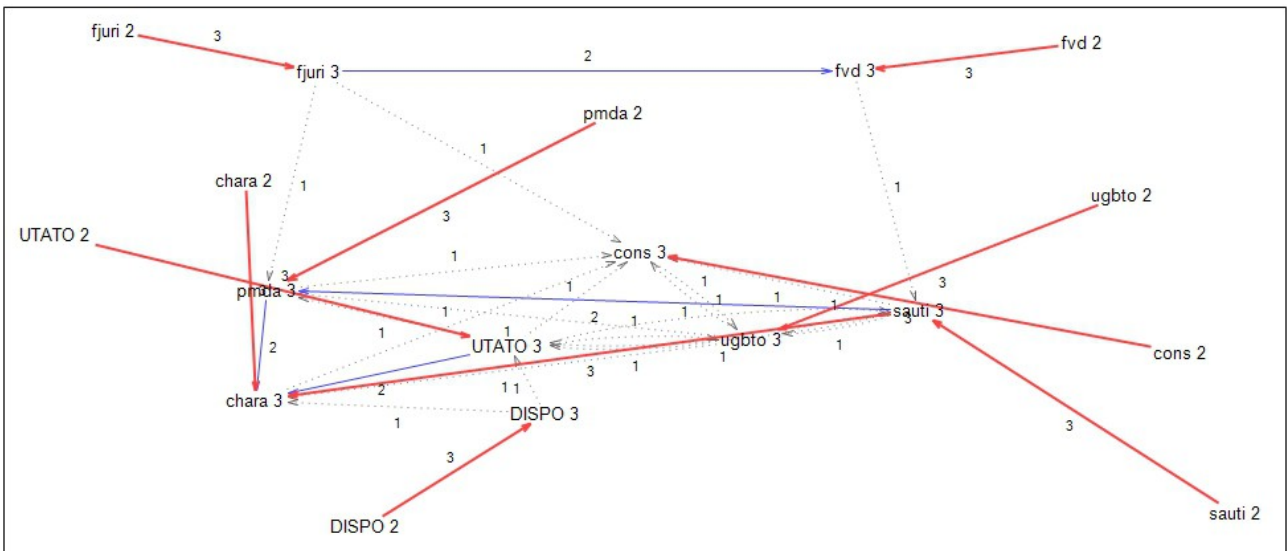
2009



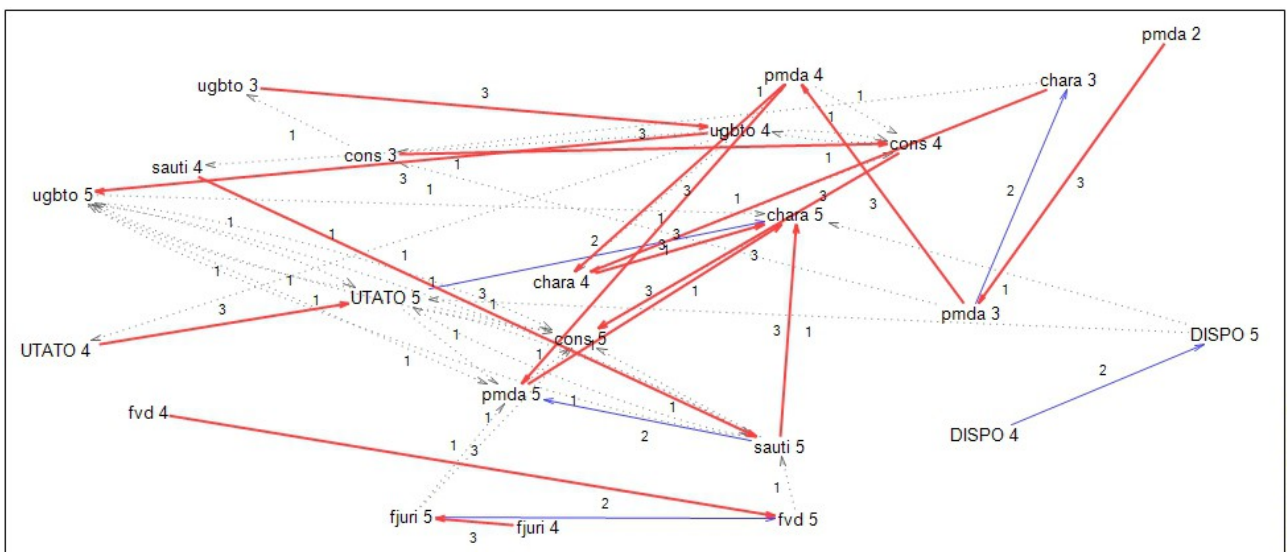
2001-2002



2002-2003

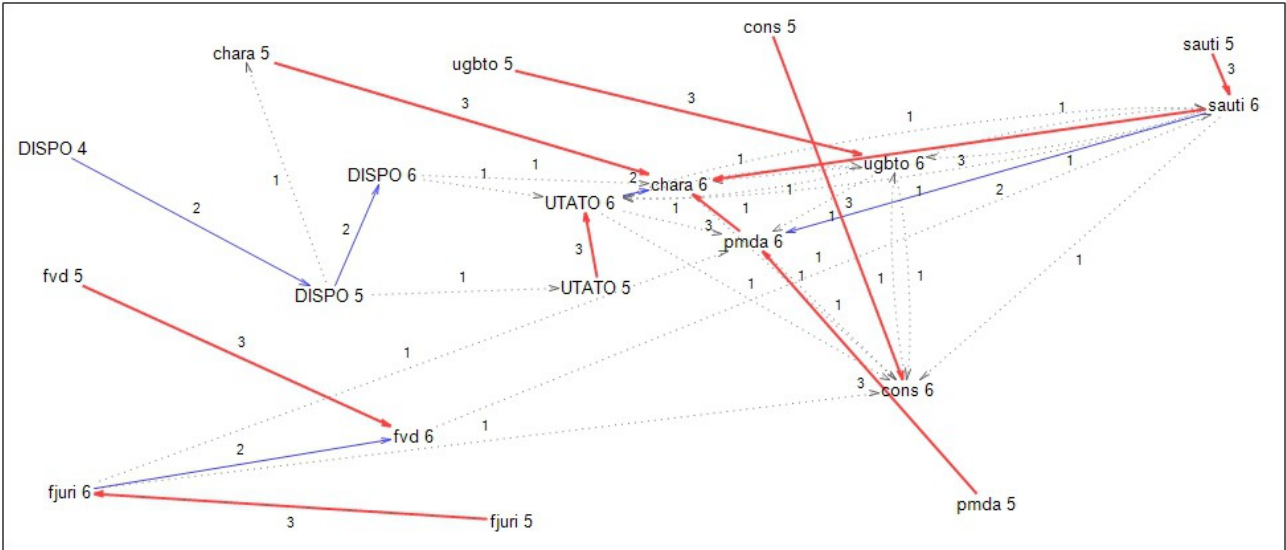


2004-2005

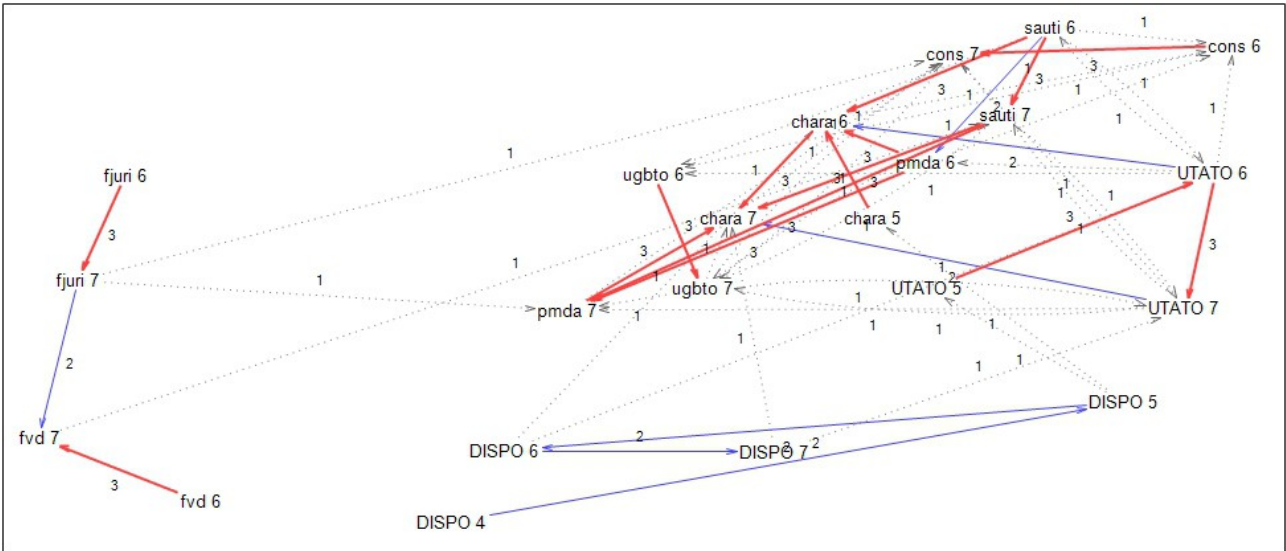




2005-2006



2006-2007



## ANNEXE 15

### Références des logiciels

OpenOffice, dernière version utilisée :  
Apache OpenOffice 4.1.1  
AOO411m6(Build:9775) - Rev. 1617669  
2014-08-13 09:06:54 (Mi, 13 Aug 2014)  
Copyright © 2014 The Apache Software Foundation.  
<http://www.openoffice.org/>

R version 3.1.0 (2014-04-10) -- "Spring Dance"  
Copyright (C) 2014 The R Foundation for Statistical Computing  
Platform: x86\_64-w64-mingw32/x64 (64-bit)  
<http://cran.r-project.org/>

PSPad Freeware editor  
4.5.7 (2450) 25/01/2013  
Jean Fiala 2001-2014  
Slovakova 1270  
684 01 Slavkov U Brna  
Czech Republic  
<http://www.pspad.com/fr/>

Micmac Version 6.1.2 2003  
LIPSOR, CNAM, EPITA  
Méthode de Michel Godet et Françoise Bourse 1989  
Avec le concours de nombreux partenaires  
Logiciel libre.  
<http://www.lapropective.fr/>

Internet Explorer 11  
dernière version utilisée : 11.0.9600.17498  
Version des mises à jour 11.0.15  
2013 Microsoft Corporation  
<http://windows.microsoft.com/fr-fr/internet-explorer/browser-ie#touchweb=touchvidtab1>

Environnement de travail  
Windows 8.1  
2013 Microsoft Corporation  
<http://windows.microsoft.com/fr-fr/windows/home>

NB : Le matériel de recherche est disponible sur demande sous forme de documents numériques.