Tunisian Business register
Update, quality and diffusion

Hassen AROURI
-Geneva, September 2013-
I. Presentation of TBR
  - Legal framework
  - Goals
  - Sources
  - Management
  - Content

II. Quality control and improvement
  - Problems of administrative sources
  - Quality improvement survey
  - Statistical methodology of estimation

III. Publications
Pursuant to the 94-780 decree of 4 April 1994:

- The National Business Register (RNE) is created and managed by the National Statistical Institute (INS)
- INS attribute a national identifier for each enterprise or establishment in the RNE
- INS is charged to codify economic activity using the Tunisian national activity classification (NAT)
Sources of update

• Administrative sources: the General Fiscal Direction (DGI), the National Social Security Fund (CNSS) and each public structure having information about firms

• Exchange Agreement: dates, variables, classifications, definitions
1. Database of units
2. Database of statistics
3. Sampling frame
• Coverage list of enterprises - establishments and update all relative information: activity status, activity, size, address, ...

• Normalisation and harmonisation enterprises information: using national classifications, unique identifier, ...
TBR Goals: Statistical database

- Publish business statistics: enterprise number, employees, turnover, importation, exportation, ... by activity, year, size, ...
- Enterprises demography: entry, exit, stillborn
- Job creation: Gross and net job creation and destruction
- International studies: World Bank (Which firms create the most jobs?, up-or-out dynamic?, creative-destruction process?, ...)
THE TBR is the unique business sampling frame:

- Economic activity national survey (ENAE)
- Investment survey
- Small enterprises economic activity survey
- Employment and wages national survey
- Trade sector national survey
- Surveys outside INS: Annual Survey of Competitiveness
Sources of update

• Administrative sources
  1. Fiscal direction (DGI)
  2. Security and social fund (CNSS)
  3. Customs (douane)
  4. Industrial Promotion agency (API)

• Economic surveys
## Administrative sources characteristics

<table>
<thead>
<tr>
<th>Source</th>
<th>Principal variables</th>
<th>Frequency</th>
<th>Coverage</th>
<th>Enterprise Identifier</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGI (legal unit)</td>
<td>Identification, activities, turnover, benefits</td>
<td>quarterly</td>
<td>600 thousand</td>
<td>Fiscal code</td>
<td>Fiscal classifications : address, activity, legal form</td>
</tr>
<tr>
<td>CNSS (Employer and independant)</td>
<td>Identification, activity, salaried employee, wages</td>
<td>quarterly</td>
<td>120 thousand</td>
<td>Employer code</td>
<td>CNSS classifications : activity, address</td>
</tr>
<tr>
<td></td>
<td>Identification</td>
<td>quarterly</td>
<td>400 thousand</td>
<td>Independant code</td>
<td>proffession</td>
</tr>
<tr>
<td>Douane</td>
<td>Identification, imported and exported products</td>
<td>monthly</td>
<td>8000</td>
<td>Customs code</td>
<td>NSH product classification</td>
</tr>
<tr>
<td>API (Industrial units)</td>
<td>Identification, activity, size</td>
<td>annual</td>
<td>6000</td>
<td>API code</td>
<td>NAT</td>
</tr>
</tbody>
</table>
• Absence of unique definition of « enterprise »
• Absence of unique or common enterprise identifier
• Multiple classifications used to code address and economic activity
• Diversity in the way of writing the names of the society and person
Updating the administrative version

- Tax Files
- Social Files

| Verifications, enterprise identifier, ... | Matching | Codifications | Updating |

TBR: administrative version
Unit identifier and matching

Unit identifier:

• Attributed to each legal unit (active or not)
• Sequential random with control key
• No relation with the activity or address or size,

Matching:

• Search, for each fiscal code, the correspondent code in the other files (cnss code, api code, ..)
• Since 2010, the matching process is automated
Variables codification

- Codification of activity, Gouvernorat, Delegation is based on pass tables
- Activity codification process:

```
<table>
<thead>
<tr>
<th>Fiscal activity code</th>
<th>Activity label</th>
<th>National Activity code NAT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activity pass table

- Insert into pass table
- Exists?
  - No: Manual codification
  - Yes: Automatic codification
```
TNR contents

• Units: private sector, associations, public enterprises and administrations

• Private sector:
  ▪ Identification variables
  ▪ Characteristics variables
  ▪ Size variables
TBR : principal variables

Identification

• Enterprise identifiers : INS, DGI, CNSS, douane, Api
• Name, address( ...,tel,email), dates

Characteristics

• Principal and secondary activity (nat96,nat09), legal form, nationality, fiscal regime (offshore, forfaitaire, reel, ...)
• Establissement : name, address, activity

Size

• Employee, wages, turnover, benefits, export, import
Quality control and improvement

- Administrative sources problems
- Solution 1: Improvement quality survey
- Solution 2: Statistical methodology
<table>
<thead>
<tr>
<th>Variable</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity status</td>
<td>False active units (11%):</td>
</tr>
<tr>
<td></td>
<td>• Delay declaration of cessation: 25% of cessations are declared with a delay of 3 years</td>
</tr>
<tr>
<td>Address</td>
<td>Address default (8%):</td>
</tr>
<tr>
<td></td>
<td>• Declaration, delay of update, ...</td>
</tr>
<tr>
<td>Economic activity</td>
<td>Problem of details</td>
</tr>
<tr>
<td></td>
<td>• declaration, delay of update, special classifications, ...</td>
</tr>
<tr>
<td>Employee number</td>
<td>Only registered employment (70%),</td>
</tr>
<tr>
<td></td>
<td>not covered all unpaid workers (only the owner)</td>
</tr>
<tr>
<td>Turnover</td>
<td>65% of units make declaration (delay and update)</td>
</tr>
<tr>
<td></td>
<td>(35% missing value)</td>
</tr>
</tbody>
</table>
Solution 1: quality survey
- Control and improvement quality survey (2006-2008)

Solution 2: developing statistical models using results of economic survey
- Diversify the administrative sources and dissemination the results of economic survey (since 2009)
Quality survey evaluation

Costs:

- Preparation of questionnaire, technical study, survey manual, storage application, ...
- 15 thousand entreprises: 150 thousand dollars
- Identification and response problems

Recourse to the second solution

- Diversify the administrative sources
- Develop a methodology for the dissemination of the results of economic surveys
# Improvement quality statistical models

<table>
<thead>
<tr>
<th>Variable</th>
<th>DGI</th>
<th>CNSS</th>
<th>API</th>
<th>Douane</th>
<th>Economic Surveys</th>
<th>Statistical model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity status</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td><strong>Probabilistic model</strong> (logistic regression, signal of activity)</td>
</tr>
<tr>
<td>Address</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td><strong>Deterministic model</strong> (a prior quality of source)</td>
</tr>
<tr>
<td>Economic activity</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td><strong>Deterministic model</strong> (frequency on sources)</td>
</tr>
<tr>
<td>size</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td><strong>Probabilistic model</strong> (robust regression)</td>
</tr>
</tbody>
</table>
Publications
Statistiques issues du Répertoire National des Entreprises

Nombre et démographie des entreprises du secteur privé

STATISTIQUES ISSUES DU RÉPERTOIRE NATIONAL DES ENTREPRISES
Dynamique des entreprises du secteur privé durant la période de 1996 à 2011

Octobre 2012

1- Objectifs du répertoire :

Le Répertoire National des Entreprises est un instrument de coordination statistique permettant principalement :

- La collecte et la mise à jour des données concernant les entreprises : identification, localisation, activités, taille, dates, ...
- L’harmonisation et la normalisation des variables selon les normes et les concepts statistiques : activité, adresse, taille, ...
Job creation: a big role for big firms

SUBMITTED BY BOB RIJKERS ON FEBRUARY 5, 2012

This blog is co-authored by Bob Rijkers at the World Bank and Hassan Arrouri at the Institut National de Statistique. Additional contributors include Caroline Freund and Antonio Nuñóra.

SME promotion programs are becoming progressively more popular. While evidence on their effectiveness remains elusive, their policy prominence is predicated on the belief that small firms grow faster and generate the most jobs. Our preliminary analysis of the Tunisian registry of firms, which contains longitudinal information on all formal firms from 1996 until 2010.

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STAGNATION STRUCTURELLE
Données au niveau des entreprises sur la Création d’emplois en Tunisie

STRUCTURAL STAGNATION
Firm-level Evidence on Job Creation in Tunisia

قراءة في دور المؤسسات في إحداثات الشغل بتونس

Mar 2013
Futur development

• Complete establissemement information : size
  ▪ Administrative sources : salaried employee files (address)
  ▪ Special survey : activity of establissemement and number of employee)

• Integration of enterprises accounts declared in DGI
  ▪ Coverage : all « reel » regime units (120 thousands)
  ▪ Phase of signature of agreement between INS and DGI
Thank you!