Tunisian Statistical Business Register
1994-2014

Hassen AROURI
-Istanbul, November 2015-
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
TBR Goals

1. Database of units
2. Database of statistics
3. Sampling frame
TBR Goals : Unit database

• 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?, ...)
TBR Goals: Sampling frame

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><strong>DGI (legal unit)</strong></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><strong>CNSS (Employer and independant)</strong></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><strong>Douane</strong></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><strong>API (Industrial units)</strong></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
- TBR: administrative version
- Verifications, enterprise identifier, ...
- Matching
- Codifications
- Updating
Unit identifier and matching

Unit identifier:

- Attributed to each legal unit (active or no)
- 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 automates
• Codification of activity, Gouvernorat, Delegation is based on pass tables

• Activity codification process:

![Diagram showing the process of codification]
TSBR contents

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

• Private sector:
  ▪ Identification variables
  ▪ Caracteristics variables
  ▪ Size variables
TSBR : principal variables

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

Caracteristics
• 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
# Administrative source quality

<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%), not covered all unpaid workers (only the owner)</td>
</tr>
<tr>
<td>Turnover</td>
<td>65% of units make declaration (delay and update) (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 manuel, 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>Probabilistic model (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>Deterministic model (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>Deterministic model (frequency on sources)</td>
</tr>
<tr>
<td>size</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Probabilistic model (robust regression)</td>
</tr>
</tbody>
</table>
Publications
Statistiques issues du Répertoire National des Entreprises

Nombre et démographie des entreprises du secteur privé
durant la période de 1996 à 2011

Octobre 2012

STATISTIQUES ISSUES DU RÉPERTOIRE NATIONAL DES ENTREPRISES

Dynamique des entreprises du secteur privé

tourdant la période de 1996 à 2011

Octobre 2012

STATISTIQUES ISSUES DU RÉPERTOIRE NATIONAL DES ENTREPRISES

Edition 2013

Edition 2014
Web site : www.ins.tn (statistiques des entreprises)
| مؤشرات رئيسية |
|------------------|---|
| إحصائيات حسب المحور | إحصائيات حسب الأجدية |
| البيانات التفصيلية |

<table>
<thead>
<tr>
<th>تطور عدد المؤسسات</th>
</tr>
</thead>
<tbody>
<tr>
<td>تطور المؤسسات الخاصة حسب قطاع النشاط</td>
</tr>
<tr>
<td>تطور المؤسسات الخاصة حسب حجم المؤسسة</td>
</tr>
<tr>
<td>تطور المؤسسات الخاصة حسب الصيغة الجبائية</td>
</tr>
<tr>
<td>تطور المؤسسات حسب الجنسية</td>
</tr>
<tr>
<td>تطور المؤسسات حسب نظام الإنتاج</td>
</tr>
<tr>
<td>تطور عدد المؤسسات حسب الولاية</td>
</tr>
</tbody>
</table>
Voices and Views: Middle East and North Africa

Job creation: a big role for big firms
SUBMITTED BY BOB RIKERS ON FEBRUARY 5, 2012

This blog is co-authored by Bob Rijkers at the World Bank and Hassen Arouri at the Institut National de Statistique. Additional contributors include, Caroline Freund and Antonio Nucifora.

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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». Arab World ails ill-served
». A Georgian idol for the Middle East and North Africa
Futur developement

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

• Integration of enterprises accounts declared in DGI
  ▪ Coverage : all « reel » regime units
  ▪ First Enterprises Accounts Register 2013 – 2014 covering 150 accounts
• Before 1992: economic census (cost, delay, update, response, demography)
• 1992: beginning of discussion: constitution of BR based on administrative sources
• 1994: legal framework: INS, DGI and CNSS
• 1996: First BR: RNE 1996 (manual matching and codification)
• 2008: quality improvement survey
• 2010: intégration of APII and Douane sources, statistical methodology, automatic matching
• After 2010: RNE (1996-2013): database of sampling & estimation survey, economic studies and statistics
**Business Register**: An enterprises list (all, most important units: +90% GDP) containing at least: name, address, economic activity, size (emploi, production)

To establish a BR based on administrative sources:

- Make a census of administrations files (fisc, social fund, customs, promotion agency,...)
- Study of unit coverage, contents, définitions, classifications, updates, ...
- Develop a methodology of integration (matching, codification,...)
- Establish a legal framework: using administrative sources for statistical purposes
Thank you!

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