Methodology

Starting 1998, ECES initiated and conducted the business barometer survey biannually in June and December of each year. The survey targets the most important sectors affecting economic activity. It provides useful information on business sector views about past performance and future expectations for their own production, prices, employment and investment. Starting the July 2007 issue and to date, the survey comprises a sample of large firms in terms of output in the manufacturing, construction and tourism sectors in addition to transportation, communications and financial sectors.

Sample Structure

The current sample comprises both manufacturing and services sectors. Of the total number of firms surveyed (474 firms), 47 percent of firms (225) are in manufacturing and 53 percent (249) in services. Public-private distribution of the whole sample is as follows: 79 percent of firms are from the private sector and 21 percent from the public sector.

The manufacturing sector's sample is constructed in a way that reflects the contribution of each industry to manufacturing value added and the importance of public versus private production within each industry based on CAPMAS Annual Industrial Statistics 2004 (for the private sector) and 2003/04 (for the public sector). Manufacturing sub-sectors are: food; beverages and tobacco; spinning and weaving; ready-made clothes; wood and furniture; paper and its products; printing; shoes; leather and leather products; rubber products; chemicals and chemical-related products; non-metal mining products; basic metal products; and transportation equipment.

The services sample includes firms in transportation (56 firms), communications (29 firms), financial intermediaries (65 firms), tourism (43 firms) and construction (56 firms).

The survey elicits responses of firms on current levels of activity in terms of production, sales in domestic and international markets, inventories, the level of capacity utilization, the prices of final products and intermediate inputs as well as wages, employment and investment. The survey also probes the changing nature of constraints on business as well as assessment of overall economic growth (see questionnaire).

The Business Barometer Indices (BBIs)

In July 2008, a new business barometer Index (BBI) was constructed to summarize firms' responses about their evaluation and expectations regarding the overall economic performance and their own activities in one single index. In this issue, the index methodology has been revised and re-estimated. To allow for detailed comparisons over time, it was thought to be more useful to create two separate indices, the BB evaluation index and the BB expectations index.

The computation of BBI Indices relied on principal component analysis (PCA), a multivariate analysis technique. The PCA[1] was used to explain changes among observed variables in terms of fewer unobserved variables usually called principal components, eigenvectors, factors or loadings. PCA attempts to identify the underlying principal components that explain the pattern of correlations within a set of observed variables. It is often used to identify a small number of factors that explain most of the variance that is observed in a much larger number of observed variables. The principal components (PC) are modeled as linear weighted combinations of those observed variables. For a set of observed variables X_i, where i=1,,……..,n, PC_j can be written as:

$$PC_j = a_{j1}X_1 + a_{j2}X_2 + ... a_{jn}X_n$$

where:

a_{ji} represents the weights for the *i*th variable (X_i) in the jth PC (j=1,……..,m; m<n).[2] The PCs are ordered in such a way that the first PC explains the largest possible amount of variation in the original data, under the constraint that the sum of the squared weights is equal to 1. The following components are not correlated with the first principal component and explain additional but less variation than the first principal component. The values of the first principal component are normalized to take the values between 0 and 100, and the mean value represents the value of BBI.

[1] Vyas, S., and L. Kumaranayake. 2006. "Constructing Socio-Economic Status Indices: How to Use Principal Components Analysis." Health Policy Plan 21(6):459-68.

[2] STATA statistical package was used to run and compute the eigenvalues, eigenvectors of the covariance matrix and principal components.

ECES
The Egyptian Center for Economic Studies

Business Barometer

(Biannual Survey: January 2009)

Respondent Name: .... 　Position: ....

Enterprise Name: ....

Nature of Activity: .... 　Specialization: ....

Telephone Number:..

Sector: .... 　☐ Public 　　　☐ Private

Year of Foundation: .... 　Number of Employees: ....

Address: .... 　Email Address: ....

Date of Interview: .... 　Surveyed Period: (July 2008 – December 2008)

1- During the past six months relative to the preceding six months: 　　　　　　　　　　　　　　　　**%**

- Was your production/volume of activity:	☐	Higher	☐	Normal	☐ Lower	___
- Was your sales volume/size of activity in the domestic market:	☐	Higher	☐	Normal	☐ Lower	___
- Was your sales volume/size of activity in the international market:						
- *European Union*	☐	Higher	☐	Normal	☐ Lower	___
- *United States of America*	☐	Higher	☐	Normal	☐ Lower	___
- *Arab Countries*	☐	Higher	☐	Normal	☐ Lower	___
- *Asia (excluding Arab countries)*	☐	Higher	☐	Normal	☐ Lower	___
- *Africa (excluding Arab countries)*	☐	Higher	☐	Normal	☐ Lower	___
- Did prices of your products/ projects:	☐	Rise	☐	Stay the same	☐ Fall	___
- Did prices of your inputs:						
- *Raw materials*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Energy*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Maintenance*	☐	Rise	☐	Stay the same	☐ Fall	___
- Did your wage level:	☐	Rise	☐	Stay the same	☐ Fall	___
- Did your inventories:	☐	Rise	☐	Stay the same	☐ Fall	___
- Was your capacity utilization:	☐	Approaching full capacity	☐	Normal	☐ Below	___
- Did your employment, from:						
- *White-collar:*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Permanent*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Temporary*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Blue-collar:*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Permanent*	☐	Rise	☐	Stay the same	☐ Fall	___
- *Temporary*	☐	Rise	☐	Stay the same	☐ Fall	___

- Did your investment in:

- *Land*	☐ Rise	☐ Stay the same	☐ Fall	___
- *Buildings*	☐ Rise	☐ Stay the same	☐ Fall	___
- *Machinery & Equipment*	☐ Rise	☐ Stay the same	☐ Fall	___
- Did your expenditure on R&D	☐ Rise	☐ Stay the same	☐ Fall	___
- Did the value of subsidies that your firm benefit from (if applicable)	☐ Rise	☐ Stay the same	☐ Fall	___

2- What were your sales/size of activity in Egyptian pounds during: The year before the survey period:-------------

The survey period: -----------------------------

3- In the past six months, did the economy grow: ☐ Faster   ☐ At the same rate   ☐ Slower

4- What are your company's main sources of finance from the following list, ranking your choices on a scale from 1 to 4 (1 for the lowest and 4 for the highest source):

	Source	Rank
1-	Own funds/business partner	
2-	Bank credit	
3-	Issuing bonds	
4-	Stock market (selling stocks)	

5- Is your production currently constrained: ☐ Yes   ☐ No

If yes, please rank on a scale from 0 to 4 the following constraints to your production process, where 0 indicates not a constraint and 4 refers to severe constraints.

	0	1	2	3	4
- Insufficient demand					
- Insufficient capital					
- Insufficient access to imports					
- Insufficient skilled workforce					
- Complicated export procedures					
- Difficulty to obtain credit					
- High interest rate on loans					
- Difficulties related to terms of obtaining a bank credit					
- Difficulty to obtain land (for new projects or expansions)					
- Complicated legal procedures					
- Difficulty in interacting with government agencies					
- Other factors (please specify):--					

6- In the next six months, do you expect: *%*

  - Your production/volume of activity to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___
  - Your sales volume/size of activity in the domestic market to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___
  - Your sales volume/size of activity in the international market to:

    - *European Union*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *United States of America*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *Arab countries*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *Asia (excluding Arab countries)*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *Africa (excluding Arab countries)*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___

  - Prices of your products/projects to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___
  - Prices of your inputs to:

    - *Raw Materials*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *Energy*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___
    - *Maintenance*   ☐ Rise   ☐ Stay the same   ☐ Fall   ___

  - Wage level to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___
  - Inventories to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___
  - Capacity Utilization to: ☐ Rise   ☐ Stay the same   ☐ Fall   ___

7- In the next six months, what are you planning to do about the following items:

  - Workforce: ☐ Increase   ☐ Maintain   ☐ Decrease
    - *White-Collars:*   ☐ Increase   ☐ Maintain   ☐ Decrease
      - *Permanent*   ☐ Increase   ☐ Maintain   ☐ Decrease
      - *Temporary*   ☐ Increase   ☐ Maintain   ☐ Decrease
    - *Blue-Collars:*   ☐ Increase   ☐ Maintain   ☐ Decrease
      - *Permanent*   ☐ Increase   ☐ Maintain   ☐ Decrease
      - *Temporary*   ☐ Increase   ☐ Maintain   ☐ Decrease
  - Investment: ☐ Increase   ☐ Maintain   ☐ Decrease
    - *Land*   ☐ Increase   ☐ Maintain   ☐ Decrease
    - *Buildings*   ☐ Increase   ☐ Maintain   ☐ Decrease
    - *Machinery & Equipment*   ☐ Increase   ☐ Maintain   ☐ Decrease

8- In the next six months, do you expect the economy to grow

☐ Faster   ☐ At the same rate   ☐ Slower