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**THE MACRO-MICRO NEXUS AND PUBLIC  
PROCUREMENT SUPPORT POLICY FOR SMES:  
THE CASE OF PHARMACEUTICALS IN EGYPT**

**Lobna AbdelLatif and Mohamed Zaky**

**Working Paper No. 818**

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## Abstract

The purpose of the current paper is to inform the open dialogue on further development on the frame of public procurement in Egypt and present some advice for policy making on fostering the accessibility of SMEs to public tender market. Observations of previous research showed that SMEs are facing many challenges in this market. The study has a three step approach; we take a quick look at the public procurement law, then we zoom on its application on public tender contracts in pharmaceuticals. Additionally, we conduct a survey on companies in that industry to get the field touch. Linking the findings of these three steps to challenges facing SMEs worldwide and inside Egypt, we find that while Egypt shares the general challenges with others it has different paths for solutions.

**JEL Classifications:** H57, I18, L25, O55

**Keywords:** public procurement, small and medium enterprises, pharmaceuticals, Egypt.

## ملخص

الغرض من هذه الورقة هو خلق حوار مفتوح حول مزيد من التطوير على إطار المشتريات العامة في مصر وتقديم بعض النصائح لصناع السياسات على تعزيز إمكانية الوصول إلى الشركات الصغيرة والمتوسطة. أظهرت الملاحظات من الأبحاث السابقة أن الشركات الصغيرة والمتوسطة تواجه العديد من التحديات في هذا السوق. تحذو هذه الدراسة نهجا ثلاثي الخطوات ، تلقي نظرة سريعة على قانون المشتريات العامة، ونلقى الضوء على تطبيقه في عقود المناقصات العامة في سوق المستحضرات الصيدلانية. بالإضافة إلى ذلك، نقوم بإجراء مسح على الشركات في هذه الصناعة للحصول على لمحة عن المجال. ويربط نتائج هذه الخطوات الثلاث إلى التحديات التي تواجه الشركات الصغيرة والمتوسطة في جميع أنحاء العالم وداخل مصر، نجد أنه في حين تتقاسم مصر التحديات العامة مع الدول الأخرى إلا ان لديها مسارات مختلفة لاجاد حلول.

## **1. Introduction**

Creating supportive environments for SMEs entrepreneurship and development has become a top public policy priority in almost every country around the world. Whilst governments' support of SMEs can take on a number of guises there is a global recognition of the significance of public procurement as an effective public policy tool in supporting SMEs.

Public procurement constitutes an important portion of GDP in different countries. UNCTAD (2012) reported that public procurement accounts for up to 25–30 percent of GDP in developing countries and for approximately 15 percent of GDP in OECD countries. In Egypt it amounted almost to 17% in 2010/2011. As such, governments have an opportunity to support SMEs directly through their purchasing policies, being major consumers of goods and services.

Almost everywhere in the world, laws, policies, and practices have been under thorough revision to that effect. Most countries reviewed their legal frameworks to reflect their supportive policies towards SMEs. Linked to this macro reform, new sets of directives, at the level of organizations, were produced to level up the organizations behavior and attitudes to absorb changes of policies and laws. Egypt is not far from that; many measures were taken to foster the role of SMEs.

The current paper aims at highlighting this macro-micro nexus. It uses data on Egypt to explore how the missing link between policies and laws from one side and their reflection in the practices that govern the behavior and attitudes of governmental agencies can harm SMEs in their accession to public tenders. The detachment between macro and micro reforms could be seen as a real deficiency in the support program of the Government of Egypt (GoE) for SMEs.

The rest of the paper is structured as follows. In section two the paper reviews international experience on the issue. Section three moves to the case of Egypt. It starts with shedding light on barriers facing SMEs in the public procurement market in general then it zooms on the pharmaceutical sector to discuss its regulations and public procurement aspects. Section four presents the results of a field survey conducted on pharmaceutical companies intended to further explore the importance of micro reforms to complement the supportive policy at the macro level. Finally, section five concludes with a policy recommendations.

## **2. Review of the International Experience of Macro-Micro Reforms**

Based on the potential role that public procurement could play in SMEs' development strategy, most of the developed and developing countries around the world have embarked on reform initiatives of their public procurement policies to enhance SMEs competing capacity in public procurement markets. To achieve this goal, many of these countries implemented significant modifications in their legal frameworks, including their constitutions in some cases, such as South Africa (Bolton 2006).

Many of the countries have applied disaggregation of big tenders and set-aside approaches to encourage SMEs participation. The U.S. federal government promotes small business procurement opportunities at both the prime and subcontracting levels; and the American Congress assures through national policies the maximum utilization of small businesses in federal contracting (Clark et al. 2006). With the enactment of Public Law 95-507<sup>1</sup>, this promotion was extended to include small disadvantaged businesses (including minorities); women-owned small businesses; HubZone small businesses; veteran-owned small businesses; and service-disabled veteran-owned small businesses. The Federal Acquisition Regulation Council and the U.S. Small Business Administration (SBA) have the federal

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<sup>1</sup> However, Clark et al. (2006) claims that the global economy is rapidly creating a need in America for greater flexibility in its small businesses programs. It states that Public Law 95-507 was enacted in 1978 and has changed very little.

target of increasing small business procurement opportunities to these groups. SBA enters into prime contracts with federal departments and agencies, and then subcontracts to small businesses. The federal government also uses the set-aside approach to target procurement toward SMEs.

France on the other hand applies sub-dividing contracts approach. The legal framework has obligated different procuring authorities to break down the procurement contracts into lots taking into consideration the technical and financial qualification of the contract (Commission of the European Communities 2008; and GHK 2010). Countries that apply a set-aside approach include Cyprus, Lithuania, Slovenia, and Poland (Commission of the European Communities 2008; and GHK 2010). The UK government published the “Coalition’s Programme for Government” in May 2010 which stated that the Government would “promote small business procurement” by “... introducing an aspiration that 25% of government contracts should be awarded to small and medium-sized businesses and by publishing government tenders in full online and free of charge.” (Maer 2012). The government is working towards the elimination of pre-qualification conditions for all central government procurements under £100,000 (Maer 2012).

Moreover, countries tended to firmly link policy reform to practices on the micro level by providing details in the main laws or complementing them with legal procedures. Executive memorandums of the laws give flexibility in application; however, audit agencies and the like provide strong systems for monitor and evaluation. The Small Business Innovation Research program (SBIR) awards over US\$2 billion in value across 4,000 contracts to US small businesses each year. The US government detailed on its legislation that favors small business across all government procurement by requiring “set aside” application for small business participation when there is a reasonable expectation that offers will be obtained from at least two small businesses and awards will be made at fair market price. According to this legislation each agency has a minimum percentage that they must spend with US small businesses. The specific percentage varies from one agency to the other but the statutory minimum is 23%. The set-aside legislation also applies to some prime contractors of the US government and these targets are carefully monitored by either the government or internal small business offices (Fresh Minds Research 2008).

European Union experience is a model example. The EU finally formalized the “Code of Best Practices”<sup>2</sup>, which provides a clear example of complementing macro reforms with micro or institutional ones. The variation of outcomes of these reforms among EU countries gives a clear indication how micro reforms are crucial for the success of the whole process. To enforce transparency and good governance principles in public tenders, public procurement in EU member states was subject to legislation reform which obliged them to open their procurement markets, to comply with procurement procedures based on the principles of transparency, competition and sound procedural management, and to introduce a national review system that allows for rapid and effective redress in cases where bidders consider that contracts have been awarded (UNCTAD 2012).

Consequently, the macro reforms mainly include regulatory reforms that reduce the administrative burden and costs related to tendering, make procurement systems more transparent and easier for SMEs (in particular) to access, and encourage the use of information technology systems (e-procurement) to simplify the process. The Code assists public authorities in developing strategies, programs or action plans with the specific aim of facilitating SMEs' access to public contracts. It also encourages Member States to learn from

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<sup>2</sup> There were several attempts to reform the EU procurement laws and practices prior to the EU code of Best Practices: the initiative “Electronic Public Procurement System for Europe - ELPRO” and 1998 Communications ( MFT 2002).

each other as they implement the new rules under the public procurement directives (GHK 2010).

A recent report claimed that SMEs won 58% to 61% of public procurement contracts above the EU thresholds in the period between 2006 and 2008, which correspond to 31% to 38% of the total contract values<sup>3</sup>. In terms of total contract value secured, European SMEs accounted for about 34% of public procurement in the 2006-2008 period, which is 18 percentage points lower than their overall share in the economy, as calculated on the basis of their combined turnover (52%) (GHK 2010). However, as the GHK (2010) report clarified, in some EU countries SMEs enjoyed greater access to public procurement. SMEs in Luxembourg, Slovakia, Germany and Ireland had greater access to public procurement above the EU threshold than their significance in the wider economy would suggest. This is to show again that country responses to macro reforms may vary according to their national “practicing” of this reform. To elaborate on this, the Code for example contains an article on “subdividing contracts into lots, in order to be able to increase SMEs chances of covering the contract quantities. EU countries include in their national laws an article on dividing contracts into lots. However, practices vary from one country to another. In Ireland, contracting authorities subdivide lots for some specialties for SMEs, however they require the main contractor to coordinate the whole work. In France, public agencies are required to subdivide contracts with multi specialties into lots according to specification area to facilitate application for SMEs. On the other hand, Austria has a loose micro frame in this regard, where according to Austrian law contracting authorities have the freedom to decide whether to award a global contract or to sub-divide it into separate lots (Commission of European Committees 2008) Such an article is considered loose as is not linked to further regulations regarding practice. Accordingly, Austria was identified among EU countries that rarely break contracts into lots as an opportunity of lowering the entry barrier to SMEs (GHK 2010). It was further documented that Austria—among a set of other countries—has witnessed a decrease in the share of its SMEs winning public contracts from 2005-2006 to 2007-2008 (GHK 2010), which again highlights the importance of complementing micro reforms. In other words, the EU sample shows how practicing micro reform varied from one EU country to another and how that affected the outcomes.

Argentina and India are other examples in the same vein. Argentina implemented several measures to enhance SMEs performance in the economy through a set of legislative reforms. The success of these measures sprang from the fact that they complemented legislative reforms with practices that encourage SMEs engagement in public procurement activities. For example, the legislative reforms involved opening up procurement at the municipal level and enhancing decentralization in the procurement process. Subsequently, in Buenos Aires in early 1996, the city undertook a renovation of its procurement procedures and practices to ease the constraints before SMEs. Additionally it produced substantial savings for the local government (ITC 1998). There was evidence that prices on many municipal contracts were as much as 30% higher than those in the commercial market. Examples of the micro reforms included elimination of “closed procurements” and increase public advertising of upcoming contract opportunities, leading to increase the number of companies submitting into bids. Additionally, officials began using a database of “reference prices”(ITC 1998).

According to ITC (1998), the city saved US\$ 200 million in the first year following the procurement reforms. The city also improved its relationship with suppliers by overhauling its payment system so that contractors were paid on time. Deficiencies in the previous system, in which payments were decentralized and issued by the unit that had purchased a

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<sup>3</sup> However, the report mentioned that this is less than their overall weight in the economy would warrant: their share in total turnover or gross premium written was 52%. The report claimed that hat this share has not changed markedly over the last years post to applying the code of best practices (GHK 2010).

service, led to chronic payment delays that contractors ultimately used to justify their higher prices. This is yet another example to prove that the success of any legislative or macro reform in general—and of procurement processes in particular—is conditional on the complementing practices and reforms on the institutional level.

The government of India granted special status to these units and provided for preferential treatment to be given to them in public buying (MFT 2002). The main policies included a Reservation Policy, where the government of India provided purchase and price preferences to be given to goods produced by SMEs. As a result certain items were reserved for procurement from the small-scale sector. This is in addition to price preference, where SMEs are entitled to a price preference of up to 15% on merit when competing with large-scale units and even when competing with a state-owned enterprise. Several administrative practices were set to encourage SMEs participation; for example, supplying bid invitation free of cost to SMEs, exemptions from bid guarantees payments when submitting offers and also when the contract is awarded to them; and compensation for delay in payment (MFT, 2002). Recently, the Indian government announced in 2011 a new public procurement policy that would require all central ministries and public sector units to purchase at least 20 percent of their total annual purchases from the SME sector<sup>4</sup>. This was complemented in 2012 by the Indian government's new action plan where every central ministry/department/local unit was slated to set an annual goal for procurement from SMEs at the beginning of every financial year. The objective of this policy is to achieve an overall procurement goal of minimum 20% of total annual purchases of products or services produced or rendered by SMEs in a period of three years. After 3 years, the overall procurement goal of minimum 20% will be mandatory (Travel Impact Newswire 2012).

### **3. SMEs and Public Procurement in Egypt's Pharmaceutical Sector**

#### **3.1 General Overview**

Successive Egyptian governments have declared supporting SMEs as one of the top public policy priorities. This interest resulted in the adoption of many important initiatives to enhance SMEs' competitiveness and increase their role in the economy. The Social Fund for Development (SFD), established to support and finance SMEs, has reflected the government's interest in SMEs development. Issuing the Small and Medium-Sized Enterprises' Development Law in 2004 has been identified as an important step to institutionalizing the process of SMEs' engagement in the economy. According to the law, SMEs were given the right to supply 10 percent of the value of all government procurement denoted in any tender. Launching Special SMEs Supporting Fund and Development Unit in 2006 was of important significance as well. The unit aims to develop an appropriate fiscal policy environment, including public procurement affairs that enable SMEs to work and grow under the umbrella of the formal sector through improving the policy environment for SMEs development<sup>5</sup>.

Like many other countries Egypt believed that that public procurement policy can play a significant role in supporting SMEs. It worth noting that Egypt's public procurement spending comprises the combined values of the public tenders (PTs) for the government sector and public economic authorities<sup>6</sup>, which amounted to around 17% of GDP in

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<sup>4</sup> According to the declaration of the Indian Ministry of Micro, Small and Medium Enterprises (MSME), Office of Development Commissioner, 23 March, 2012.

<sup>5</sup> The policy issues addressed by the unit undertook the definition of SMEs, financial constraints hampering their access to financial markets, legal and regulatory infrastructure surrounding them and their involvement in public procurement. It also facilitated their communicating with the Ministry of Finance

<sup>6</sup> Article one of Law no. 89 of 1998 governing public procurement states that the law governs "all the operations of governmental and economic public authorities units in the following areas: Procurement and purchase of movable assets, contracting for construction work and transportation, receiving of services, and consultancy studies and technical tasks."



2010/2011<sup>7</sup>. All this is subject to Public Procurement Law no. 89 for the year 1998 for tenders and auctions. The share represented by procurement spending is a relatively significant portion of the Egyptian economy; hence, it could play an important and influential role in supporting SMEs and in achieving other public policy goals as well.

It is worth mentioning here that preference is granted to local companies when their bids are within 15 percent of other bids. Rules of tenders and auctions were amended in May 2006 for construction contracts to require the procuring governmental entity to change the contract value with the supplier, pursuant to the increase or decrease in cost which took place after the date determined for opening the technical envelopes or after the date of awarding the contract. The amendments stipulated compensating contractors for price fluctuations. In September 2006, the executive regulations of the Law were also amended to streamline procurement procedures.

Despite these successive amendments, the barriers for SMEs were still significant. CIPE (2009) commissioned a survey of nearly 800 Egyptian SMEs on their experience with corruption in the course of doing business. When were asked about public procurement, respondents were very negative. Only 20% answered that public procurement is carried out in compliance with the law, 33% said that laws are not respected, and 26% cited weak oversight mechanisms. When asked about corruption in government procurement, 37% believed that bribes are paid to win government tenders, with an additional 27% believing that the practice takes place to a limited extent, and only 9% believed that bribes don't take place at all. Kaspar and Puddephatt (2012) confirmed these results<sup>8</sup> in their analysis of lack of transparency in public procurement in Egypt and discussed their negative impacts on SMEs' presence in the public tender market.

However, as many observed, the identifications of problems have not been reflected in changes in regulations and measures taken by government agencies responsible for public PTs. The responsiveness in the system is relatively low. While the SMEs Law includes clear directives for better access of SMEs to PTs, none of those directives were reflected in any action related to the process of tendering and awarding.

### **3.2 Pharmaceutical Industry in Egypt**

#### *Key Features of the Egyptian Pharmaceutical Industry*

Egyptian pharmaceutical market grew from EGP18.23bn (US\$3.07bn) in 2011 to EGP20.33bn (US\$2.90bn) in 2012; with a growth rate of +11.5% in local currency terms and -5.3% in US dollar terms (Business Monitor International 2012 Q3,p.5). Egypt's pharmaceutical sales are divided into 3 main drug categories: patented and multinational companies drugs (brands), generic, and over the counter (OTC). The overall market sales mix in 2011 was segmented as follows: 55.4% patented drugs, 27.4% generic drugs and 17.2% OTC drugs (Business Monitor International 2012 Q3,p.17). This sales mix had changed since 2007 favoring generic drugs on the expense of patented and multinational companies' drugs. This trend is expected to continue in the long term (Business Monitor International 2011,Q4). The number of working companies increased from 512 in 2007 to 599 in 2011 (IMS 2012).

The market comprises both the private market (sales to pharmacies and private hospitals) and the public market (government and economic authorities' procurement). No data is available on the latter. The estimated value for companies working in that sector of that market was LE6 billion in 2011<sup>9</sup>. Figure (1a) shows the distribution of the sales value in 2011 according to ownership type, in the private market. At present, the market is almost a private one,

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<sup>7</sup> State budget, provisional.

<sup>8</sup> They used Enterprise Surveys, The World Bank (<http://www.enterprisesurveys.org>),

<sup>9</sup> Based on interviews with distributing companies.

halved between multinationals and local companies. Sales value of public companies is limited. Figure (1b) shows that the market is relatively concentrated. Large companies, both multinationals and locals, amounted to 70% of total sales value<sup>10</sup>.

The concentration ratio of production among the big ten is almost 50%. However, the concentration index is relatively low with the presence of almost 600 working companies in the industry. Herfindahl-Hirschman Index (HHI) in 2011 was just 390.04, which is considered a relatively low level of concentration<sup>11</sup>.

### *Regulatory Framework*

The regulatory authority in Egypt is the Ministry of Health and Population (MoHP), and the principal regulatory department within MoHP is the Egyptian Drug Authority (EDA). Registering drugs in Egypt is considered highly complex because of bureaucratic barriers which involve multiple committees and application reviews.

BMI (2012, Q3) reported on Egypt's public pharmaceuticals registration process that Egypt's transparency score is one of the lowest among 15 other countries to which it was compared using the World Health Organization's (WHO) methodology for measuring transparency. This indicates that the current system is moderately vulnerable to corruption, according to the WHO's measuring instrument. According to the report, low scores are related to problems of transparency in registration and pricing.

The other important feature of registration procedure is the pricing policy. Drugs' prices in Egypt are all decided by the MoHP through pricing committees. The pharmaceutical sector is the only sector under price controls. The general rule is that the price of the brand is the average of its price in a selected set of comparably socio-economical countries. Generic prices are set to 60% less than reference prices (RP) of the branded product for the first subscriber and to 10% less continuously by successive comers. RP process "consists of clustering drugs according to some equivalence criteria and defining a reference price for each cluster. In particular, drugs can be clustered according to chemical (identical products with same active principle), pharmacological (chemically different but pharmacologically related drugs) or therapeutic equivalence (all drugs used to treat a particular condition)" (Gazzili et al. 2011).

Some adjustments based on country of origin of imported materials and proved innovation could be made<sup>12</sup>. Negotiations also can take place. This predatory pricing policy has been criticized for many reasons the top being deviation from free competition.

In addition, MoHP restricts competition in the market by limiting the number of generic drugs (chemical or pharmacological) of any brand one that could be registered for the local market to a maximum of ten products. This policy named by the "Box" was created under the justification to save companies from fierce competition and force companies to direct their resources to other boxes that have fewer than ten generics.

### *Public Tenders in Pharmaceuticals*

- The public tender cycle in the pharmaceutical sector is mainly governed by two institutional bodies, The Ministry of Finance (MoF) and its affiliate, the Public Authority

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<sup>10</sup> Stratification was based on interviews with two banks engaged in lending to pharmaceutical companies and figures were checked through interviews with three companies representing different size categories.

<sup>11</sup> Herfindahl-Hirschman Index (HHI): uses the market shares of all the firms in the industry, and these shares are squared in the calculations to place more weight on the larger firms.

$$0 < HHI = S_1^2 + S_2^2 + \dots + S_n^2 \leq 10,000$$

If HHI is less than 1000, the market is a relatively unconcentrated market.

If  $1000 \leq HHI \leq 1800$ , represents a moderately concentrated market.

<sup>12</sup> Based on interviews with members from the Registration Committee and the ex-chair of Department of Pharmaceuticals in MoHP. It is worth mentioning that they all are under the impression that dictating prices and box policy are international practices.

of Governmental Services (PAGS). Here MoF is responsible for implementing Law no. 89 for 1998 of public tenders and auctions, called public procurement law. The other institutional body is the MoHP and its relevant affiliated agencies. The MoHP is responsible for issuing tenders, and monitoring their process. In order to identify any challenges or dysfunction on the legal and practice fronts, this section of the paper will both analyze the legal framework governing public tenders in Egyptian pharmaceutical sector, and review a sample of drug tender documents.

- Reviewing public procurement law highlights a key problem. Most articles governing public tender cycle in pharmaceutical and other sectors are broad and stretchy. There is a noticeable mismatch between macro and micro level procedures. For example, the law grants Egyptian bidders preferential treatment when their bids are within 15% of foreign bidders. However, it does not have process of follow-up and assessment in place. Also, in the SMEs 2004 Law, SMEs were given the right to supply 10 percent of the value of all government procurement denoted in any tender; however there is no reflection of this preferential treatment for SMEs in the public procurement law and its executive regulations or decrees. As mentioned before, there is a match between both levels of procedural reforms in most developed countries.

Table (2) highlights the main legal dysfunctions in the articles related to the different stages of public procuring cycles.

PTs in the pharmaceuticals sector can be divided into three types; consolidated tenders of the MoHP and hospitals of medical insurance (ConT); complementary tenders of public health hospitals, and hospitals of medical insurance (ComT) where each hospital complements its needs from products related more to its area of specialization; and finally other public hospitals of other ministries (Others), like those of the Ministry of Higher Education, Defense, Interior and others, where variety of the same product could be tendered. ConT are the biggest public tenders in the sector and the amounts demanded are huge. As of the interviews with companies and also with senior officers of the MoHP and the MoF, competition in ConT is based solely on price. Past experience is not seen as an important factor in accepting a technical offer, while for ComT this is relatively important and it is even more important in Others category where the prices of awarded tenders may be higher. Also due to the smaller amounts requested in ComT and Others, prices are likely to be higher.

We reviewed seven tender documents that cover all the three types of PTs in the pharmaceutical sector. Analysis of these tenders highlights many other practical challenges that hinder competitiveness in these tenders.

First of all, there is a noticeable exaggeration of guarantees awarded to public authorities by drug suppliers in a way that could possibly scare many SMEs of pushing themselves into such tenders fearing that they may be unable to abide to such strict conditions in the future. This can be demonstrated in the following examples:

- The public agency has the right to amend the contract, either increasing or decreasing the requested quantities with the same prices and specifications (see table 3). This is in addition to its right to renew the contracts with the same prices and specifications until ending the selection process of a new tender following the current one. Additionally, in case that no company applies for those items in the new tender, the public agency can oblige companies awarded in the last bid to continue supplying those items. It is worth noting that most of these tenders don't specify the exact increase or decrease that may happen in amended contracts. This raises companies' concerns in general and SMEs in particular of not being able to fulfill such new requirements. It is also worth noting that all tenders require setting fixed supply prices during the whole supply period, although this is amended in the case of contractors in the construction sector in order to

compensate contractors for increases in raw material prices, through setting a balancing rule for rights and responsibilities of contracting parts.

- The timing between awarding the tender and the initial supply date and also between different scheduled supply dates is very limited. Also it is noticed that tender conditions don't give companies a specific time schedule to supply the required quantities.
- Adding extra arbitrary penalties in the case of supply delay. A tender contract issued by Suez Canal Authority applied a 4% penalty for delay and not the 3% as stated in article no. 94 of executive regulation.

Second, while business history and past experience is nonexistent in tenders supplied by governmental central agencies, it is present in tenders of the public economic authority, with no regulation to execute them. This condition is not transparent and is open for a variety of potential interpretations, such as previous deals of that company with the same agency or with any public agency, or previous deals on that drug in general, or anything else related to personal experience of the technical committee in the agency.

Finally, there is a general lack of transparency. Analyzing several tender rules for supplying drugs to MoHP and other public authorities shows the following:

- Ambiguity of many general conditions and a high probability of misinterpreting these articles. For example, there is general ambiguity in articles relevant to payment conditions and dates which may lead to a delay in payments for suppliers.
- In many cases SMEs don't know about a lot of public tenders, though that Article (14) of the Law emphasizes on the commitment of all administrative units to keep a record including all contractors and suppliers databases and sufficient information. In addition, prime minister decree no. 33 for the year 2010 states that public authorities (under the procurement law 89 for the year 1998) should publish all the tenders on the website of the Public Authority of Government Services. However, in practice more than 30% of drug supply tenders are not published on the website<sup>13</sup>.
- Drug tenders usually have an article stating the right of the public authority not to disclose reasons for refusing bidders. For example, in the above mentioned Suez Canal Authority tender document, there was an item implying that the authority has the exclusive right to reject any bidder without justification.

#### **4. Public Tenders and SMEs: Survey Based Analysis**

As mentioned earlier, no data is available on the pharmaceutical PTs market for SMEs or even large firms. However, interviews showed the importance of this market. It almost amounts to one third of drugs total sales based on the Chamber of Pharmaceuticals in Egypt. To study the status of SMEs<sup>14</sup> in this market, we adopt a three step methodology. First we conduct some interviews with officers in two banks that are involved in lending companies in this sector, one distributing company, three working companies representing different firm sizes in the market and two former senior officers in the MoF. We also interview the former chair of the PAGES and the former chair of the Department of Financial Inspection, then a sample size of 90 companies is surveyed (for more details about the formula to calculate the sample size see annex I ) which were selected based on a data set of their 2011 by company compiled by IMS (2012). Data gives information on turnover in the private market by company as well as by product for each company. The sample, which was designed to be a stratified random sample where the population is pharmaceutical companies in Egypt (for the purpose of the current study, we excluded the multinational and governmental companies), is divided into three strata by sales values; where limits were placed according to information

<sup>13</sup> As reported by distributing companies between January 2012 and April 2012.

<sup>14</sup> As there isn't a well-established definition of SMEs in that sector in Egypt, we counted on interviews to draw the definition used in table (4).

collected through the interviews of step one. The questionnaire was designed to obtain data, qualitative and quantitative, on the company's performance in both the private and public markets, participation in the public tender market, risk, corruption and uncertainty of public procurement and suggestions for improvement<sup>15</sup>. Thirdly, along with this sample survey and side interviews, we conducted structured interviews with five distributing companies to assess their role in PTs in the sector.

Those interviews as well as the sample survey were conducted using Computer Aided Telephone Interview (CATI) method. Companies demonstrated a response rate of 68 % (90 out of 134<sup>16</sup> companies) for the survey.

To obtain better size representation, fuzzy cluster analysis (FANNY method as of Kaufman (1990)<sup>17</sup> was used to regroup the companies. In addition to their sales values, information from the survey results on the number of drugs produced by each company and also its employees were used. While sales value is a good indicator for company size, the other two variables were also used to neutralize the impact of the differences in prices for similar products among companies (same effective substance). It is worth mentioning that the three variables are good proxies for each other. There is a significant relation between revenue and employees (79%) and also between revenue and number of products (70%). Changes in clustered strata from the original sample are presented in table (4).

In the following, we divide our analysis of the survey results into two main topics. First, we explore the presence of SMEs in the PTs market. Then we move to discuss factors that may hinder that presence as reviewed in earlier sections.

First of all and contrary to initial expectations that SMEs are not present in PTs, survey results showed that they SMEs are not just interested in PTs, but that they are also active. The majority of the small companies (74%) showed interest in PTs. Out of them just 3% don't apply to PTs. (Figure 2), the remaining companies have subscribed to PTs at least once in the last five years. From the companies who subscribed at least once before, almost 12% do not do that frequently.

All medium and large companies subscribe frequently to PTs, as shown in table (5). It is quite interesting that regardless of the quantities demanded in each type of PTs, small and medium companies apply to all. Small companies are likely to be more constrained in subscription because of the fewer number of drugs they can offer; according to survey results, on average small companies can procure up to 86% of all types of drugs requested in the PTs, where medium and large can procure all of them.

When asked about their preference, small companies showed an inclination towards ComT and Others. They are more frequent and smaller amounts are requested for procurement. Therefore, there is a possibility of getting relatively higher prices.

As side interviews showed, ConT is not repeated frequently. As mentioned earlier, by law, the longevity of ConT spans two years. However, in practice, high cost of conducting them and lengthy procedures, make public agencies live with the successful tenders long times when it is applicable, and have no tendency to close them and start a new process if possible.

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<sup>15</sup> The questionnaire is constructed in six blocks, starting with company information; mainly labor and production facilities (8 questions). The second two blocks comprise questions related to companies' perception of governance in the industry related to MoHP policies in drugs registration, pricing regulations and the Box policy as well as information on number of licensed and produced drugs (15 questions). The fourth block discusses with companies their interest in applying to the tender market and challenges facing them related to size, collusion, favoritisms and others (58 questions). The fifth block profiles the role played by distributing companies in SMEs' accessibility to public tenders (17 questions). Finally, block six obtains the vision of companies on how to proceed to better accessibility (15 questions).

<sup>16</sup> Total population is 530 local/private companies after exclusion of multi nationals and public companies for the sake of neutralizing any factors that may affect the results.

<sup>17</sup> See annex II for the methodology.

Table (7) shows all company sizes by number of PTs subscribed to and awarded. It shows the infrequency of ConT.

The probability of being awarded a tender is higher for larger companies as shown in figure (3). When were asked about that, small companies figured that the capacity of large companies to respond faster to large procurement requests (in terms of quantity) and their capacity to offer good financial proposals with lower prices are factors. Finally being able to promote their products in public hospitals and to convince physicians in these hospitals with the effectiveness of their drugs also helps. In addition, as will be discuss below, past experience plays a major role in ComT and Others, yet, it's not easy especially for small companies to provide good evidence in this regard.

Figure (4) shows how companies view PTs as a way to grow in terms of production and revenues. SMEs ranked increase in production as the top factor because sometimes revenue from PTs is very little. Price discounts in PTs are relatively high, as observed from side interviews, whereas SMEs reported that market prices of their drugs are generally lower than others, meaning that they have to offer discounts on prices that originally low. One of the justifications given in the interviews for that is SMEs are most likely to be late comers to the Box of a specific effective substance. They are likely to take more time to prepare for the subscription of registration of a generic medication. Recalling that MoHP's policy is that late comers receive lower prices, 85% of small companies perceive that their prices are lower than others, albeit with a small margin. However, there is a general perception in the market that all prices cluster around a mean. Some 63% of small companies reported that this margin helps them to compete in the private market. While 87% mentioned that they can afford to decrease their prices to win the tender, 100% of large companies are ready to do that.

The survey involved questions to figure out factors recognized by small and medium companies as obstacles to subscribe to or be awarded PTs. Five factors are identified; transparency in subscription and in awarding, risk of unfair practices due to competing with large companies, corruption, specifications of PT in terms of amounts (centralization), frequency and terms of procuring, and finally governance framework as dictated by rules of MoHP affecting number of registered products and pricing.

We found that information about tenders is relatively known. Almost 78%, 87% and 100% of small, medium and large companies, respectively, reported that they knew the quantities procured in previous tenders. These percentages are 83%, 91%, and 100 respectively for price of the last award. That is not to say that the system is transparent. An important parallel, non-official system of information is present; mainly distributing companies and companies' representatives. When companies were asked to rank the importance of channels to get information on PTs, distributing companies were at the top for small and medium companies (Figure 5).

For large companies, their representatives in public hospitals play a major role in that respect, equal to the distributing companies. Distributing companies provide many facilities for SMEs: they make available information about tenders as well as supporting subscription by offering collateral letters. They also carry out all the logistics on behalf of the companies. All companies concur that the most important role for distributing companies is providing the collateral letter, followed by all other roles such as providing information about PTs and follow ups on the PTs process.

Therefore, contrary to prior expectation about lack of information and weak transparency in the process for subscription, we found that most companies are familiar with open tenders and all information regarding previous ones. Services provided by distributing companies include all important information regarding previous awards, in terms of prices, quantities

procured and companies awarded, which helps companies in better shaping their financial and technical offers. All companies confirmed that there are no formal channels to get this information. Interviews as well as a visit to the Agency of Public Services (APS), which is responsible of monitoring the process of announcement and awarding of PTs, made it clear that transparency is limited. It is not feasible through any public channel to know information about previously awarded tenders. While APS has developed an electronic system to inform companies about tenders, almost two thirds of the tenders are not uploaded on APS system and there is no follow up on ministries that don't post their tenders on the system, as required. Also APS doesn't compile information on award results such as final quantities procured and frequency of procurements or prices. SMEs complain that if they lose the tender, they are not informed in a systematic manner of the reasons why. Almost 36% of small companies claimed they were not informed of the reason, while the percentage goes down to 13% for medium companies and 0% for large companies. This may show that the formal system may be biased against small firms.

This relatively weak transparency gives room for perceptions of unfair practices or corruption. SMEs perceived that the process of PTs is biased in favor of large firms.

Almost 60% of SMEs and 50% of large companies perceive the importance of company size in being awarded PTs. Respondents recognize the positive impact of company size on capacity to procure with lower prices. Also many companies view that the successful marketing of their products in the private market supports their subscription to PTs, especially in ComT and Others. SMEs perceive that one of the strong points of large firms is that they can promote the effectiveness of their products through many channels: services to hospitals, capacity to offer samples for consumers to try their products, good relations with physicians in their private clinics. Almost 70% of large firms recognize the double benefit of their marketing plans targeting private physicians; while it affects sales positively in the private market, it also makes an impact in tenders where past experience is an important requirement. SMEs have less capacity to promote their products due to cost. It requires a complicated network of representatives and large amounts of free samples, in addition to other incentives. 10% of small companies hesitate to subscribe to PTs when the last awarded company has been a large one. Almost 60% of SMEs see that marketing plans with physicians in private clinics shouldn't affect the results of PTs, however, 40% of them recognize that it has an impact on awarding, especially in Others category.

SMEs perceive some aspects as corruption practices, such as the implicit collusion between large firms to settle the tender on one of them. SMEs don't see themselves not in the same position as large companies. 80% of the small companies and 74% of the medium companies mentioned that they don't have the capacity to go into such agreements. Distributing companies mentioned that they are not involved in such practices; however, they added that some large companies may be involved. 57% of the large companies agree that there is an implicit collusion in the market; nevertheless, they observe that some of these operations (almost one third) is among small firms.

It is worth mentioning that 85% of SMEs don't perceive technical specifications in PTs to be biased towards one specific direction, while the remaining 15% view them as biased in favor of large firms. They list this under corruption because it and they mention that this happens because of the interests of the bid's technical committee. However they elaborated that this may be because the committee is assured of the larger companies' capabilities to procure the required amounts of the drug in a timely fashion.

Around 35% of SMEs raised the issue of rumors that question the effectiveness of their products despite them being technically approved and registered through MoHP. 42% of small companies mentioned that this issue affects their decision to subscribe to PTs. Just 17%

of the medium companies gave that issue any importance. Nevertheless, two thirds and one third of the respondents from small and medium companies, respectively, mentioned that they have concerns about its negative impact as a threat on the acceptance of their technical proposals.

PTs' administrative specifications are seen as a real obstacle especially to small companies. On average 94% of all companies perceived that public bids are not as periodic as they should be, and are thus in violation of the law stating that the life time of any awarded bid should not exceed two years. PT rules that dictate a maximum increase of 10% in awarded prices over the last award create obstacles for companies across the board, however, and surprisingly, more for large companies than for SMEs (100% and 56% respectively).

As for suggested solutions to make PTs accessible to SMEs, splitting PTs into smaller lots was welcomed by small companies, and to a lesser extent by medium companies. However, this suggestion was completely rejected by large companies. Also to change the approach in public bids from tenders to practices was welcomed more by large companies, recalling that they already perform that implicitly, than by small and medium companies.

Companies that blessed the shift to practicing rather than tendering provided three main reasons: decreasing the risk of any unexpected increase in the requested amounts by engaging more companies into the process of awarding, improving the process of awarding itself by making it more transparent and competition is fair, expecting more fair prices.

Companies perceive the status of the company in the private market as an important indicator that supports the probability of being awarded a PT. They break down this factor into three elements: experience of the company in the private market linked to the number of products sold and sales value in that market. This raises the importance of studying factors affecting the number of registered products and also sold ones. Registration policy of the MoHP acquires importance in this regard. On average 70% of the surveyed companies perceived that the registration process is now more difficult than before (Table 9 a & b ); firstly because of the time length of the process of performing the required tests through the labs of MoHP, that may reach two years, secondly because the box is closed, and thirdly due to inefficiency in managing the process in MoHP (Figure 8)

Around 66% of small companies see that facilitation of the registration process would help them to subscribe to more PTs. Surprisingly, 86% of the large companies agree to this as well. According to the survey results, the average number of drugs sold by company size on average is 3, 17 and 75 for small, medium and large companies respectively. Table (10) shows the number of products that companies manage, on average, to register every two years. It is apparent how small companies are lower performers; however, some of them are doing much than others.

It is interesting to note that many of the companies that recognized the Box policy as a major obstacle that hinders increasing the number of registered products don't want to open the box because opening the box means more competition among substitutes. On average 46% of the small companies don't want to open the box. This share goes down to 44% for medium companies. In addition this would require more incentives to physicians and more discounts to pharmacies which would lead to less profit. Companies also raised the issue of MoHP's pricing policy. Pricing policy is based on comes first capture higher price, yet with some minor adjustments as of country of origin for imported materials. Out of the surveyed small companies, 63% perceived prices dictated by MoHP as detrimental to their subscription to PTs.



The pricing policy affects company revenues and makes companies less capable to offer more in PTs. Almost 56% and 48% of small and medium companies highlighted the importance of revenues in the private market to facilitate subscriptions to PTs.

For government support, 83% on average of surveyed SMEs did not welcome any general or financial support from the government. Also almost 65% of SMEs don't advocate for any preferential treatment. However, and again, 60% of them assured the responsibilities of MoHP as crucial in helping them through PTs by facilitating product registration and providing a better pricing policy based on mark ups. Also 65% mentioned that hospitals shouldn't resort to the condition of past experience in awarding technical offers. It is worth mentioning here that SMEs were hesitant about splitting the ConT into smaller lots. Just 45% agreed and the remaining saw that larger procured amounts help them to minimize the cost of subscription and procuring.

Finally, the 26% of the small surveyed companies that were not interested in subscription to PTs justified their attitude mainly by two reasons: 60% were satisfied with their business in the private market, while 20% were reluctant because of rumors of corruption heard about PTs.

In conclusion, the survey analysis reveals three important results. Firstly, contrary to expectations, most small companies subscribe to PTs, as do all medium and large ones do. Perception of corruption from a few companies doesn't deter from subscription to PTs. Transparency is an issue in subscription, however, the presence of distributing companies mitigates any possible negative effects. The condition of past experience, while not negatively affecting the attitude towards subscription, is still in itself an issue of transparency. Interviews with Public Service Agency and also officers in MoF recognize past experience as a hedge factor against the risk of incompetency to procure and to maximize the value of time. More transparency in reporting results of awarding will shape the whole process with transparency.

Secondly, the majority of respondents don't call for any general or financial support from the government; however, they need specific actions. At the top of important determinants to apply to PTs come number of produced drugs as it determines capacity to subscribe to PTs in addition to financial status as affecting capacity to offer reduction in prices. Both of the two factors are seen as so much linked to registration and pricing regulations of MoHP. All companies, regardless of their size, call for more transparent regulations in registration and pricing. Also they see lower prices as an important tool for competition. They agree that it is better to free the market from predatory prices dictated by pricing committees and the low concentration in the market will work to drag prices downwards. Drugs that are viewed as critical could still be subject to predatory pricing. Innovation, even if it is set as a long term policy, should be encouraged by MoHP to foster competition in the market instead of fixing prices and distorting the market.

Thirdly, we can't see a clear difference in attitudes among companies due to size. Even though SMEs admittedly felt the unfair competition they had in facing big companies, especially in their capacity to procure big amounts and to build ties and thus gain previous experience with public hospitals, there is no clear evidence that this issue has deterred them from being present in the public market. They seem to be used to this kind of competition in the private market. In addition, it seems that marketing strategies in the private market are important to build the reputation of their drugs. While SMEs perceive this, they can't use it because of financial constraints. Large companies use this to the maximum.

## 5. Policy Implications

The purpose of the current paper was to open the dialogue for further development in the structure of public procurement in Egypt and present some advice for policy making on improving the accessibility of SMEs to the PTs market. Observations from previous research showed that SMEs face many challenges in this market.

The study employed a three-step approach. First we took a quick look at the public procurement law, then we zoomed on its application in public tender contracts in the pharmaceutical sector. Additionally, we conducted a survey on companies in that industry to get the field touch. Linking the findings of these three steps to challenges facing SMEs worldwide and on the national level, we found that while Egypt shared the general challenges with other countries, it had its own unique path in providing solutions.

In reviewing other countries' experiences, we found two approaches; either to have detailed laws to shape all micro application in public agencies or to have broad binding guidelines and leave each public agency to identify actions to satisfy them. Comparing that to Egypt, our reading of the law and its applications showed that Egypt does not follow any of those tracks. This confirms our argument outline above; that there is a missing link between policies and applications. Macro reforms in terms of laws and announced policies to support SMEs have not been reflected in actions to reshape the attitudes and behavior of public agencies, with which SMEs do their business.

When the Law of Public Procurement was reviewed, we found that because articles are so broad and not detailed, they are open to different interpretations. Also, while there is a strong system of financial inspection and auditing in Egypt, there isn't a matching mechanism for monitoring and evaluating the implementation of the law. In addition, applying the Law on the micro level is largely left to the discretion of public agencies. That is coupled with the lack of transparency rules at that level does not serve to establish a fair relation between those agencies and procurement companies. The survey results also confirmed that there are no micro regulations that ensure the 10% stipulated procurement from SMEs by the Law.

While previous work pointed to the weak transparency in public procurement in Egypt and its negative impact on SMEs accessibility to PTs, the pharmaceutical industry is a good example on which to design a support package for SMEs. The intermediary role played by distributing companies proved to help SMEs cross barriers related to "insufficient knowledge" and "lack of feedback". This peculiar characteristic of the pharmaceutical industry provides a lesson to the government to use in its effort to formulate a support policy for SMEs. The government could officially use those intermediaries in capacity building on PT issues for SMEs. Intermediaries can also help in building a closer relationship between contracting authorities and SMEs. They can also be helpful in reporting to the authorities on challenges facing SMEs and bottlenecks of the process. Encouraging constructive dialogue and mutual understanding between SMEs and large buyers is highly recommended as well, through activities such as disseminating information through official channels and building monitoring and evaluation measures.

Here we would like to differentiate between the existence of information and its flow. As our interviews showed, officially the information is not there. Neither public agencies nor the General Authority for Public Service keeps a good archiving system for information on previous tenders. Therefore, there should be a mechanism to keep tender records, generate reports, and make those available through a channel that assures the continuous flow of those reports.

We also noticed that companies, especially the smaller ones, can't recognize collusion action or differentiate between them and other activities that could be classified under companies'

collaboration. For example, they could not identify companies' action to segment tenders among themselves implicitly before applying to PTs as corruption. Apart from bribes, actually they failed to define what they recognize as corruption. Also their limited knowledge about the law let them mix up between qualifying conditions and corruption.

Specifically for pharmaceutical SMEs, we would like to direct the attention to two micro applications related to the general macro policy of improving investment climate for doing business, regardless of company size. Those are related to MoHP. Should there be a need for direct government intervention in the drug market, it should avoid all actions that limit or distort competition. Price regulating measures should be through setting the maximum sale price of generic medications (price cap) as most EU countries do (Puig-Junoy 2010). As our survey results showed, all companies are aware of the importance of lower prices in competition.

The Box regulation has to be revisited. Limiting the number of generic drugs in the market should be a market decision and not an administrative one, and MoHP should encourage market signals that highlight the demand gaps or supply surplus. MoHP should seek measures that speed up registration time by opening more private labs to participate in the process of testing. MoHP should fully assume its responsibility towards SMEs. As the regulator for this market, the performance of companies should be given a lot of care. Measures to promote SMEs should be thought of and developed and MoHP be held accountable for that.

These two micro reforms, while pertaining to the pharmaceutical industry, can also be generalized. While pricing and registration have nothing to do directly with PTs, they can and do distort the whole issue. This leads us to stress on the fact that the support package for SMEs should be comprehensive. We found that MoHP plays a pivotal role in regulating drug registration and pricing, and thus consequently in the accessibility of SMEs to tender markets. Therefore, it is not enough to regulate PTs to facilitate SMEs' subscription in this market. A more integrated vision is needed. Also it was shown that performance in the private market affects subscription into the public market. Success in the private market would indirectly encourage SMEs' exposure to the tender market. It also raises their tolerance to absorb the cost and risk that exists in the public tender market. This market interdependence, again, necessitates the integrated vision when designing a support package for SMEs.

Our main policy advice of transforming macro reforms into micro actions needs a high level of intervention at the level of each government agency. Government of Egypt should request from each public agency to provide a plan on how to support SMEs. Parts of their proposals may need some amendments to the legal framework, but other parts may be manageable within the current legal framework. This suggests that more work should be done at the micro level to study in depth how public tenders can be utilized as a tool to fulfill the social responsibility of the government to SMEs while not losing the "value of money" because of weaknesses could be there because of preferential treatment for SMEs such as higher prices which reduce the amount procured for the same cost or any other like side implications. Also more studies are needed on other industries to assess how SMEs are constrained in tender markets due to external factors attributed to the industry itself.

## References

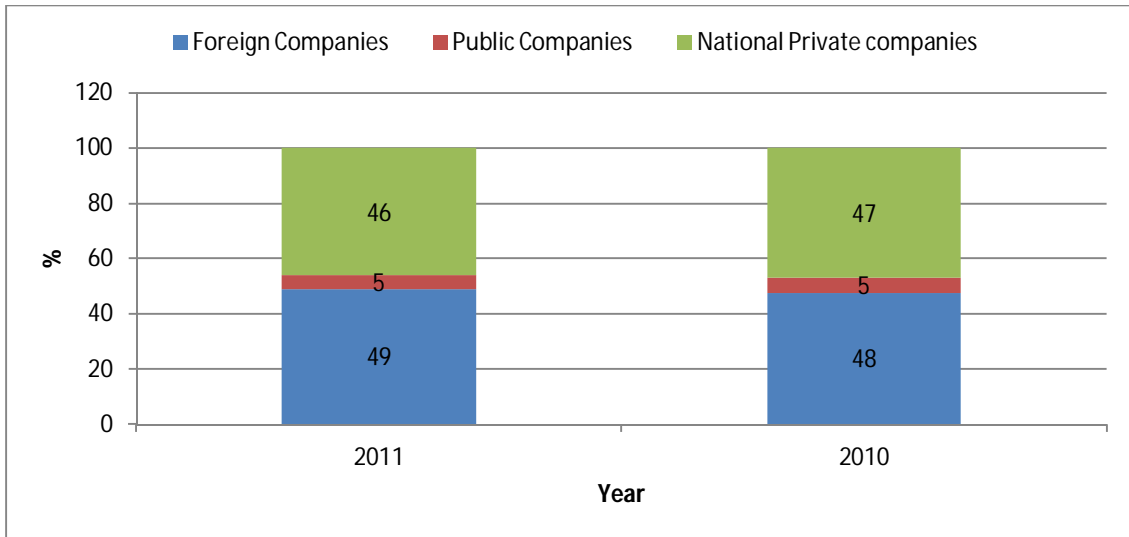
- Antonio, E., and A. Iimi. 2011. Bidders' entry and auctioneer's rejection: Applying a double selection model to road procurement auctions. *Journal of Applied Economics* vol. XIV, no. 2 (November), pp. 199–223
- Bolton, P. 2006. Government procurement as a policy in South Africa. *Journal of Public Procurement* 6(3): 193–217. PrAcademics Press.
- Breen, J., and Demediuk, P. 2003. *A methodology for identifying ways to improve SME access to government procurement markets within the APEC region*. Retrieved from <http://iceb.nccu.edu.tw/proceedings/APDSI/2004/pdf/121.pdf>
- Business Monitor International . 2012 Q 3. Egypt pharmaceuticals & healthcare report. Business Monitor International, UK
- Business Monitor International. 2011 Q 4. Egypt pharmaceuticals & healthcare report. Business Monitor International, UK
- CBI Public Service Strategy Board. 2006. Realizing best practice in procurement and contract management. Retrieved from <http://www2.epos.de/fileadmin/epos/ppp/PPP%20Related%20Literature/Realising%20Best%20Practice%20in%20Procurement%20and%20Contract%20Management.pdf>
- Center for International Private Enterprise (CIPE). 2009. *Business environment for small and medium-sized enterprises (SME) in Egypt and SMEs' interaction with government agencies: 2009 Survey on corruption final report*. Retrieved from <http://www.cipe.org/sites/default/files/publication-docs/2009%20Egypt%20SME%20Survey%20Report%20EN.pdf>
- Clark, M., Moutray, C., and Saade, R. 2006. The government's role in aiding small business. *Federal subcontracting programs in the United States*. Office of Advocacy, U.S. Small Business Administration. Retrieved from <http://archive.sba.gov/advo/research/rs281tot.pdf>
- Commission of the European Communities. 2008. *Commission Staff Working Document: European code of best practices facilitating access by SMEs to public procurement contracts*. Brussels, 25, 06, 2008. SEC(2008) 2193. Retrieved from [http://ec.europa.eu/internal\\_market/publicprocurement/docs/sme\\_code\\_of\\_best\\_practices\\_en.pdf](http://ec.europa.eu/internal_market/publicprocurement/docs/sme_code_of_best_practices_en.pdf)
- Confederation of Tanzanian Industries. 2009. SMEs market access through private and public procurement and linkages. Policy Position Paper, December.
- DETE. 2009. Using public procurement to stimulate innovation and SME access to public contracts. Report of the Procurement Innovation Group, the Department of Enterprise, Trade & Employment (DETE), Ireland.
- Eadie, R., S. Perera, G. Heaney, and J. Carlisle. 2007. Drivers and barriers to public sector e-procurement within Northern Ireland's construction industry. *IT con papers* vol. 12, pp. 103–20.
- Egyptian SMEs Law No. 141 for 2004 with latest amendments.
- Egyptian Tenders and Auctions Law No. 89 for 1998 and its executive regulation, with latest amendments.
- Fiontar, A. and Fostaiochta, T. 2009. Using public procurement to stimulate innovation and SME access to public contracts. *Report of the Procurement Innovation Group*. Retrieved from

<http://etenders.gov.ie/Media/Default/SiteContent/LegislationGuides/Report%20of%20the%20Procurement%20Innovation%20Group.pdf>

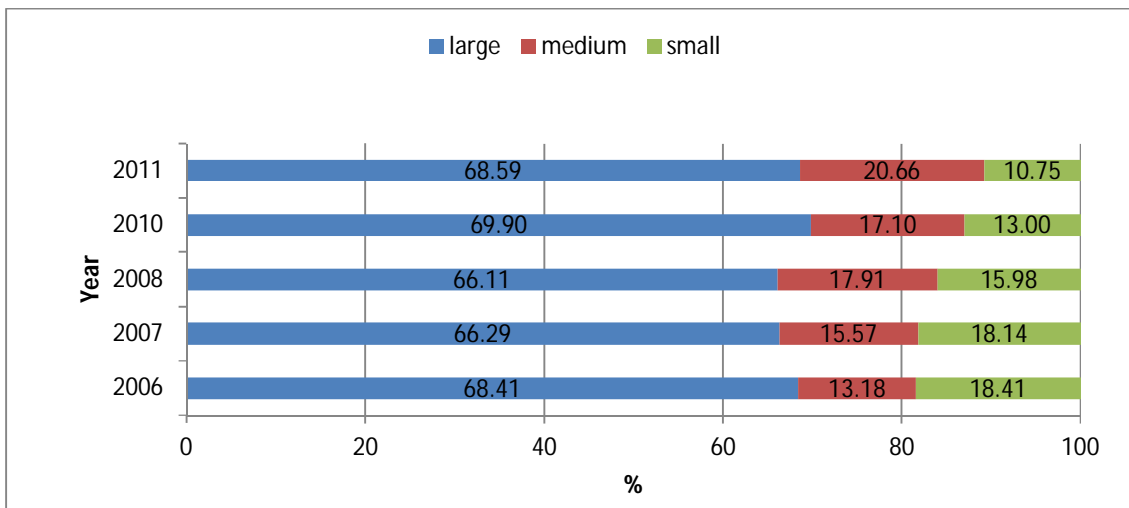
- Fresh Minds Research. 2008. *Evaluating SME experiences of government procurement: A report by Fresh Minds for the Scorecard Working Party*. Retrieved from <http://www.fsb.org.uk/policy/images/12615%20fsb%20procurement.pdf>
- Gazzili, M., S. Ghislandi, and M. Miraldo. 2011. Effects of reference pricing in pharmaceutical markets. *Pharmacoeconomic* 29 (1): 17–33.
- GHK. (2010, September). *Evaluation of SMEs' access to public procurement markets in the EU: DG Enterprise and Industry*. Final Report. Retrieved from [http://ec.europa.eu/enterprise/policies/sme/business-environment/files/smes\\_access\\_to\\_public\\_procurement\\_final\\_report\\_2010\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/business-environment/files/smes_access_to_public_procurement_final_report_2010_en.pdf)
- Government of India, Ministry of Micro Small and Medium Enterprises Office of Development Commissioner (MSME). *Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012*. New Delhi, 2012, March 23. Retrieved from [http://eprocare.gov.in/cppp/sites/default/files/gos/imsme\\_FinalPressorder.pdf](http://eprocare.gov.in/cppp/sites/default/files/gos/imsme_FinalPressorder.pdf)
- Holmes, J., Holmes, A., Sear, L., A. Regan, A., Smith, C. and Butler, B. 2009. *Opportunities and barriers to consortia bidding for public sector contracts*. Scottish Government Social Research. Retrieved from <http://www.scotland.gov.uk/Resource/Doc/292166/0090086.pdf>
- Information Management System (IMS), 2012. *Data base of Pharmaceutical Industry in Egypt*. IMS Company
- International Trade Center (ITC). 1998. ITC. 1998. "SME and Export-led growth: Are there roles for public procurement programmes?", A Workshop entitled: "A Practical Guide for Assessing and Developing Public Procurement Programmes to Assist SMEs". The International Trade Centre, UNCTAD. Geneva
- Karjalainen, K. 2011. Estimating the cost effects of purchasing centralization—Empirical evidence from framework agreements in the public sector. *Journal of Purchasing & Supply Management* 17 (2011): 87–97
- Kaspar, L. and Puddephatt, A. (2012, March). Benefits of Transparency in Public Procurement for SMEs: General Lessons for Egypt". Global Partners and Associates. <http://global-partners.co.uk/wp-content/uploads/Benefits-of-transparency-in-PP-for-SMEs.pdf>
- Kaufman, L. and Rousseeuw, P. J. 1990. *Finding Groups in Data: An Introduction to Cluster Analysis*. John Wiley and Sons, Inc., New York.
- Maer, L. (2012, June). Public procurement: Small businesses and savings. *House of Commons Library. Economic Policy and Statistics*. SN/EP/6069. Retrieved from [www.parliament.uk/briefing-papers/sn06069.pdf](http://www.parliament.uk/briefing-papers/sn06069.pdf)
- Ministry of Foreign Trade (MFT). 2002. *Developing a Procurement Reform Program Supporting SME Development in Egypt: A background study*. Retrieved from [http://www.mof.gov.eg/MOFGallerySource/English/SME/Research\\_studies/4.pdf](http://www.mof.gov.eg/MOFGallerySource/English/SME/Research_studies/4.pdf)
- OECD. 2011. Fighting bid rigging in public procurement in Mexico. A Secretariat report on IMSS' procurement regulations and practices, OECD.
- Puig-Junoy, J. 2010. Impact of European pharmaceutical price regulation on generic price competition: A review. *Pharmacoeconomics* 28(8): 649–63.

- Republic of Uganda (ROU). 2010. *Improving SMEs access to the public procurement market*. Trade, Enterprise and Agricultural Department, Special Advisory Services Division, Commonwealth Secretariat. [www.pdda.go.ug/index.php/.../272-improving-sme-access-report.html](http://www.pdda.go.ug/index.php/.../272-improving-sme-access-report.html)
- Travel Impact Newswire. 2012. *Indian government sets 20% procurement target from SMEs in 3 years*. Travel Impact Newswire website. Retrieved from <http://www.travel-impact-newswire.com/2012/02/indian-govt-sets-20-procurement-target-from-smes-in-3-years/#axzzByomni8E>
- Uasail, A. D. 2010. Facilitating SME participation in public procurement. Available online at: [http://www.etenders.gov.ie/guides/guides\\_list.aspx?Type=2](http://www.etenders.gov.ie/guides/guides_list.aspx?Type=2) document 26.
- UNCTAD. (2012, April). Competition policy and public procurement. *The United Nations Conference of Trade and Development*. Twelfth Session, Geneva, 09-11 July 2012. Item 3(a) of the Provisional Agenda. Retrieved From [http://unctad.org/meetings/en/SessionalDocuments/ciclpd14\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd14_en.pdf)
- Withey, J. 2011. Small manufacturing business: Their interests in securing contracts from public agencies. *Journal of Public Procurement* 11(3): 388–402.

**Figure 1a.: Market Percentage Distribution by Type of the Company Sales Value by Type**

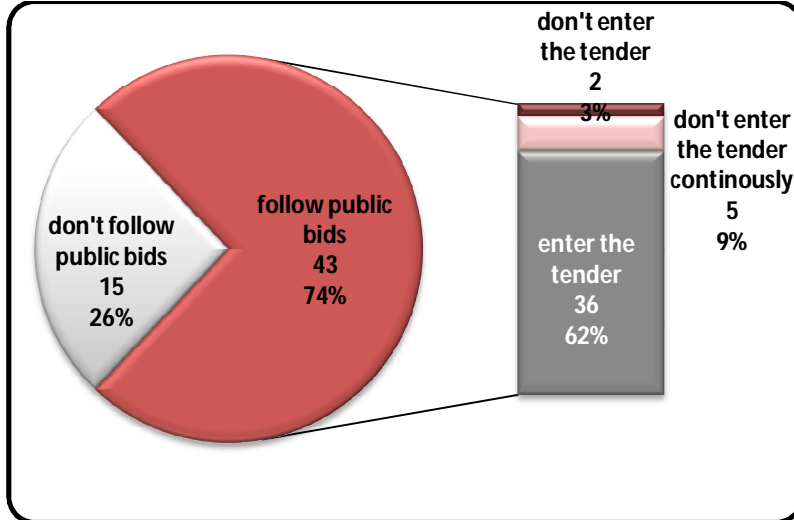


**Figure 1b.: Pharmaceutical Market Shares by Company Size Sales Value by Size**



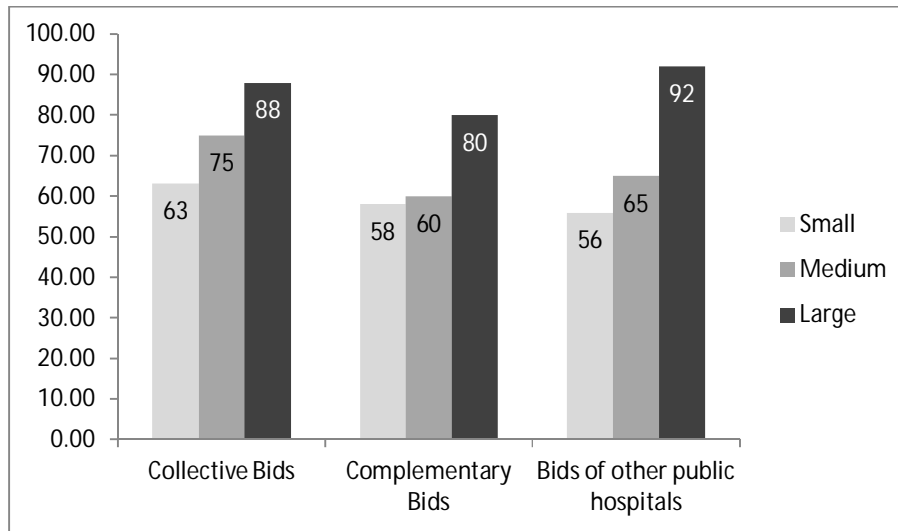
Source: drawn based Information Management System (IMS), 2012, Egypt.

**Figure 2: The Distribution of Small Companies According to their Attitude toward PTs**



Source: Survey results

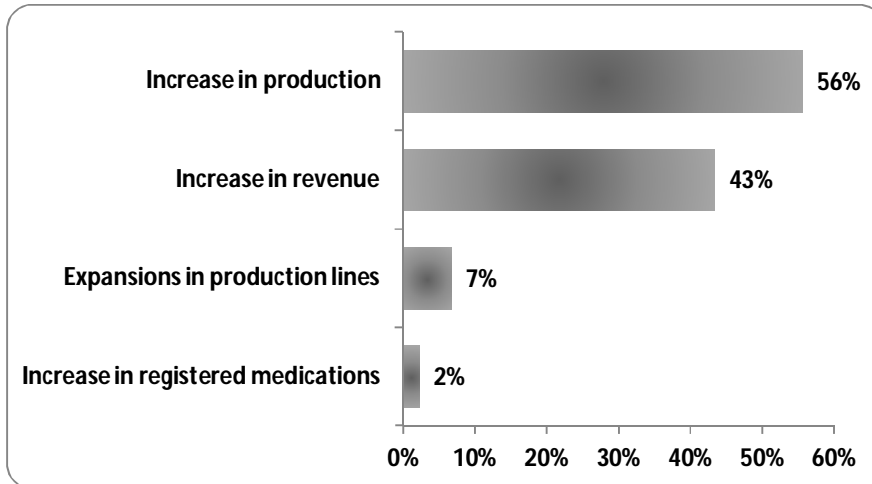
**Figure 3: The Average Awarded Tenders in Each Size (%)**



Source: Survey results

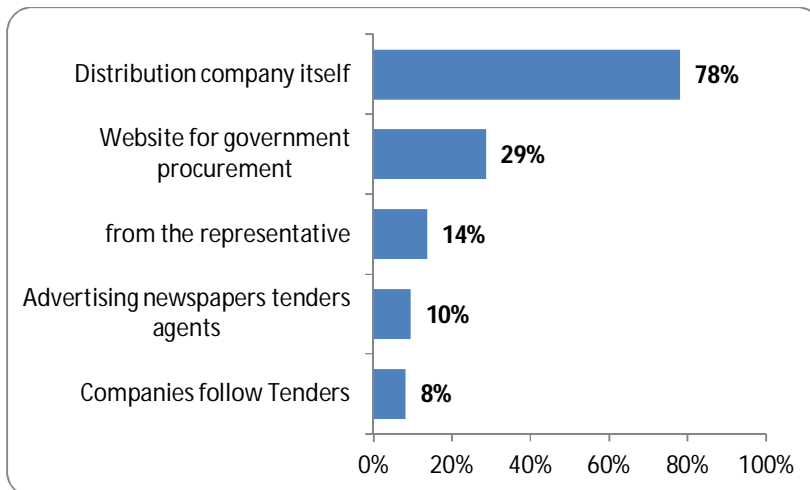


**Figure 4: Importance of PTs to SMEs' Growth**



Source: Survey results

**Figure 5: Ranking of Different Information Channels for PTs**



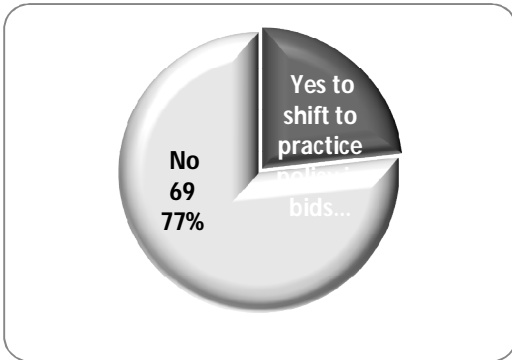
Source: Survey results.

**Figure 6: Information Transparency in Public Tenders**

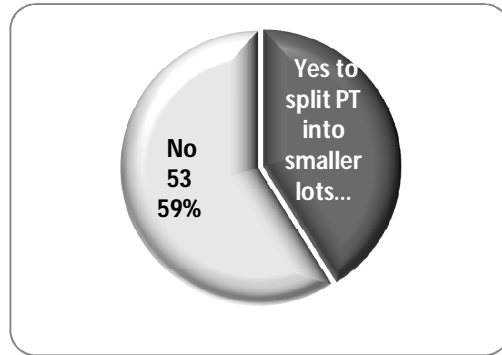


Source: Survey results.

**Figure 7a: Preference for practices rather than tenders**

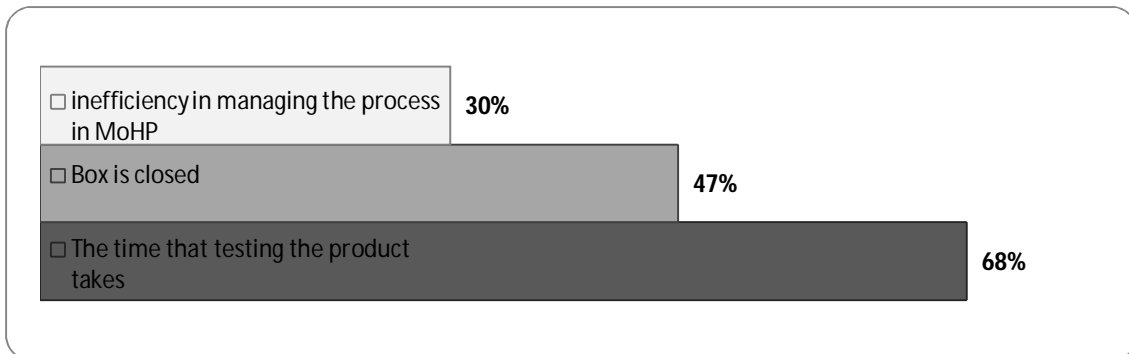


**Figure 7b: Preference to split PTs into smaller lots**



Source: Survey results.

**Figure 8: Reasons behind Difficulties in Registration**



Source: Survey results

**Table 1: Different Products with the Same Substance (Ranitidine)**

<b>Firms</b>	<b>Trade name of the Product</b>	<b>Form</b>	<b>Packaging</b>	<b>Substance Concentration</b>	<b>Consumer Price EGY LE</b>
GLAXO	Zantac	tablets	20	150	20 LE
SEDICO	Ranitac	tablets	20	150	14 LE
Medical Union Phar.	Ranitidine	tablets	20	150	12.5 LE
ADCO	Rantidine	tablets	20	150	9.9 LE
NASR	Rantidol	tablets	20	150	9.5 LE

Source: Based on interviews with distributing companies.

**Table 2: Analytical Overview of Public Procurement Law**

Stages	Regulations and Rules	Theme	Goals	Types of Macro-Micro Mismatching
Accessing stage	Articles No. (1), (3), and (4).	Methods of Public procuring	<ul style="list-style-type: none"> <li>Identifying the different methods of public tendering.</li> <li>Identifying the cases of applying short list tendering.</li> <li>Highlighting the maximum value for applying local short list tendering approach.</li> </ul>	The articles are very broad and loose. For example article no. (3) identifies the cases of applying short list tendering without defining such cases, or their conditions, in a definitive manner. .
	Articles No. (2)	Macro-rules of public tendering	Emphasizing on the necessity of enforcing transparency, and openness and affording equal opportunities in public tenders and auctions.	The article is very broad. In addition, it doesn't propose any follow-up and assessment procedures on the micro-level.
	Articles No. (7), and (8).	Delegation and discretion	<ul style="list-style-type: none"> <li>Identifying the total financial values of tenders around which the head of the administrative unit and the Minister are delegated to apply direct contracting approach.</li> <li>Delegating the prime minister the authority to apply short list tendering, local short list tendering, and direct contracting approaches in the cases of absolute necessity and based on his consideration and in accordance with the conditions and rules that he proposes.</li> </ul>	The articles are very loose. It doesn't identify the full meaning of: <ul style="list-style-type: none"> <li>"absolute necessity"</li> <li>"based on his consideration".</li> </ul> In addition, Article (8) opens the door to the prime minister to apply his discretion without any restrictions.
	Article No.(14)		Emphasizing the commitment of all administrative units to keep records on all contractors/suppliers databases and sufficient information.	The article doesn't identify any follow-up and assessment mechanisms.
Awarding stage	Articles No.(16), (19), and (38), and Article No(134)of the executive regulation	Preferential treatments	<ul style="list-style-type: none"> <li>Exempting the awarded bidder from paying the final insurance in case of supplying and acceptance of the bid within the period of paying that insurance.</li> <li>Giving the public units which are subject to public procurement law no.89 for 1998 the discretion to contract with each other through direct agreement, and delegate each other in holding contracts of specific task and in accordance with the rules that applied in the administrative unit.</li> </ul>	<ul style="list-style-type: none"> <li>Exempting the awarded bidder from paying the final insurance is inapplicable because the time limit available to pay final insurance according to the law is 20 days at most. At the same time Article (21) emphasizes the right of the administrative unit to terminate the contract and hold the primary insurance in case of delay of paying the final insurance within the time limit.</li> <li>However Article (2) of the law emphasizes the affording of equal opportunities. Thus granting this preferential treatment for the public units may open the door for corruption and hindering fair competition between private and public sector companies.</li> </ul>
	Article No. (37)	Tender disaggregation	Inadmissibility of tender disaggregation which targets circumventing the law in order to avoid its rules, conditions, and procedures.	Virtually, this condition has led to preventing tender disaggregation utterly. Administrative units usually resort to an aggregated bid to avoid any contradiction with the law. Actually these practices hinder SMEs competitiveness in public tenders.
Procuring Stage	Article No. (23), and Article No. (94) of The executive regulation	Penalties of procuring delay.	<p>Giving the relevant authority the right to allow the delayed supplier extra time for supply and set a delay penalty of 1% of the delayed quantity value for each week of delay or part of a week to a maximum of 3%. If the supplier fails to deliver in the scheduled date or in the delayed date, the relevant authority can do either of following actions in light of its priorities and interests after informing the supplier:</p> <ul style="list-style-type: none"> <li>Buying the unsupplied quantities from other supplier, on his expense, and with the same contracted specification, in accordance with Procurement and Bids Law.</li> <li>Terminating the contract relevant to these items.</li> <li>In both cases final insurance goes to the</li> </ul>	These articles exaggerate the guarantees awarded to public authorities. However, the law is silent with regards to delays in paying the bidder by the public authority, which often happens. Regarding contracting works, it is worth noting that the law was amended in 2005 and accordingly, the minister decree no 219 for 2006 has added the article no.(55 repeated) to the executive regulation to require that in regard of the contracting works with implementing time acceding 6 months, the procuring governmental entity to change the contract value with the contractor, pursuant to the increase or decrease in cost which took place after the date determined for opening the technical envelopes or after the date of

Stages	Regulations and Rules	Theme	Goals	Types of Macro-Micro Mismatching
			administrative agency, and it has the right to decide all the required penalties and the estimated losses—including price differences and administrative expenses that could sum up to around 10% of the items' prices—from any accrued amounts for the supplier and if not sufficient then decide it from accrued amounts at any other agency without resorting to judicial actions.	awarding the contract. The amendments also require the procuring entity to disburse to the contractor advance payments for work in-progress. The amendment also stipulates compensating contractors for price fluctuations that might occur during the first year of the contract. However, it applies just to construction contracts, violating the condition of fair treatment with other suppliers

Source: prepared by authors based on reviewing Egyptian Tenders and Auctions Law No. 89 for 1998 and its executive regulation, with latest amendments.

**Table 3: Quantities Initially Requested in ConT and Final Procured Quantities**

Date of Tender	Item	Quantity requested in tender(1)	Final quantity procured(2)	(2)/(1)%
05/08/2007	PARACETAMOL 120 ML	4,584,848.000	12,389,148.000	269.6
05/08/2007	PARACETAMOL 500 MG	102,465,730.000	272,011,427.000	265.3
05/08/2007	TIMOGEN 120ML BROMOHEXINE	118,000.000	1,919,200.000	1626.5
06/08/2007	120ML	958,401.000	2,911,347.000	3037.7
06/08/2007	FROSIMED 40 MG	4,854,462.000	6,757,652.000	139.6
08/08/2007	WINCEF 0.5 MG	61,660.000	1,109,090.000	1797.4
08/08/2007	WINCEF 1 GM	124,150.000	2,948,475.000	2375.9

Source: Compiled from IBN SINA's distributing company data set on public procurement.

**Table 4: Profile of the Surveyed Sample By Company Size**

Sample		Strata by Clustering			Total
		Small	Medium	Large	
Strata by turn over value	Small (less than LE 50 million)	55	15	0	70
	Medium (IBIN SINA LE 50 million- less than LE100 million)	3	10	2	15
	Large (more than LE100 million)	0	0	5	5
Total		58	25	7	90

**Table 5: The Distribution of the Companies Interested in PTs According to Their Attitude**

	Company size		attending tender			Total
			don't enter the tender	don't enter the tender continuously	enter the tender	
Company size	Small	Frequency	2	5	36	43
		%	5%	12%	84%	100%
	Medium	Frequency	0	2	21	23
		%	0%	9%	91%	100%
	Large	Frequency	0	0	7	7
		%	0%	0%	100%	100%
Total	Count	2	7	64	73	
	% within clustering <sup>3</sup>	3%	10%	88%	100%	

Source: Survey results.

**Table 6: The Distribution of The Companies According to The Match of their Products to Those Required in PTs**

			Yes requested	Not requested	Total
Company size	Small	Frequency	37	6	43
		%	86%	14%	100%
	Medium	Frequency	23	0	23
		%	100%	0%	100%
	Large	Frequency	7	0	7
		%	100%	0%	100%
Total	Frequency	67	6	73	
	%	92%	8%	100%	

Source: Survey results.

**Table 7: The Average Number of PTs Subscribed to and Awarded, by Type of PT and Company Size**

Company Size	ConT Bids		ComT Bids		Others	
	bids entered during the last 5 years	bids awarded in the last 5 years	bids entered during the last 5 years	bids awarded in the last 5 years	bids entered during the last 5 years	bids awarded in the last 5 years
	Small	4.0	2.5	12.6	6.3	20.0
Medium	3.9	2.8	34.7	22.2	74.5	50.5
Large	4.0	3.4	28.1	20.6	269.0	249.9
Total	3.9	2.8	22.9	14.6	67.5	54.5

Source: Survey results.

**Table 8: Sales Value Accrued from PTs as of Total Sales (%)**

Sample size	Mean	Minimum	Maximum
Small	23.51	1	80
Medium	20.39	1	60
Large	21.86	10	35

**Table 9a: Registration Process**

Current status of registration in the last two years	Frequency	Percent
Easier	27	30.0
More Difficult	63	70.0
Total	90	100.0

**Table 9b: Impact of Registration Process**

Impact of facilitation of the registration of pharmaceutical products applying to bids	Frequency	Percent
Yes	55	61.1
No	35	38.9
Total	90	100.0

Source: Survey results.

**Table 10: Average Number of Products that Are Registered Every Two Years**

Company size	Mean	Minimum	Maximum
Small	3.95	1	30
Medium	5.64	2	15
Large	30.00	20	40
Total	6.44	1	40

Source: Survey results.

## Annex I:

The sample is designed to be a proportional stratified random sample by dividing the population of pharmaceutical companies in Egypt (530 companies) into three strata; large, medium and SMEs to represent all company sizes in the sample, as follows:

1- Select the total sample size according **Cochran's sample size formula** :

$$n_0 = \frac{(t)^2 * (s)^2}{(d)^2}$$

Where

t = value for selected alpha level in each tail.

s = estimate of standard deviation in the population.

d = acceptable margin of error for mean being estimated.

2- Allocate the sample to strata using the following formula:

Strata sample sizes are determined by the following equation :

$$n_h = (N_h / N) * n$$

where

$n_h$  = the sample size for stratum h,

$N_h$  = the population size for stratum h,

N = total population size,

n = total sample size.

## Sample distribution

Firm size	Population size	Sample Size
Large	27	5
Medium	88	15
Small	415	70
Total	530	90

## Annex II

### Fuzzy Cluster analysis (FANNY)

In general, the objective of cluster analysis is to partition a set of objects into two or more clusters such that objects within a cluster are similar and objects in different clusters are dissimilar. The fuzzy clustering algorithms occupy a prominent position in the science of classification because they are suitable for situations dealing with overlapping clusters which include hybrid points situated in the midst of two disjoint compact clusters or bridges between clusters, also, clusters which include isolated points

The fuzzy algorithm used in this paper is described in Kaufman (1990). He developed a fuzzy clustering method called FANNY that just depends on a collection of dissimilarities or distances between objects and does not need any representative points. The main advantage of this method is that its objective function does not depend on the squared distance. Hence, FANNY has lower sensitivity to outliers and a better recognition of non-spherical clusters. These two advantages make this method more robust than most clustering methods. FANNY aims to minimize the following objective function:

$$J = \frac{\sum_{L=1}^C \sum_{i=1}^n \sum_{k=1}^n u_{iL}^2 u_{kL}^2 d(x_i, x_k)}{2 \sum_{k=1}^n u_{kL}^2}$$

subject to

$$u_{iL} \geq 0 \quad \text{for } i = 1, \dots, n ; L = 1, \dots, C$$

$$\sum_{L=1}^C u_{iL} = 1 \quad \text{for } i = 1, \dots, n$$

where

n: number of observations

k: number of clusters

$d(x_i, x_k)$  : represent the given distance between the two objects  $x_i$  and  $x_k$  .

$u_{iL}$  : is the unknown membership degree of object  $x_i$  to cluster L,