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**ELECTRONIC REVERSE AUCTIONS IN BRAZIL FEDERAL GOVERNMENT:  
A CRITICAL VIEW**

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## **1. Introduction**

As observed by Fernandes<sup>2</sup>, the public acquisition process have comercial and legal components. There is the assumption that the commercial dimension is focused on efficiency, seeking the best results, while the legal dimension helps with transparency and impersonality, essential in any public organization<sup>3</sup>. The balance between these ingredients vary from nation to nation. In the Brazilian case, "[t]he discussion about the issues related to government purchases tend to be limited to legal procedures, ..."4.

Historically, the Brazilian society has a great distrust about government agents, in particular regarding the use of public money. Given this, there is a substantial legal apparatus to combat corruption. The public procurement law is strongly permeated by such objective. But as well as other laws with the same concern, does not escape from the perception of inefficiency. However, in this case also are frequent criticisms that the complexity and rigidity of the law imply in difficulties to achieve good purchases. In this context arises the reverse auction and its electronic variation.

Today, with some years of experience, the Electronic Reverse Auction is the most used competitive purchase mechanism<sup>5</sup> in Brazilian Federal Government. Its advantages in increasing

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<sup>2</sup> FERNANDES, C.C.C. Abrangência, inserção e impacto transformador dos sistemas de compras eletrônicas na administração pública – análise do SIASG/COMPRASNET. **Revista do Serviço Público**, n. 56 (2), p. 195-216, abr/jun 2005.

<sup>3</sup> See also COSTA, A.L. Sistema de Compras Públicas e Privadas no Brasil. In: XXII Encontro da ANPAD, Foz do Iguaçu, 1998. **Anais. ENANPAD 1998**. Disponível em: <<http://www.anpad.org.br/enanpad/1998/dwn/enanpad1998-ap-07.pdf>>. Acesso em 16 set. 2008.

<sup>4</sup> FERNANDES, C.C.C. **Sistemas de Comparas Eletrônicas e sua Aplicação à Administração Pública: o caso do SIASG/Comprasnet**. 2003. Dissertação (Mestrado em Administração) – Faculdade de Ciências Econômicas, Universidade Federal de Minas Gerais, Brasília, 2003, p.14.

<sup>5</sup> Purchase method which has a public competition. It is necessary to point that the Brazilian legislation has situations where competition is not required (Art. 24 of Procurement Law), or is not considered possible (Art. 25).

competition, streamlining the procurement process, reducing prices and purchase process costs, are widely supported. However, despite of a certain euphoria with good results, is not yet clear how they contribute to a framework of excellence in Brazilian federal public procurement.

Thus, given the concerns previously presented and the growing international interest on the mechanisms of electronic purchase, this paper aims to provide a critical analysis about the use of Electronic Reverse Auction by the Brazilian federal government, seeking out, as far as possible, its positive and negative dimensions and contributions to the improvement of the purchase quality of that country.

## 2. Some relevant concepts

On the assumption, widely accepted, that the fight against waste is an inescapable obligation of public action, understand its essence and dynamic becomes a very important task.

In a recent work, Bandiera, Prat, Valletta<sup>6</sup>, discuss the waste, understood as the difference in prices paid for the same products in several institutions of the Italian public sector, during the period from 2000 to 2005. The authors split the waste concept into two specific types:

“Active waste is such that its presence entails direct or indirect benefit for the public decision-maker. In other words, reducing waste would reduce the utility of the decision-maker. The classical example is corruption in procurement, ...

Passive waste, in contrast, is such that its presence does not benefit the public decision-maker. In other words, reducing waste would (weakly) increase the utility of the decision maker. Passive waste can derive from a variety of sources. One is that public officials simply do not possess the skills to minimize costs. Another is that public officials have no incentive to minimize costs, although they are able to do so. A final cause of passive waste, following Kelman (1990, 2005), is that excessive regulatory burden may make procurement cumbersome and increase the average price that the public body pays.”<sup>7</sup>

Comprehend the differences and relevance of Active and Passive Waste is a crucial step in the development of more rational strategy to confront them. This finding becomes more relevant in the light of the result obtained by the authors about the comparative weight of the two concepts in relation to the Italian total waste: 83% of waste was considered passive. Obviously, this result does not mean the abandon of measures to combat corruption, but recognizes the importance of passive waste, i.e., procurement inefficiency.

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<sup>6</sup> BANDIERA, O.; PRAT, A.; VALLETTI, T. **Active and Passive Waste in Government Spending**: evidence from a policy experiment. [artigo científico]. Available at: <<http://econ.lse.ac.uk/staff/bandiera/bpv0208.pdf>>. Accessed: 23 nov. 2008.

<sup>7</sup> BANDIERA, O.; PRAT, A.; VALLETTI, T., (fn. 6), p. 2.

In a country like Brazil, with enormous social problems, the waste, regardless of its type, is a matter of highest importance. In the field of Active Waste efforts have not been spared. The government purchases are itself a demonstration of the priority assigned to the fight against corruption, despite a low perception of success in this task. Moreover, in the field of combating Passive Waste, there is no clear policy and the few implemented actions are disconnected. The electronic reverse auction is the greatest case of success in this dimension.

But if in one hand is relatively clear that the fight against the Active Waste is carried out, among several measures, by law, monitoring/control and punishment, in the case of passive waste, the private sector experience seems to suggest a strategy turned to the development of excellence in purchase<sup>8</sup>, i.e., focused on the binomial good acquisitions at the lowest possible cost.

According to the basic knowledge accumulated in the field of purchase<sup>9</sup>, a good acquisition is the one which an organization gets what is needed at the right time and quantities, with the appropriate quality in the shortest possible time and for a fair price. In the private sector, given the constant search for higher profits, additionally there is the concern about the process being used to obtain goods and services, which needs to be adequate enough to allow a good purchase and at the same time rational to take the lowest cost.

However, an appropriate definition of Excellence in Purchase in the public sector would not be complete without considering the question of transparency, understood here as a guarantee of full compliance with relevant legislation and how this may be accompanied and supervised by the society. Thus, for the purpose of this work, Excellence in Public Purchase (EPP) is the quality of optimizing the relationship between the value of goods and services purchased and the cost of its acquisition, assuming in a transparent way.

Today the information technology also plays an important role because it assists and enhances the entire effort in the search for the EPP. Taking as appropriate the american public procurement framework: procurement planning, supplier selection and contract management<sup>10</sup>, it is clear the great potential of IT, especially in the automation of the supplier selection process together with the modern techniques of online communication. In effect, the electronic reverse auction is one of the most eloquent examples of this potential.

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<sup>8</sup> Obviously the private sector seeks to increase efficiency in several areas, but this work will be focused on this issue in particular.

<sup>9</sup> To further study see: BAILY, P.; FARMER, D.; JESSOP, D.; JONES, D. *Compras: princípios e administração*. São Paulo: Ed. Atlas, 2008 e ELLRAM, L.; CARR, A. *Strategic Purchasing: a History and Review of the Literature*. *International Journal of Purchasing and Materials Management*, v.30, n.2, p. 9-19, Spring 1994. Available at: <<http://www.reedsresearch.com/EllramCarr1994.pdf>>. Accessed: 21 jan. 2009.

<sup>10</sup> See KELMAN, S. **Remaking Federal Procurement**. Cambridge: JFK School of Government, Harvard University, 2002 (Working Paper n°3). 66p. Available at: <<http://ksghome.harvard.edu/~skelman/Remaking%20Federal%20Procurement%20Visions%20paper.pdf>>. Accessed: 27 abr. 2008.

But at the same time, it is necessary to recognize the limits of IT and understand the fundamental importance of human skills and motivation in tasks like procurement planning and contract management, which require a sensitivity and intelligence that IT can not provide.

Therefore, the EPP, parameterized by the transparency of public action, implies the need for efficiency in the procurement process and effectiveness in delivering results. Thus, the EPP is the result of strategic action (procurement planning) and operational (supplier selection and management of contracts) of a public entity, which in turn not only demands high standards of organization, but very qualified team in operational and managerial terms.

The issues previously discussed are important for the analysis of the Brazilian public purchase model, today strongly connected to the Eletronic Reverse Auction. This tool has shown excellent results in terms of transparency and reducing the cost of purchase, through supplier selection. But this success may be hindering the perception that EPP goes far beyond that.

### 3. Comments on the Brazilian public purchases

The Brazilian direct<sup>11</sup> federal government purchases, as seen in Table 1, were about € 9.021 billions in 2008.

**Table 1 - Public Federal Administration Acquisitions by Purchase Method**

Purchase Method	2008	
	Events	€ (x1.000)
<b>Invitation</b>	4.967	20.036
<b>Price Taking</b>	1.750	74.637
<b>Competition</b>	915	1.161.596
<b>International Competition</b>	50	455
<b>Electronic Reverse Auction</b>	33.972	4.489.635
<b>Presential Reverse Auction</b>	1.385	703.810
<b>Contest</b>	8	104
<b>Bid not required</b>	246.889	1.391.030
<b>Bid not possible</b>	14.048	1.180.507
<b>TOTAL</b>	<b>303.984</b>	<b>9.021.810</b>

Fonte: SIASG/Comprasnet (GAIE/DLSG/SLTI/MP)<sup>12</sup>.

Data from the Integrated General Services Administration System (SIASG), software which controls and monitors the federal purchases, reports over 287 thousand active registered suppliers

<sup>11</sup> Except independent bodies, foundations and state companies.

<sup>12</sup> The author thanks for the Siasg / Comprasnet information to Dr. Rogério Santanna dos Santos (Secretary of Logistics and Information Technology) and his collaborators Loreni Fracasso Foresti, Carlos Henrique de Azevedo Moreira and Cesar Clesito Arcoverde Fechine.

until June 2008. They can deliver to the federal government more than 177 thousand items of equipment and 2,500 types of service.

In Brazil federal government, the purchasing function is organized as a system, the General Services System (SISG)<sup>13</sup>. Its structure has a central authority<sup>14</sup> with normative power<sup>15</sup>, and various decentralized units (executors)<sup>16</sup> that implement the acquisitions in accordance with the law and the additional federal standards, and following the established purchasing policy.

The purchases of the Brazilian federal government are recorded and monitored by the aforementioned SIASG, which the UASG's are electronically connected. DLSG also serves as the link between the central authority and the decentralized units at SISG, maintaining a structure of guidance and clarification of doubts. This service operates in real time and with different levels according to the difficulty of the problems presented by users. In fact, the size and diversity of topics covered by SISG have restricted the action of DLSG. The managerial and operational tasks have largely overlapped the formulation of policies and guidelines for the public procurement sector.

### **3.1. Acquisition Process<sup>17</sup>**

The Brazilian procurement process is parameterized by Law No. 8666<sup>18</sup> of 1993, and more recently by Law No. 10520 of 2000, also known as Reverse Auction Law, by having established this type of procurement. These laws cover all the direct and indirect public administration and federative levels in all branches<sup>19</sup>. On the federal level is still necessary to consider a significant amount of additional regulation<sup>20</sup>. Public organizations, seeking to establish a clear flow of action and the standardization of procedures, may establish additional internal standards about the various stages of the bidding process.

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<sup>13</sup> The SISG was created in 1975 by Decree No. 75.657, later replaced by Decree 1.094/1994. This system not only deals with federal purchases, but a wide range of activities: administration of public buildings and housing, material (where the procurement activities are), transport, administrative communication and documentation.

<sup>14</sup> The Secretariat of Logistics and Information Technology (SLTI), advised by the Department of Logistics and General Services (DLSG), both subordinated to the Brazilian Ministry of Planning, Budget, and Management (MP).

<sup>15</sup> Its authority covers the national civilian government. The military organizations may, to the extent of their interest and as applicable, follow the rules of SISG.

<sup>16</sup> The General Services Administrative Units (UASG's). By the year 2008 there were 3,876 UASG's.

<sup>17</sup> Although the objective of this work is not a discussion about the legal character of the Brazilian federal government purchases, some knowledge is essential.

<sup>18</sup> This law came to regulate the Article 37, item XXI, from the Brazilian Federal Constitution, which deals with the public procurement.

<sup>19</sup> Only state-owned joint capital corporations and more recently the agencies may establish their own standards, substitutive of Law No. 8666/93, for their purchases.

<sup>20</sup> An overview of this legal structure can be obtained by visiting the Brazilian federal government procurement portal (<http://www.comprasnet.gov.br/>) and choosing the menu "LEGISLAÇÃO" (only in Portuguese).

The Article 3 of Law No. 8666/93 makes clear that the bidding in Brazil has two basic objectives. First, ensure the equality among the bidders, which means equal conditions of competition. The second goal is to select the most advantageous proposal to the government. It is also clear in the same article, the legal principles that guide the public procurement in Brazil. The combination and rigid interpretation of these principles have led to formation of a culture of severe punishment for any deviation from established procedure, but without the same rigor about the results. Indeed, there is even some complacency with the incompetence of obtaining results favorable to the government.

In Brazil case, the acquisition is carried out through public bidding, operated by a bidding committee<sup>21</sup> or by a auctioneer<sup>22</sup>, both necessarily designated by a competent authority. According to the Federal Court of Accounts (TCU)<sup>23 24</sup>, the bidding procedure can be divided into two phases, internal and external. The internal phase, which has a preparatory character, starts with the definition of what is needed.

The demanding sector must specify what will be purchased, in a clear, precise, succinct and objective way. It is also necessary to justify the purchase. In the Procurement of services and engineering works, the document containing the specification of the object to be bid is called Basic Project (Projeto Básico). In these cases there will also be the need to provide an Executive Project (Projeto Executivo)<sup>25</sup>. When the acquisition is of common products, using the Reverse Auction<sup>26</sup>, the document needed is a Reference Term (Termo de Referência).

It realizes that the proper specification of the product or service is of crucial importance to an advantageous acquisition for the government. This task, which initially may seem simple, in fact it is not. Building specifications of quality depends on a well trained workforce.

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<sup>21</sup> In Brazil, public purchasers are temporarily assigned to participate of the bidding committees. There is no specific career. The recruitment is very complex, since there is little interest in voluntarily perform procurement activities. Furthermore, the training is very focused on the legislation, making the task seems bureaucratic and less challenging. Beyond that, the perception of the occupants of managerial jobs that the purchasing function would not require the same intellectual level of other activities considered "noble", results in a low self-esteem and motivation. Although the situation has shown some improvement with the introduction of Reverse Auction and there are a more positive perception about the auctioneer, the training for these people is still very focused on law enforcement.

<sup>22</sup> In the case of presential or electronic reverse auction.

<sup>23</sup> External audit organization linked to the Federal Legislative Branch. It watches and prepares annual reports on the management of all federal organizations and Branches. Internaly to the Executive Branch, the same function is developed gy Office of the Federal Controller.

<sup>24</sup> TRIBUNAL DE CONTAS DA UNIÃO. Licitações & Contratos: orientações básicas. - 3ª. ed, rev. atual. e ampl. - Brasília : TCU, Secretaria de Controle Interno, 2006. 409p. Available at: <[http://portal2.tcu.gov.br/portal/page/portal/TCU/comunidades/biblioteca\\_tcu/biblioteca\\_digital/LICITACOES\\_CO\\_NTRATOS\\_3AED.pdf](http://portal2.tcu.gov.br/portal/page/portal/TCU/comunidades/biblioteca_tcu/biblioteca_digital/LICITACOES_CO_NTRATOS_3AED.pdf)>. Accessed: 30 jan. 2009.

<sup>25</sup> According to TCU (fn. 24, p. 67) "... is the set of elements necessary and sufficient to achieve the work to be performed, with maximum level of detail possible in all its stages. "

<sup>26</sup> To purchase products by another common form than the Reverse Auction, there is no requirement for preparation of specific document to describe the object, although it is possible to use basic project.

Another important step in the preparation of bidding is the market research, necessary to justify the projection of the acquisition reference price<sup>27</sup>. Current law does not determine a specific procedure for the conduct of such research, but TCU's decision states that at least three proposals must be collected<sup>28</sup>

Once completed the legal rites, made the description of the object through a basic project or reference term and taking the projection of the reference price, should be set the procurement method by which the dispute will take place, as well as its selection criteria.

Brazilian law has five procurement methods: Convite (Invitation), Tomada de Preços (Price Taking), Concorrência (Competition)<sup>29</sup>, Concurso (Contest)<sup>30</sup> and Pregão (Reverse Auction)<sup>31</sup>. The estimated value for the purchase is the basic reference for the method choice, except in the case of Reverse Auction, which can be used for any value purchases of common goods<sup>32</sup> or services. Table 2 shows the values to be used in the choice of a procurement method.

**Table 2 – Procurement methods and their values (€)**

<b>Object Type</b>	<b>Invitation</b>	<b>Price Taking</b>	<b>Competition</b>
Engineering works and services	≥ 5,515 until 55,150	> 55,150 until 551,500	> 551,500
Common products and services	≥ 2,941 until 29,410	> 29,410 until 238,970	> 238,970

Source: TCU (fn. 24, p. 28).

The Invitation, the Price Taking and Competition are the most common methods, all contained in Law No. 8666/93. These arrangements are similar in general, differing more clearly in complexity, as in the Invite compared to Price Taking and Competition. Another aspect of differentiation refers to the minimum periods required by law to judge the bidders complaints and administrative procedures, which directly impacts on the time duration of each acquisition. In this sense, according Tescarolo<sup>33</sup>, depending on the section criteria, an Invitation can last between 30

<sup>27</sup> Maximum price which the government is willing to pay for the object to be purchased.

<sup>28</sup> See VIEIRA, A.P.; VIEIRA, H.P.; FURTADO, M.R.; FURTADO, M.R.R. **Gestão de Contratos de Terceirização na Administração Pública**: teoria e prática. Belo Horizonte: Fórum, 2006. 260p.

<sup>29</sup> when companies from other countries are accepted, the Competition is called International.

<sup>30</sup> It will not be discussed in this paper. It is a method used only for the choice of technical, scientific or artistic works, in which the winner receives a prize previously stipulated.

<sup>31</sup> This method will be discussed ahead.

<sup>32</sup> "Are considered common goods and services those whose standards of performance and quality can be objectively defined in the notice, through usual specifications used in the market" (TCU, fn. 24, p.36).

<sup>33</sup> TESCAROLO, F.S. **A Política de Gestão de Suprimentos no Governo de Minas Gerais**: uma avaliação a partir da percepção dos seus gestores. 2005, p. 56. Dissertação (Mestrado em Gestão Empresarial) – Escola Brasileira de Administração Pública e de Empresas, Fundação Getúlio Vargas, Belo Horizonte, 2005. Disponível em: <<http://www.dominiopublico.gov.br>>. Acesso em 04 nov. 2008.

and 45 days, a Price Taking, something between 60 and 90 days and a Competition, between 90 and 150 days<sup>34</sup>.

After defining the procurement method, should be chosen the selection criteria, which almost always is the **lowest price**, where the winning bidder is the one who submitted the proposal in accordance with the notice or invitation specifications and presents the lowest price bid. But there are other ways to judge the proposals. In case of **best technique** criterion, mostly used when the nature of the object is predominantly intellectual, the notice will establish the maximum price to be paid. However, the concept of best technique only serves to define a group of bidders that more adequately meets the quality requirements at the notice. The subsequent price proposal will be the final decisive criterion. The last option is the **best technique and price** criterion:

"Selection Criteria in which the most advantageous bid for the administration is chosen based on the highest weighted average, considering the marks obtained in the proposed price and technique. It is obligatory on the procurement of information technology goods and services, which need to be done by price taking and competition"<sup>35</sup>

The External Phase "... begins with the disclosure of the call act and goes until the provision contract of the good, the execution of the work or the services"<sup>36</sup>. The call act can be a notice<sup>37</sup> or an Invitation. It is through it that the authorities shall inform the parties that public sector want to buy a product, service or work. The TCU<sup>38</sup> define the notice as the "... law of the bidding. Lists all the conditions of the notice which must be strictly observed by the public organization and the bidder, under penalty of become void all acts taken thereunder, including the contract".

Any action that may connote a disrespect of the bidding principles almost always condemned the whole process to nullity, which means rework and new costs. For this reason, in both the internal and external phase, there is a great concern to let the bidding process "impeccable" in formal terms.

Using as an example a procurement process with lowest price selection criteria, achieved through Competition, is possible to follow the next steps of the external phase. At the date and time marked the bidders presents to the Commission two sealed envelopes containing its documentation and proposed price. Initially is opened the documentation envelope, when the habilitation is evaluated. All participants can view the documents submitted by the other bidders. Of course this

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<sup>34</sup> Although not common, these time limits may be exceeded because of judicial disputes.

<sup>35</sup> TCU, (fn. 24), p. 49.

<sup>36</sup> TCU, (fn. 24), p. 114.

<sup>37</sup> In case of Price Taking, Competition, Contest and Reverse Auction.

<sup>38</sup> TCU, (fn. 24), p. 394.

stage is considered one of the most complex and lengthy process of bidding, as the smallest error, mistake or omission will be used by bidders in an attempt to disqualify the others, action which can trigger a series of complaints, substantially delaying the process<sup>39</sup>. If any bidder is disabled the envelope containing the proposed price will be returned still sealed.

The next step is the competition moment, where the envelopes containing the price proposals are opened<sup>40</sup> and again suffer the scrutiny of all bidders, and may also pass through the same routine of complaints, noting that such administrative actions, when related to the price evaluation or qualification/disqualification of bidders have suspensive effect, in other words, stop the bidding process until his appreciation. In case of lowest price bids, the winner will be the bidder whose proposal complies with all requirements of the notice and has the lowest proposed price.

Note that in a lowest price bidding the quality of product or service purchased is inextricably depends on the object description. However the procurement law, turning to transparency, the fight against corruption and equality, limits the freedom of public officials in the object description, as we can see through Art. 3, §1, Item I, that is **forbidden to public officials**:

"Admit, establish, add or tolerate, in call acts, terms or conditions that compromise, restrict or frustrate the its competitive nature and establish preferences or distinctions on grounds of place of birth, domicile or headquarters of the bidders or any other circumstance impertinent or irrelevant to the specific object of the contract".<sup>41</sup>

In case of common products and services the descriptions are relatively simple. However, any requirement to expand the quality or skill/qualification level of suppliers is a possible limitation of the competitive condition. What is the appropriate level of quality to not jeopardize the competition? What items are inappropriate or irrelevant to the proper skill/qualification of any supplier? The current interpretation of the procurement law, subliminally implies that specifications with high standards, possibly resulting in reducing the number of bidders, are possible acts of bad faith rather than legitimate attempt to protect public interest.

In high monetary values procurement process, often suppliers disqualified for not complying with the full requirements of the notice, try to contest it seeking to reduce the level of requirement of the object or items for habilitation or qualification. This behavior is encouraged by the almost nonexistent administrative costs compared to the gains if the complaint is accepted.

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<sup>39</sup> For further study in relation to administrative complaints, see Law No. 8666/93, Chapter V.

<sup>40</sup> In a bid using best technique or best technique and price, the envelope to be opened after qualification will be that which contains the technical proposal, and only then the price proposal.

<sup>41</sup> Law No. 8666/93

But besides listed elements, the Brazilian legislation is shown out of compass with the modern concepts on purchases, in which the idea of smallest price was changed as main element by the concept of best value. In the Brazilian case, even in best technique and technique and price bids, the price variable still has decisive role<sup>42</sup>.

Retaking the external phase flow, its conclusion happens when the competent authority, that has the last word on the evaluation accomplished by the bidding committee, confirms the final classification obtained through the mentioned judgement (Approval) and formally assigns the object to the winner, call him for the signature of the contract (Award).

Analyzing the Brazilian public purchase process in perspective, it is possible to identify that the procurement law is concerned about efficiency. However, this is buried under the weight of the fight against corruption. There is no visible balance. In this context of few and unmotivated public servants, high level of control, mistrust and strong pressure for fast acquisitions, emerges the Reverse Auction.

#### **4. Implementing the Electronic Reverse Auction: characteristics and progress**

The Reverse Auction is the more recent purchase modality, having appeared initially with the General Telecommunications Law (Law n° 9.472, of 1997)<sup>43</sup>, that created the National Agency of Telecommunications (ANATEL) and its mechanisms of products and services acquisition. Later, in the year 2000, through the Temporary Act n° 2.026, it started to be susceptible to use by all the federal public administration. With the approval of the Law n° 10.520, of July of 2002, all the remaining national public administration<sup>44</sup> could also use.

Since 2005 the use of the Reverse Auction has become mandatory for purchases of common goods and services under SISG<sup>45</sup>, its electronic form is preferred. Its selection criteria is lowest price only. Note that the Presential or Electronic versions are only different mechanisms to implement

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<sup>42</sup> See MEIRELLES, Hely Lopes. **Licitação e contrato administrativo**. 12° ed. São Paulo: Malheiros, 1999. And MIRANDA, H.S. **Licitações e Contratos Administrativos**. - 2ª. ed, rev. atual. e ampl. - Brasília: Senado Federal, Subsecretaria de Edições Técnicas, 2005. 364p.

<sup>43</sup> It is relevant to observe that the Secretary of Finance of the State of São Paulo developed a mechanism of electronic purchases similar to the Electronic Reverse Auction, that entered in operation in 2000 (FERRER 2007). Although it has been created to accomplish acquisitions of common goods and services of inferior value to the demanded for the accomplishment of an Invitation (R\$ 8.000,00), the Electronic Purchases Exchange (BEC) has also been used for acquisitions in the Invitation modality, with the introduction of a subsequent tender phase after the opening of the initial proposals. See also SOBOL, W. **BEC/SP — Bolsa Eletrônica de Compras do Governo do Estado de São Paulo (2001–2002)**: um ano e meio de bons resultados: como desburocratizar as contas públicas. Rio de Janeiro: BNDES, 2003.

<sup>44</sup> States and Municipalities.

<sup>45</sup> Decree No. 5450, May 2005.

the same method, Reverse Auction, which basically follows the structure presented in Law No. 8666/93, except for some very important details:

- Reversing the habilitation stage: no prior bidders habilitation/qualification. Only the winner will undergo this process;
- The deadlines for bidders appeals are shorter than the other methods;
- After presenting the proposals there is a successive bidding stage (reverse auction).

With these characteristics the Reverse Auction, initially in its Presential form, started to be used at the federal level, which can be seen in Table 3. Its simplicity and similarity with the invitation made the novelty of the bidding process was soon overcome. Moreover, the reversal of the habilitation stage provided a significant reduction in the purchases length, especially for procurement of common goods and services that previously were carried out through more complex arrangements and with a great room for appeals and challenges, such as Price Taking and Competition<sup>46</sup>. According Tescarolo<sup>47</sup>, a Reverse Auction can be completed between 8 and 15 days.

**Table 3 - Development of the Presential and Electronic Reverse Auctions Use (2002/2008)**

Year	Presential Reverse Auction		Electronic Reverse Auction	
	Events	€ (x1.000)	Events	€ (x1.000)
2002	4.290	1.144.804	420	34.561
2003	5.671	776.480	1.303	90.223
2004	9.187	1.619.643	2.677	226.179
2005	6.792	3.862.303	13.384	1.418.725
2006	2.717	1.635.863	27.682	4.452.024
2007	2.223	862.195	35.676	6.066.829
2008	1.385	703.810	33.972	4.489.635
<b>TOTAL</b>	<b>32.265</b>	<b>10.605.098</b>	<b>115.114</b>	<b>16.778.176</b>

Source: SIASG/Comprasnet (GAIE/DLSG/SLTI/MP).

Another aspect that deserves attention about Reverse Auctions is the prices reduction in the purchased products<sup>48</sup>. Table 4 shows the evolution of the so-called economy provided by purchases through Electronic Reverse Auction method<sup>49</sup>. Note that the economy is calculated as the difference

<sup>46</sup> See FARIA, E.R.; FERREIRA, M.A.M.; ZUCCOLOTTO, R.; MOREIRA, V.H. Estudo Comparativo de Redução de Custos e Tempo nas Modalidades de Licitação por Pregão Eletrônico e Presencial. In: 8º Congresso USP de Contadoria e Contabilidade, São Paulo, 2008. Available at: <<http://www.congressoeac.locaweb.com.br/artigos82008/595.pdf>>. Accessed: 11 fev. 2009.

<sup>47</sup> TESCAROLO, F.S., (fn. 33, p. 56)

<sup>48</sup> FERNANDES, C.C.C., (fn. 4, p. 121)

<sup>49</sup> Despite the savings generated by other procurement methods are not publicly disclosed, SLTI has pointed that Electronic Reverse Auction is the most economical means of acquisitions at the federal government.

between the approved price and reference price. Being the first value at which the contract will be signed with the supplier and the second one from price/cost research of concerned areas.

**Table 4 - Evolution of Electronic Reverse Auctions Economy (2002/2008)**

Year	Approved Price (€ x1.000)	Reference Price (€ x1.000)	Economy (€ x1.000)	%
2002	25.912	34.906	8.993	25,76
2003	68.869	89.114	20.246	22,72
2004	196.331	285.485	89.154	31,23
2005	1.244.290	1.719.696	475.406	27,64
2006	4.103.152	4.771.468	668.316	14,01
2007	6.066.829	7.248.556	1.181.727	16,3
2008	4.489.635	5.898.098	1.408.462	23,88

Source: SIASG/Comprasnet (GAIE/DLSG/SLTI/MP).

In the case of Electronic Reverse Auction the price reductions seem to result from the expanded competition provided by increasing participation. As the whole process is done through the website **Comprasnet**<sup>50</sup>, the participation costs are very low and bidders can participate in various processes at the same time, in several regions of the country.

Through Tables 5 and 6, are presented the groups of materials and services purchased<sup>51</sup> through Electronic Reverse Auction. From the total materials purchased by Brazilian Federal Government, approximately 69% was through this method, while in terms of services, the percentage backs to 29%.

**Table 5 - Materials Purchased Through Electronic Reverse Auction (2008)**

Groups of Materials	Purchase Value (€ x1.000)	%
Medical, Dental, and Veterinary Equipment and Supplies	604.704	18,8
Vehicular Equipment Components	431.795	13,4
Books, Maps and Other Publications	346.839	10,8
Construction and Building Materials	255.350	7,9
Vehicles	246.568	7,7
Subsistence	216.822	6,7
General Purpose Automatic Data Processing Equipment (Including Firmware), Software, Supplies and Support Equipment	183.932	5,7
Instruments and Laboratory Equipment	180.995	5,6
Fuels, Lubricants, Oils and Waxes	132.323	4,1
Other groups	619.740	19,3
<b>Total</b>	<b>3.219.067</b>	<b>100,0</b>

Source: SIASG/Comprasnet (GAIE/DLSG/SLTI/MP).

<sup>50</sup> See fn. 20.

<sup>51</sup> The Brazilian government uses the Federal Supply Classification for materials and CPC - Central Product Classification for services.

**Table 6 - Services Purchased Through Electronic Reverse Auction (2008)**

<b>Groups of Services</b>	<b>Purchase Value (€ x1.000)</b>	<b>%</b>
Others support services	179.879	14,2
Leasing or rental services concerning other goods	162.518	12,8
Land transport service (combined modals)	113.084	8,9
Telecommunications, broadcasting and information supply services	84.257	6,6
Travel arrangement, tour operator and related services	74.064	5,8
Investigation and security services	66.875	5,3
Maintenance and repair services of fabricated metal products, machinery and equipment	54.709	4,3
Cleaning services	53.424	4,2
Leasing or rental services without operator	45.287	3,6
Special trade construction services	44.959	3,5
Wholesale trade services on a fee or contract basis	40.953	3,2
Fluvial (internal) transport service	39.812	3,1
Human health services	26.924	2,1
Recreational, cultural and sporting services	26.324	2,1
Others service groups	257.500	20,3
<b>Total</b>	<b>1.270.569</b>	<b>100,0</b>

Source: SIASG/Comprasnet (GAIE/DLSG/SLTI/MP).

Other interesting aspect of the Electronic Reverse Auction is its low cost of implementation. Although there is no scientific studies on this aspect, a projection done by Ferrer<sup>52</sup> comparing the acquisition costs using the Invitation process implemented through the “Bolsa Eletrônica de Compras do Estado de São Paulo”<sup>53</sup> and by the traditional process in paper, found that the electronic mechanism is approximately 3.6 times cheaper than the traditional. In this issue valid to assume that the Presential Reverse Auction is not as advantageous as the Electronic way, because its costs tend to be similar to a traditional Invitation.

Finally, another important gain from the Electronic Reverse Auction is the increase in transparency. Despite the World Bank<sup>54</sup> has already registered that “... the transparency of the 1993 procurement law provided an adequate legal framework to combat corrupt and fraudulent practices”, the technology has enabled to go further. In the case of Electronic Reverse Auction, anyone anywhere in the world, can track in real time, not only the external phase steps of the bidding, but also the bid dispute among the bidders.

But of course not everything is solved by electronic tolls and despite their clear advantages is important to reflect on the impact of their use, taking as reference the general context in which it is inserted.

<sup>52</sup> FERRER, F. et al. **Gestão Pública Eficiente**: impactos econômicos de governos inovadores. 2ª ed. Rio de Janeiro: Ed. Campus / Elsevier, 2007. 178p.

<sup>53</sup> Electronic public purchasing mechanism very similar to Electronic Reverse Auction. See footnote 43.

<sup>54</sup> WORLD BANK. **Brazil – Country Procurement Assessment Report**. Washington D.C., 2004. p. xii.

## 5. Electronic Reverse Auction: some concerns

The first issue to be examined is about the speed in which Reverse Auction was adopted, especially in its Presential form. One of the hypothesis for this phenomenon is linked to the budgetary execution problems of Brazilian government. To generate primary balances<sup>55</sup>, large portion of the ministries budgets is locked and not released under a rational schedule throughout the year, but concentrated in large plots in the last months of each year. As there is fear on the part of UASG's that their budgets could be cut next year, with the arguments that they were not used, it triggers a real "rush" for purchases at the end of each year. As the legislation states that the materials purchases are extinguished if not approved until December 31 of each year, the natural preference is use "fast" modalities to purchase, like Reverse Auction. According to data from SIASG/Comprasnet for the year 2007, from the € 6.066 billion acquired through Electronics Reverse Auction, € 3.032 billion were purchased in the last two months.

Another subject that deserves attention is the "economy" generated by the Electronic Reverse Auction. Although the monetary values are significant, with average savings of approximately 18% in the last three years and it was even higher before, some caution is needed in the analysis. Initially considering the reference price, which is made based on market research performed with the potential suppliers. This practice can generate estimates higher than those that truly reflect the average of the market, possibly overestimating the values taken as Electronic Reverse Auctions "savings". However, even if it takes the reference value as accurate representation of market value, there is another methodological problem in comparing Reverse Auctions with the other modalities. The current form of presenting Reverse Auctions economies would effect a comparison with all other methods, when it would be reasonable to imagine that the potential savings would be derived from it stage of successive bids. However, opting for the submission only of the Electronic Reverse Auction, would be more appropriate to highlight the gains of the bidding phase, obtained by the difference between the lowest initial offer and the price finally approved.

The very low prices are another issue that is worrying the users of Electronic Reverse Auction. It is not uncommon that a supplier wins a session with a much lower price than the market, but fails to honor the contract. In some opportunities, this occurs by the inexperience of the bidder that is led by the climate of fierce competition in the bidding phase. But there are also situations in which the action is deliberate. The competitor, aware of the fragility of the contracts management in the federal government, intentionally wins a bid with a very low price. Its goal is requesting an increase in the contract price soon after starts to work, or simply deliver a product or service below

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<sup>55</sup> Or Primary Surplus. Economy of budgetary resources for the payment of public debt.

the specifications of the bidding. In these cases, the premature increase in prices, as the receipt of inadequate goods or services, cause losses to the public. It is not uncommon in these cases, the bankruptcy of the winning company, with serious consequences for its employees and for the government, which will be without the purchased product or service and may still have to conduct a new bidding process.

Finally, there is also an issue yet little explored, but important, dealing with products and services that are purchased through Reverse Auction. As can be observed in Tables 5 and 6, there is a wide range of products and services being purchased through this procurement modality. Approximately 57.5% of purchases of Brazilian federal government. It is necessary to conduct researches to verify if all this amount of purchases are really common products and services, or the public buyers are, on account of the advantages of bidding, especially for its simplicity and speed, using it in an inappropriate manner. Accordingly, the Reverse Auction, although a great advance in several ways, may also be bringing some "tranquility" to the exercise of disorganization and lack of planning.

## **6. Conclusion**

In Brazil there is a broad consensus about the benefits of the Reverse Auction, especially in its electronic version, emphasizing the prices reduction, the transparency and competition increase. But such success requires an additional consideration. Any tool, no matter how advanced, dispensing the need for knowledge of basic concepts for their efficient application. A good acquisition is not the choice of a purchase mechanism, but primarily the clear determination of the need, the precise specification of the object and establishing the best strategy for interaction with the market as well, of course, a management contract, which allows not only to maintain the gains of the acquisition, but also provides additional cost reductions.

Furthermore, it should be noted that the concerns identified in relation to the Reverse Auction, are in fact issues relating to the use of the tool and therefore the responsibility of those using or establishing policies for more general use. Thus, understanding the tool is as important as understanding the context in which it is inserted. In Brazil, the perception on the need to develop Excellence in Government Procurement is unclear and is tied almost exclusively to the fight against Active Waste. In this context the tool, i.e., Reverse Auction, is now seen as the solution to all

problems, which refers to psychologist Abraham Maslow<sup>56</sup>, cited by Krieger<sup>57</sup>, “[i]f the only tool you have is a hammer, it is tempting to treat everything as if it were a nail”.

In the coming years is likely that the Reverse Auction reaches its natural limit of use, if it is not already been achieved. Then the country will stagnate in terms of ECP and Active and Passive Waste possibly resume a path of acceleration. The gains obtained with the Reverse Auction will not be visible any more, because have been incorporated into the daily operations.

It is important to understand that the ECP is a link between the efficiency and transparency in public purchases. The Electronic Reverse Auction must be inserted into a larger strategy that seeks balance in purchasing efficiency and transparency. This strategy does not yet exist in Brazil. Perhaps an important step in this direction be the expansion of the training, qualification and appreciation of the servers involved with public purchases of the federal administration. In other words, after the legal and technological improvements, it may be the opportunity for investment in people and knowledge.

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<sup>56</sup> MASLOW, A. **The psychology of science**. New York: Harper and Row, 1966.

<sup>57</sup> KRIEGER, J. Professionalism in the Acquisition Contracting Workforce: have we gone too far? **Defense Acquisition Review Journal**, V. 14, n. 2 (45), p. 317-333, Sep. 2007, p. 325. Available at: <[http://www.dau.mil/pubs/arq/2007arq/2007arq45/ARJ45\\_Krieger.pdf](http://www.dau.mil/pubs/arq/2007arq/2007arq45/ARJ45_Krieger.pdf)>. Accessed: 13 jan. 2008.