Operations & strategy implications of e-procurement

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AGENDA

- Introduction: «e-procurement between myth and reality»
- e-Procurement and operations management
- e-Procurement and strategic management
- Conclusions
Introduction:

e-Procurement between myth and reality
Is e-procurement the remedy to all diseases?

- Governments across the globe identified information communication technology (ICT) as a way to improve. Government is expected to become more responsive, democratic, accountable and transparent (Dunleavy et al., 2006)

- A significant number of nations have spent more on ICT over the last decade than on traditional capital investments such as roadways, airports, water purification plants and the like (World Bank, 2004)

- Public procurement is at the forefront of most reform efforts given that it plays a significant role in promoting accountability and transparency. The current system appears to be broken, unsuitable for the demands of modern governance (Thai, 2001)

- e-Procurement is “the use of ICT to automate and make more responsive and dynamic the purchasing process” (Coulthard & Castleman, 2001; Andersen, 2009)

**MYTH:**

**e-Procurement = Panacea for all diseases of public procurement**
e-Procurement is a complex challenge to tackle together

- The implementation of technology in the public sector is seldom simple and has to be framed within the **ambiguous and continuously transforming constraints of administrative and political prerogatives** (Fountain, 2001)

- In the case of public procurement, given that the process already exhibits high levels of complexity (Leukel & Maniatopoulos, 2005), substantive policy choices become even more challenging (Henriksen & Mahnke, 2005)

- Researchers’ findings suggest that digitalized public procurement has **not yet led to significant transformative changes**. Unsuitability of software platforms, organizational resistance, lack of strategic systems’ integration, failure to involve public procurement professionals in the design of e-procurement systems were identified as the primary obstacles of effectively implementing digital procurement (McCoy and Roman, 2012)

**REALITY:**

- e-Procurement
- **long and complex challenge with uncertain results**
Identify and engage stakeholders

- To capitalize on the transformative nature of ICT in procurement, policymakers, system designers, and procurement professionals must take an **active role** in the design of the software and its adoption across political, institutional and behavioral domains.
• Employing ICT is “not enough” in achieving harmonious operation and integration: e-Procurement, like most ICT dimensions, is not deterministic in character

• It is regularly the case that administrative and democratic hopes placed within the realm of innovative use of technology in public procurement remain unfulfilled as users incorporate technology within established structures, hence reaffirming the status quo (Mota & Filho, 2011)

• e-Procurement is both a course for delivering goods and services to the consumers more efficiently, while at the same time transforming the process, including the individuals involved, by making them more effective in the discharge of their responsibilities (McCoy and Roman, 2012)

• Therefore, to disclose potential benefits, e-procurement adoption should happen alongside a thorough process re-engineering effort
Lesson learned?

- Research efforts have proven that in the last two decades e-procurement implementation has generated limited transformative changes.
- Major factors behind the underwhelming current status of e-procurement:
  - “Local” and fragmented implementation (Hardy and Williams 2008)
  - Strategy-free character of the initiative (lack of a clear vision of the possible benefits and how to disclose them) (Barnes et al., 2002; Croom & Johnston, 2003; Bof & Previtali, 2007; Varney 2011)
  - Procurement professionals as “passive” user (Mota & Filho, 2011)
  - Limited and pricey software options, unsuitableness of platforms developed for the private sector (Bof & Previtali, 2007)
  - E-procurement not legitimised as an expected institutional characteristic (Chang & Wang, 2010)
  - Unavailability of e-procurement specialists and consultants within the public sector
  - Lack of evaluation research (Fountain, 2001)
  - Inadequate legislative framework (!!!)
e-Procurement & operations management
Operations management and public procurement

- Operations management is an area of management concerned with:
  - overseeing, designing and controlling the process of production
  - and redesigning business operations in the production of goods or services.

- It involves the responsibility of ensuring that business operations are **efficient** in terms of using as few resources as needed, and **effective** in terms of meeting customer requirements (Chase, Jacobs & Aquilano, 2007)

**Public procurement operations**

- Warehouse management
- Budget management
- Tender strategy design
- Tendering
- Vendor management
- Evaluation & awarding
- Contract management
- Dispute management
Efficiency benefits

- **Efficiency** measures the *usage of resources* during a process:
  - HR
  - Time
  - Other material resources needed

- e-Procurement impacts efficiency by allowing employees to achieve the same results of a traditional “paper-based” tender, using less time, thanks to the automation of certain activities

### How to measure it?

- **Effort per procedure (FTE)**
- **Procedure length (days)**
- **Added-value generating activities**

- Creation of procedures out of templates
- Automatic noticing
- Data-entry validation
- Automatic ranking of bids
- ...

...
Effectiveness benefits

- **Effectiveness** measures gaps between goals and results.
- Most often, public procurement is said to be effective when it produces **savings** (by lowering awarding prices).
- Another way to measure effectiveness is the **reduction of disputes** and appeals from the suppliers, as they could be depending on an inaccurate tender strategy definition.
- e-Procurement could help generate savings, and (given that it should free up some time) also allow a more solid tender strategy/documentation.

**How to measure it?**

| ▼ | Awarding prices |
| ▼ | Appeals / disputes |
| ▼ | Clarification requests |
| ▲ | Job quality |

- **e-Auctions**
- **Ampler supplier base**
- **Documentation standards**
- **Online help**
- **...**
Transparency benefits

- Administrative transparency consists of ensuring the highest circulation of information, both inside and outside an organization.
- e-procurement can help spreading the most relevant information in procurement:
  - tender notices
  - evaluation criteria (especially technical ones)
  - clarification requests
  - suppliers’ participation and winning suppliers

How to measure it?

- Quality and availability of information
- Discriminatory evaluation of bidders
- Overall transparency
Competitiveness benefits

- Government procurement spending represents 50.5% of GDP (EU27 area 2010; Eurostat, 2011)
- In order to stimulate economic growth and invigorate local businesses, it is vital to stimulate the highest levels of market competition
- e-Procurement promote competitiveness by ensuring higher levels of suppliers’ participation to tenders and using advanced negotiation instruments (i.e. e-auctions)
- Quality standards may be ensured by using the “most economically advantageous offer” (MEAT) tender evaluation criterion, which is also favored by e-procurement

How to measure it?

- Suppliers participation to tenders
- Auctioning
- Rotation between suppliers
- Market stimulation
- Market scouting
- Vendor management
Dematerialization benefits

• The volume of **consumed paper** is rarely relevant when evaluating procurement
• Nevertheless, an enormous volume of documents and bundles pile up in most contracting authority offices, **archiving costs** are constantly increasing
• Using e-procurement as an operational standard could completely cut down paper usage

How to measure it?

- Paper usage
- Archiving costs
- Pollution and materials consumption
- **Procurement eco-sustainability**

Substitutive document retention

Certified email

Online forms (instead of paper – modules)

Digital signature

...
e-Procurement & strategic management
Strategic management and public procurement

• Strategic management provides overall direction to the enterprise: it specifies the **objectives**, develops **policies** to achieve objectives, and **allocates resources** to implement the policies.

• Michael **Porter** 3 principles for strategic positioning:
  1. creating a “unique and valuable position”;
  2. making trade-offs by choosing “what not to do”;
  3. creating “fit” by aligning company activities to with one another to support the chosen strategy.

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Public procurement: «unique and valuable position»?

Public procurement: «what not to do»?

Public procurement: how to create «fit» between different activities?
How can e-procurement enhance strategic performance?

- At a strategic level it is anticipated that e-procurement will free purchasing resources from transaction processes to strategic sourcing activities (Rajkumar 2001) but limited research about how e-procurement can enhance strategic performance exists!
- If e-procurement is to obtain a strategic rather than an operational level of influence within the organizational hierarchy, consideration needs to be given to, as how actors can be strategically, operationally and technologically integrated (Phillips, Piotrowicz, 2006)
Companies are increasingly using **strategic performance measurement systems** (SPMS) to implement strategy and drive performance improvements.

Strategic performance measurement is a set of nonfinancial and financial objectives, performance measures and goals designed to align managers’ actions with a firm’s strategy (Webb 2004).

Evans (2004)
A SPMS for public procurement

- Define the areas in which performance enhancement is desirable (i.e. efficiency, effectiveness, transparency, dematerialization, competitiveness) and their KPI
- Define the situation “baseline”
- Define ambitious goals
- Measure as often as possible gaps between goals and the current situation

Gardenal (2009, 2013)
Importance of networking and alliances

- e-Procurement is able to support increased and more complex coordination between:
  - buyers and suppliers (G2B)
  - buyers and buyers (G2G)
  - suppliers and suppliers (B2B)
  - regulatory bodies
- When embarking on an e-procurement project, the organization needs to be prepared to replace traditional bureaucratic purchasing processes and hierarchical structures with flexible, decentralized processes and alliance based structures (Phillips, Piotrowicz, 2006)
Conclusions
Conclusions

• At this point in the evolution of e-procurement, extant research shows that the areas where significant benefits could be obtained are underutilized or not utilized at all:
  • collaboration tools
  • e-auctions
  • contract lifecycle management
  • digitalized approach to monitor supplier performance
  • risk management...

• It appears that the digitalization of the procurement process simply automates the processes rather than generates strategic capabilities...

• ...while some cost benefits (tactical) may accrue from e-procurement, sustainable benefits will only accrue from the adoption of a strategic management perspective!
Thank you!

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