CONCEPTUAL FRAMEWORK FOR PERFORMANCE MEASUREMENT IN PUBLIC PROCUREMENT

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ABSTRACT

German Public authorities procure goods and services in the amount of more than 260 million € per annum (respectively approximately 11% of Germany's gross domestic product). Therefore even small retrenchments in per cent achieve an enormous impact. Hence an analysis of the existing procurement situation is meant to show if German contracting authorities procure efficiently and if there are sectors with a potential for improvement. This is implemented by the development and establishment of a performance benchmarking through a Public Procurement Excellence-Index. The paper contains the methodology for operationalizing public procurement excellence through dimensions and indicators. The index is developed together with leading German public procurement practitioners. As well as the status of the public institution's particular purchasing function can be derived from the index in an (anonymized) comparison, specific recommendations for attaining best practices concerning the procurement can be deduced. The project is funded by the Federal Ministry of Economics and Technology and runs in cooperation with the German Association Materials Management Purchasing and Logistics e.V.

INTRODUCTION

Administrative authorities, public enterprises and private companies procure the goods and services they need to perform their tasks.

Procurement may subsume, in general, all activities aimed at acquiring the power of disposition over goods which are needed but not self-produced (Arnold, 1997). Public procurement has the function to ensure the supply of the state in order to enable it to fulfill its tasks. The creation of public value, which is based on a political process, consists e.g. in the construction and preservation of hospitals, schools and universities as well as in procurements to maintain the operational capability of the public administration. The spectrum of goods and services required for the performance of public tasks thus covers the procurement of standard goods as well as that of highly complex goods and services (Kunert, 2003).

Fulfillment of public demand may either be ensured by production in the public sector's own responsibility, by exercising an act of state or through contracts under private law (Rittner, 1988). The major part of procurement is market-based, therefore the following exposition will focus on this type of procurement activities by the state.

EMPIRICAL SIGNIFICANCE OF PUBLIC PROCUREMENT

The relevance of public procurement is underlined by the sheer sum of money the public sector in Germany spends on the acquisition of goods and services annually, i.e. an estimated 260 billion euros (BMWi / BME, 2010); this means that more than 20% of government expenditure flows into public procurements.[1] The total volume corresponds to a percentage of about 10.8% of the gross domestic product.[2] In the European Union, the average is around 16%, with a procurement volume of about 1,550 billion euros (European Commission, 2007). The significance of the public sector's procurement activities varies among the member states, ranging between 11% and 21.5% of the respective national gross domestic product (European Commission, 2007). But also outside the EU, the volume of public procurement is on a similarly high level, e.g. estimates for the U.S.A. suggest a total volume of approximately 20% of the gross domestic product (Thai/Grimm, 2000). If the procurement volume is assumed to be as high as that, even savings of only a few percentage points would have an enormous positive effect on the national economy. Various studies substantiate the potential cost savings for Germany associated with more effective public procurement:

[1] Overall state revenues in the year 2008 amounted to 1,091.79 billion euros (Federal Statistical Office, 2010).

[2] The gross domestic product amounted to 2,407.2 billion euros in the year 2009 (Federal Statistical Office, 2010).

A study by the management consulting firm Booz & Co. found that measures such as pooling or standardization could lead to savings of 12 billion euros in the short term, and that in the medium term, organizational changes may result in savings of 18 billion euros (Schwarting/Bergmoser/Eltges/Wille, 2009). Ramboll Management in cooperation with the lawyers Leinemann & Partner analyzed that procedural costs in the awarding of public contracts could be reduced by up to 20% if contract award law was simplified (Kröber/Fieseler/Kirch, 2008). A study by McKinsey estimates the savings potential at an average of 15% of the procurement volume (Husted/Reinecke, 2009).

PERFORMANCE MEASUREMENT OF PUBLIC PROCUREMENT

Despite the enormous economic significance and the savings potentials analyzed with respect to public procurement in Germany, the performance of the latter cannot be sufficiently evaluated so far. There is no transparency concerning the efficiency of the utilization of budget resources and the performance produced. This is probably one of the reasons why the private sector is perceived as more efficient than the public sector (Smyth, 1997). Notwithstanding strict statutory regulations, there are enormous procedural as well as structural differences in public procurement in Germany, which makes it evident that adequate performance measurement of public procurement is required to serve as an information and evaluation basis (Hjerppe, 1980). In this case it is not possible to revert to private sector benchmarking. As shown in the following, the objectives in private or public procurement differ greatly from each other. The goal of performance comparisons in general is to promote efficiency in order to finally optimize administrative activity (Newcomer, 2007). The application of performance comparisons might raise the standard of public services without causing additional cost (Erridge/Fee/McIlroy, 1998). Article 91d of the German Basic Law attaches central importance to performance comparison in public administration.

Benchmarking is a relevant method for the evaluation of performance (Beamon, 1999). According to the “New Public Management” the term of performance can be declared as a key term. Benchmarking can generally be subsumed as a part of the “New Public Management” (OECD, 1993). Yet the term of performance can not be limited to one single definition but is interpreted in various ways (Carter, 1991). Therefore the development of performance indicators as well as the performance measurement is difficult

(Kouzmin/Löffler/Klages/Korac-Kakabadse, 1999). This is particularly true for the public sector (Pestiau, 2009). Apart from the problems of measuring the performance of public procurement, which will later be discussed in more detail, an excellent public procurement can be achieved by a high performance of public procurement (Stewart, 1995). Consequently, there is a positive correlation between the degree of performance and the achievement of excellence (Oakland, Tanner, 2008). Excellence means correspondingly „[…] the highest level of performance which might realistically be expected under any given set of circumstances (Oxley, Oxley, 1963).

The research project Public Procurement Excellence presented in this paper is promoted by the Federal Ministry of Economics and Technology due to a decision by the German Bundestag and carried out in cooperation with the German Association Materials Management Purchasing and Logistics e.V. It serves to provide a survey on procurement strategies and processes of the public sector and to allow performance benchmarking for public procurement in Germany. In this context, an integral benchmarking approach is to be prepared which will make it possible to ensure a performance comparison according to Art. 91d for participating public procurement agencies, applying the Public Procurement Excellence Index in order to identify procurement-specific optimization potentials.

As a matter of principle, the status of the contract awarder determines whether procurement is “public”. As a rule, a public purchaser cannot clearly be distinguished from a purely private one. Therefore, the first step is to define the term “public purchaser” as a function of the contract value.

Below certain threshold values, competitive bidding is national. National law includes the term “institutional purchaser”, which means that the right to award contracts is limited to agencies which are formally governmental or close to the state. This includes the territorial entities, the Federation, the German states (“*Laender”*) and municipalities, legal entities of public law, such as institutions or foundations, and legal entities of private law. Accordingly, both public institutions which relatively clearly fall into the category of “public sector”, such as federal ministries or local administrations, are public purchasers, as are organizations which are not a formal part of the state but obtain at least 50% of the money they spend in contract awarding from public funds. Above the decided threshold values, competitive bidding must include the entire EU. In European public procurement law, the term “functional public purchaser” applies. Among other things, this implies the inclusion

of legal entities of private law as public purchasers which are subject to state *influence* only (Matthey, 2001).

Since categories for institutions are vague, the concept of "functional purchaser" is applied in public business administration, i.e. the relevant criterion is the performance of public tasks (Eichhorn, 2005). However, not even the criterion "performance of a public task" provides a clear distinction between a public organization and a private enterprise (Naschold et al., 2000). As a result, there is no original list comprising the total number of public contracting authorities in Germany – only estimates exist, which suggest a number of about 30,000 different contract awarders in Germany for whom the rules of contract award law are binding and which are thus to be referred to as public purchasers (Federal Ministry of the Interior/Federal Ministry of Economics and Labor, 2004). The most important factor for public contracting in Germany is the executive, i.e. public administration with its institutions, agencies, offices etc. (Gornas/Beyer, 2006). Within the federal structure of the German state, these are found on three different levels, i.e. the federal, state and municipal levels (Essig/Schaefer, 2007). As part of the Public Procurement Excellence initiative, external performance comparisons in administration are carried out both horizontally (e.g. between municipalities) and vertically (e.g. between state and federal authorities).

On the federal level, the procurement of required goods is carried out either via dedicated procurement authorities of the Federation, such as the Federal Office of Defense Technology and Procurement, or the respective requesting agency satisfies its requirements in its own responsibility. The Federation purchases goods and services of a volume of around 50 billion euros (percentage of the total procurement volume in Germany: about 20%) (Federal Ministry of the Interior/Federal Ministry of Economics and Labor, 2004). On the individual state level, the demand is satisfied either via the alternatives already described for the federal level, or via specific procurement service providers with the aim of pooling the public sector's procurement activities. The German states award contracts to the value of around 62 billion euros (about 25% of the total procurement volume in Germany). Depending on the size of the cities and municipalities, local-level procurement is carried out directly in their own procurement agencies. Municipalities also have the possibility of making purchases via procurement authorities of the Federation and central procurement agencies of the respective German state. In addition, judicially acknowledged procurement cooperations are possible on the local level. The municipalities account for the largest

percentage of the procurement volume in Germany, with almost 50% (approx. 125 billion euros). Therefore, all public procurement agencies in Germany are potential participants in the performance benchmarking as part of the research project.

After explaining the fundamental importance of public procurement in Germany and the requirement to measure the performance of public contracting authorities, this paper in the following focuses on legal and other framework conditions applying to public procurement in order to conceptualize and operationalize Public Procurement Excellence. Subsequently, initial results and/or further steps to be taken as part of the research project will be presented in more detail.

CONCEPTUALIZATION AND OPERATIONALIZATION OF COMPLEX CONSTRUCTS AS THEORETICAL UNDERPINNING OF PUBLIC PROCUREMENT EXCELLENCE

A construct is a variable whose quantity cannot be measured directly. This also immediately applies to the term “Public Procurement Excellence” (Bagozzi/Phillips, 1982). In order to render the construct “Public Procurement Excellence” measurable, relations between observable variables and the construct of interest must be specified (Churchill, 1979; Peter, 1981). To acquire a fundamental and comprehensive understanding of the determinants of Public Procurement Excellence, a rough conceptualization of Public Procurement Excellence has to be carried out according to the recommended procedure by Anderson and Gerbing (1982). As a first step, an initial set of indicators for measuring the construct should be formed, e.g. by means of deduction. Figure 1 shows the assumed structure and dimensionality of Public Procurement Excellence.

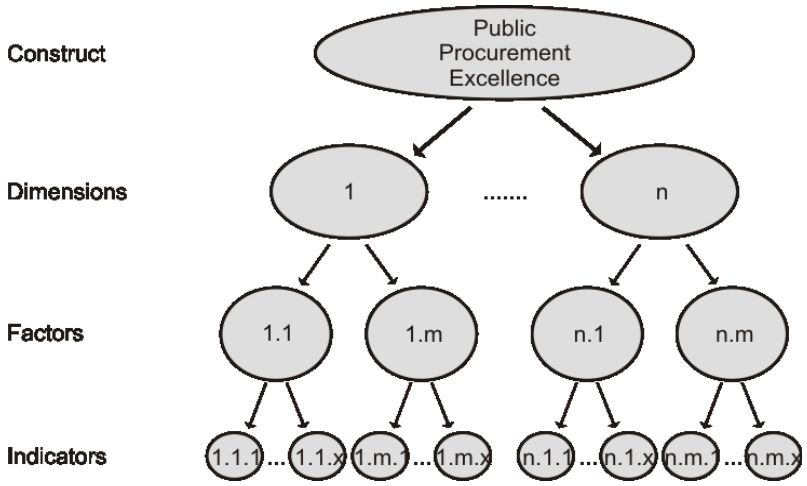

Figure 1: Possible conceptualization of the construct "Public Procurement Excellence" (Anderson/Gerbing, 1982).

As a matter of principle, reliability and validity requirements must be met which apply to indicators for measuring a latent construct. In this context, reliability represents a necessary, but not sufficient condition for validity (Carmines/Zeller, 1979). Construct measurement is valid if it fulfills the criteria of content validity, convergent validity, discriminant validity as well as nomological validity.

As already mentioned, public procurement activities cannot be evaluated by means of efficiency criteria alone. Efficiency is an important criterion, but it can only be applied in connection with other performance assessment criteria (Parker, 1991). For public procurement in Germany, and transferred to the construct of Public Procurement Excellence, economic efficiency, politics and legal conformance are major influencing factors. The decision as to which tasks the state spends money on is decided not through an academic but through a political discourse. The objective of public procurement is to help render the performance of public tasks as economical, effective and efficient as possible (Eichhorn, 2006). This is about the shaping of the lowest level of the ends-and-means hierarchy of public tasks (Eichhorn, 2001). In a simplified, ideal-type representation, public tasks are the result of political objectives, which in turn are derived from public interest. A public task has its origin in a decision made by a political instance and thus is bound to government aims. Public organizations mainly pursue material objectives and do not focus on the fulfillment of economic formal objectives only.

As already described, the public sector provides a broad spectrum of public services in order to meet society's demands. In doing so, public purchasers are directed to make their purchases as efficiently as possible, i.e. considering the premise that tax money must be put to a sensible use (Schweitzer, 2004, Thom/Ritz, 2006). To make this possible, administrative activities are based on the principle of economic efficiency (§ 25, no. 3, para 3 *Conditions concerning Contracts for Public Works, Part A* [*VOB/A*], § 25, no. 3 *Conditions concerning Contracts for Supplies and Services* [*VOL/A*], § 16 *Conditions concerning Contracts for Supplies and Services of Freelancers* [*VOF*]).[3] In this sense, economic efficiency is the optimum relation between the intended purpose and the resources to be used. This comprises the principle of economy/minimum principle, i.e. the achievement of a certain result with a small expenditure of resources (Schweitzer, 2004). From an economic point of view, the principle of economic efficiency combines the principles of rationality and efficiency, since efficiency in this sense refers to the optimum distribution of resources with respect to alternative intended uses (Schmidt/Schmidt, 1996) and thus is to be equated with the management of scarce goods. Subgoals for the procurement function may be derived from the principle of economic efficiency. A differentiation is made between long-term, strategic objectives intended to ensure and improve the organizational efficiency of procurement agencies, and operational objectives meant to guarantee continuity of supply.

The normative framework that applies to public procurement is contract award law. Its main aim is to generate fair and open competition as well as to additionally compensate the fact that public purchasers are not, per se, compelled to act economically (Matthey, 2001). A basic prerequisite of economic purchasing by the public sector is functioning competition on the procurement markets (Hopf, 2002). In addition to the efficient supply of the public sector, also a political instrumentalization of the procurement system for the performance of public tasks in Germany is possible in principle. Such aspects, which are unrelated to the contract to be awarded, may include e.g. the advancement of small to medium-sized enterprises, of certain regions or of women, or the promotion of environmental protection aims (Fante, 2004). The application of objectives without any relation to the contract to be

[3] The term "economic efficiency" is defined in more detail in the Federal Budget Code (§ 7 *BHO [Bundeshaushaltsordnung]*), in the relevant administrative regulations and in a guideline issued by the Federal Ministry of Finance (*Bundesministerium der Finanzen*).

awarded results in the main objective, economic purchase, being neglected.

For the optimization of administrative activities, public procurement must thus observe, to the maximum extent practicable, the guidelines of politics and the postulate of economic efficiency while strictly adhering to contract award law. The construct conceptualization of Public Procurement Excellence described in the following must take into account the framework conditions mentioned accordingly. With a view to the general problem concerning the "empirical tangibility" of latent constructs, an operational definition of Public Procurement Excellence is given first. Subsequently, initial findings about the underlying factor structure and dimensionality, the initial set of indicators and the pre-tests for the improvement and reduction of the set of indicators are presented.

Based on a literature search and considering the specific framework conditions that are binding for public purchasers, the analytical framework for procurement activities of the public sector developed by Schapper et al. (2006) was used as a theoretical frame of reference for the assessment of public procurement performance (Schapper/Veiga Malta/Gilbert, 2006). This frame of reference explicitly takes into account the requirements and constraints laid down for public procurement activities: political objectives, economic efficiency as well as conformance to contract award law.

Observance of the framework conditions depends on the partly competing aims of Strategic Management, Performance Management and Process Management. Figure 2 illustrates the framework conditions and their relations to each other.

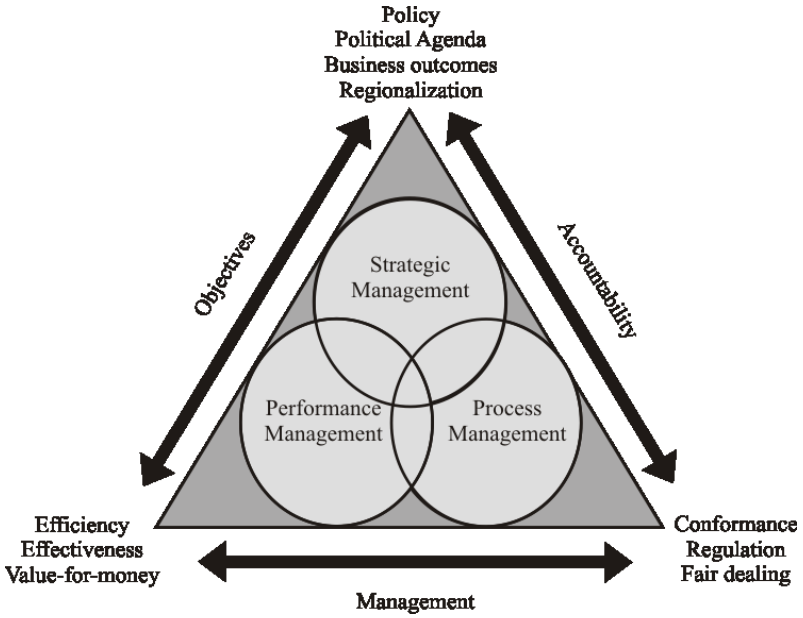

Figure 2: The Procurement Management Framework (Schapper/Veiga Malta/Gilbert, 2006).

Accordingly, procurement activities by the public sector must be evaluated as excellent with respect to Strategic Management, Performance Management and Process Management. A definition of "Excellence" is given by the European Foundation for Quality Management (EFQM). Excellence is defined as outstanding practices in organization management and in the achieving of results, based on the fundamental concepts of Excellence (EFQM, 2003). Considering the definition of procurement formulated at the beginning, Public Procurement Excellence can thus be defined as follows: Public Procurement Excellence comprises all activities of a public institution geared towards ensuring an economic and efficient supply of goods which are needed but not self-produced, with these activities to be evaluated as outstanding with respect to Strategic Management, Performance Management and Process Management.

METHODS

As shortly explained above, the study described here is an applied research project financially sponsored by the Federal Ministry of Economics and Technology over a period of 26 months, which is to yield results than can be put into practice, relying on profound academic methods. This demand for a methodological foundation is accompanied by numerous calls for an improved quality of related research and the increased use of survey methods in operations management (e.g. Forza/Di Nuzzo, 1998 or Malhorta/Grover, 1998 and Hensley, 1999): This is in line with e.g. the deductive development of the theoretical research framework presented above; additionally, information on approaches used is to be documented clearly and explicitly throughout the research process, with only unambiguous and reliable methods being applied in all phases.

The underlying research process here in principle follows the recommendations by Forza (2002), which include the following steps: development of theoretical foundations of Public Procurement Excellence, designing of the index-based measurement of Public Procurement Excellence, pre-testing and piloting, analysis of data from the piloting phase as well as the conduct of the main data collection and subsequent data analysis. The research process applied in the project is shown in figure 3.

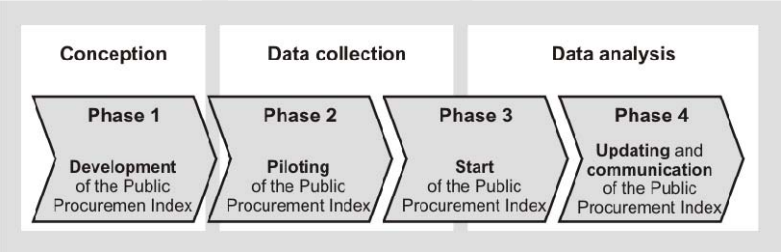

Figure 3: Research Process of Public Procurement Excellence

In this study, the subjects of analysis are public contracting authorities in Germany; accordingly, the expected result is a Public Procurement Excellence Index guaranteeing each individual participant a performance evaluation (benchmarking) based on this index. This assessment is in relation to Best Practice and/or the best 10%. Each public contracting authority participating in the survey must decide for

itself how detailed the benchmarking on Public Procurement Excellence should be carried out (general benchmarking vs. in-depth benchmarking). General benchmarking must be undergone by all participating procurement divisions; for in-depth benchmarking, additional data are required, which necessitates a greater effort by the contract awarding authority but also provides more detailed results. Furthermore, the results of the analysis is to be automatically adapted to the detailization required by the respective plane of perspective. The aim is to provide highly densified information to politicians (index value), for example, whereas the executive level of agencies is to receive an evaluation on the basis of general benchmarking, and the operational level an evaluation based on in-depth benchmarking. The measuring instrument to be used is a questionnaire; the wording and scaling of the questions and / or indicators contained in this questionnaire are to be determined in a workshop with selected public procurement experts in order to ensure that all questions are formulated such that they are easy to understand, and to avoid e.g. the danger of double-barreled questions (Oppenheim, 1992). As addressees, procurement staff at public contracting authorities are selected. For example, the experts are currently working for one of the largest german public procurement organizations such as the Federal Office of Defense Technology and Procurement as well as the Procurement Office of the Federal Ministery of Interior. As briefly mentioned above, the statistical population of public contracting authorities in Germany is only known by approximation, if at all. This means that sampling can only be non-probalistic, although at least a quota sample should be selected (Forza, 2002). Data collection itself as well as the analysis of the data are to be carried out by a fully automated electronic system.

At the moment, the project is in phase one (cf. figure 3), which will be completed once the Public Procurement Excellence Index and/or the resulting questionnaire will have been designed. As a first step, a fundamental understanding of Public Procurement Excellence was elaborated through deduction and an indicator pool was developed by means of literature search. Afterwards, the relevance and completeness of the indicators identified up to that time were verified during a two-hour group discussion (Morley, 1992 and Willis, 1997) with six selected public procurement experts. In this case, the term “experts” denotes people who, unlike specialists or laymen, have an overview of the knowledge available in the field of public procurement and understand overall contexts. This means that these individuals have the ability to identify the reasons of problems and to solve them, e.g. by deriving suitable principles of action (Pfadenhauer, 2006). The composition of the

group discussion can be described as homogeneous with respect to expert knowledge, and its sole purpose was to identify what is referred to as "interpretative codes" (Morley, 1992) in the context of the operationalization of Public Procurement Excellence.

Upon analysis of the group discussion results, two focus group interviews complemented the described approach, which lasted two hours each and were conducted at different times (Krueger, 1988 and Kitzinger, 1994) with initially five and subsequently eight public procurement experts. This made it possible to reach an initial assumption about the factor structure and dimensionality underlying the construct (Churchill, 1991; Hunt, 1991 and Jarvis/MacKenzie/Podsakoff, 2003). From the methodological point of view, the focus group interview differs from the group discussion in the generation of hypotheses on the construct structure and initial ideas concerning the development of a measuring approach for Public Procurement Excellence (Malhotra/Birks, 2000). The respective selection of interview partners, both for the group discussion and the focus group interviews, was carried out according to the principle of the "key informants method" (Philipps, 1981), which means that the interviewees were selectively chosen solely on the basis of their special qualifications, such as an executive position and specific knowledge in the field of public procurement. Currently, the questionnaire will be designed. The data will be collected with a web-based survey (Griffis/Goldsby/Cooper, 2003). This accomplish with small expenditure of time and costs compared to personel interviews and implies higher case numbers (Kinnear / Taylo, 1991). Furthermore, an "interviewer-bias" can be excluded. We will use Likert scales (Likert, 1932), Fishbein scales (Fishbein, 1963) and Trommsdorff scales (Trommsdorff, 1975) to measure the attitudes. In a next step the questionnaire will be pre-tested to identify possible modifications of the questionnaire (Churchill, 1991).

RESULTS

The group discussion and the focus group interviews substantiate the initial assumption that Public Procurement Excellence is a complex and/or multi-dimensional construct composed of the dimensions Strategic Management, Performance Management and Process Management. The dimensions themselves seem to be based on different factors – for example, Strategic Management can be operationalized via the factors Procurement Objectives and/or Procurement Strategy as well as via the strategy areas Economics, Sustainability, Advancement of

Innovation and Advancement of Economics. Performance Management can be described by the factors Economics of Objects or Economics of Processes, respectively, and by Customer Management and Supplier Management. Process Management, finally, can be assumed to be composed of the factors Conformance to German Contract Procedures, Employees, Organization and Information Systems. So various indicators underlie each factor, which can be collected e.g. through an inquiry about variables with the respective public contracting authority. (Appendix A contains a table of the identified indicators). Figure 4 represents the measurement model with the respective dimensions and factors.

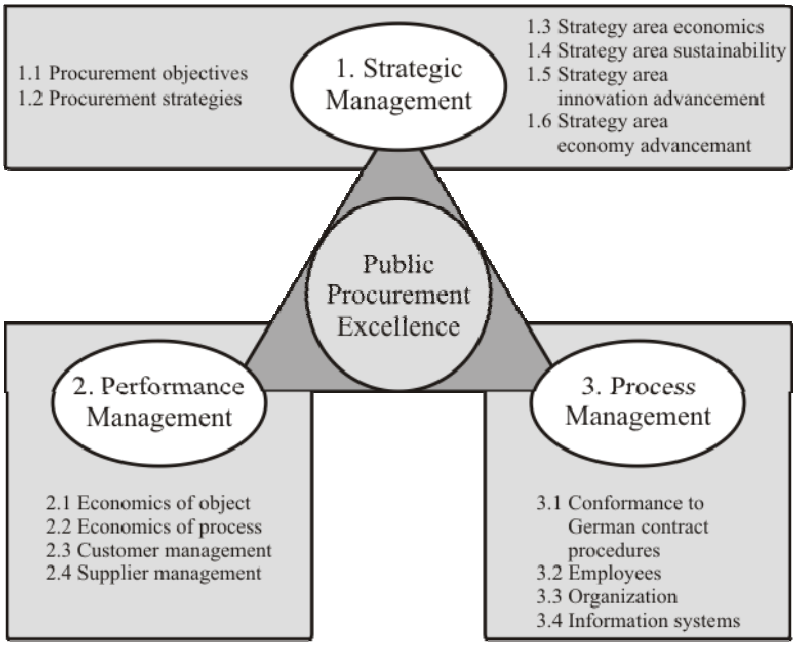

Figure 4: Measurement model of Public Procurement Excellence

The factor Conformance to German Contract Procedures may be referred to as an example. It is determined with the help of the indicators “Compliance with German contract procedures”, “Importance of internal legal know-how at the contracting authority”, “Importance of external legal know-how at the contracting authority”, “Percentage of staff trained in contract award law in relation to the total number of personnel at the contracting authority”, “Percentage of (admissible) verification

procedures in relation to the total number of contract awards completed by the procurement division", "Percentage of reprimands in relation to the total number of contract awards completed by the procurement division" as well as "Percentage of contract awards cancelled by the procurement division itself (in case of formal mistakes)".

DISCUSSION

Once the questionnaire design process and the required pre-tests will have been completed, an initial measurement round is to be started as part of the piloting process. The content-related and methodological findings obtained during this phase are to be directly integrated in the index and, accordingly, be considered in the main data collection. Furthermore, the data obtained in the main data collection phase are meant to help verify the initially assumed structure and dimensionality of Public Procurement Excellence by means of exploratory factor analysis. This is to make it possible to uncover cause-effect relationships within the complex construct through subsequent confirmatory factor analysis (Anderson/Gerbing, 1988). Consequently, Public Procurement Excellence will be investigated using a multi structural equation model and in the long run by means of a multiple-sample confirmatory factor analysis, since the data collection is intended to take place at least every two years. The essential scientific goal of the research project is the determination of strengths and directions of the effects on public procurement targets, object and process efficiency, or the conformance to German contract procedures. In this regard, a possible propositions is e.g. that the Conformance to German Contract Procedures is positively affected by the procurement strategy of public authorities, which in turn is influenced by customer and supplier management in a positive way. Moreover, each of the factors employees, organization and information systems are postulated to have a positive effect on the procurement strategy of a public authority. Applied science and/or public procurement may benefit from the approach described as part of the research project in two ways: For one thing, the Public Procurement Excellence Index provided represents an efficient benchmarking instrument for contracting authorities, and for another thing, the cause-effect relationships identified cause elementary correcting variables for the improvement of Public Procurement Excellence to become evident.

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APPENDIX A: TABLE OF PRELIMINARY INDICATORS

No.	Factor	No.	Indicator
1.1	Procurement objectives	1.1.1	Defined procurement objectives
		1.1.2	Promotion of economic development
		1.1.3	Promotion of innovation
		1.1.4	Sustainability
		1.1.5	Continuity of supply
		1.1.6	Long-term effectiveness
		1.1.7	Low prices / Low costs
1.2	Procurement strategies	1.2.1	Defined procurement strategies
		1.2.2	Supplier strategy
		1.2.3	Product group strategies
		1.2.4	Product standard strategies
		1.2.5	Global sourcing strategies
		1.2.6	Internal procurement cooperative
		1.2.7	External procurement cooperative
1.3	Strategy area economics	1.3.1	Award criteria price / cost
		1.3.2	Calculation of the probability
1.4	Strategy area sustainability	1.4.1	Award criteria sustainability
		1.4.2	Environmental standards
		1.4.3	Labor and social standards
1.5	Strategy area innovation advancement	1.5.1	Awarding objective promotion of innovation
		1.5.2	Functional performance description
		1.5.3	Approval of seperate tenders
		1.5.4	*Competitive dialogues*
1.6	Strategy area economy advancement	1.6.1	Awarding objectives promotion of SMEs
		1.6.2	Division into lots
		1.6.3	Approval of subcontractors
		1.6.4	Bidding syndicate
		1.6.5	Awarding objective regional promotion

No.	Factor	No.	Indicator
2.1	Economics of object	2.1.1	Measurement of the efficiency of procured goods and services
		2.1.2	Methods of measuring effectiveness
		2.1.3	Reporting/Controlling
		2.1.4	Methods of measuring awarding overlapping effectiveness
		2.1.5	Conditions of payment
2.2	Economics of process	2.2.1	Number of each type of awarding procedure
		2.2.2	Awarding volume of each type of awarding procedure
		2.2.3	Process costs of each type of awarding procedure
		2.2.4	Throughput time of each type of awarding procedure
		2.2.5	Influences of the throughput time
2.3	Customer management	2.3.1	Number of internal customers
		2.3.2	Number of external customers
		2.3.3	Measurement of the customer satisfaction
		2.3.4	Causes for complaint
2.4	Supplier management	2.4.1	Systematic supplier management
		2.4.2	Measurement of supplier satisfaction
		2.4.3	Number of new suppliers
		2.4.4	Number of lost suppliers
		2.4.5	Received tenders of each type of awarding procedure
		2.4.6	Number of applicants
		2.4.7	Change of suppliers
		2.4.8	Supplier evaluation
		2.4.9	Supplier database
		2.4.10	Supplier development

No.	Factor	No.	Indicator
3.1	Confor-mance to German contract procedures	3.1.1	Compliance with German contract procedures
		3.1.2	Internal legal know-how at the contracting authority
		3.1.3	External legal know-how at the contracting authority
		3.1.4	(Legal) reprimand
		3.1.5	(Admissible) verification procedures
		3.1.6	Contract awards cancelled by the procurement division itself (in case of formal mistakes)
3.2	Employees	3.2.1	Number of employees (full-time equivalent)
		3.2.2	Tasks of the employees
		3.2.3	Employees with an expert knowledge
		3.2.4	Employees with a knowledge of the market
		3.2.5	Employees with knowledge of administrative economics
		3.2.6	Employees with knowledge of economics
		3.2.7	Employees with legal knowledge
		3.2.8	Employees with technical knowledge
		3.2.9	Further education
3.3	Organization	3.3.1	Central procurement (internal)
		3.3.2	Central procurement (external)
		3.3.3	Process description
		3.3.4	Control method for assessing the contract award procedure
		3.3.5	Information to unsuccessful tenderers
		3.3.6	Application of the awarding simplification rules (economic package)
3.4	Information systems	3.4.1	Utilization of an information system
		3.4.2	Number of applied information systems

	3.4.3 Electronic procurement 3.4.4 Electronic catalog system