“Best Value” Model

Critical analisys of the concept and its aplicability to building construction in the portuguese context

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Abstract

The “Best Value” Model is based on a paradigm shift which main purpose is to guide the market into the production or purchase of the best value for the lowest price. Information is presented as the key element for this shift, as it allows the informed decision-making process, minimizing the risk that is inherently associated.

This procurement model, proposed by Kashiwagi (2012), suggests that the client should choose from the presented value (performance / price relationship) by the vendor, instead of forcing the vendor to adjust its performance to the price that the client expects. Therefore, this model proposes that the client should take into account other selection criteria beyond the price, and is composed of three phases – 1.Selection / 2.Clarification or Pre-award / 3.Management by Risk Minimization. Firstly, the best value vendor is selected, who, on the second phase, will clarify the offer and on the third phase will proceed to the production, reporting the risk management to the client.

The risk management is essentially a way to ensure the informed decision-making which, to be effective, needs to be integrated into a context (that varies according to the entity who is promoting it). As so, it is proposed the risk management scope, presented in the model, is extended to the scope presented in the ISO 31000:2009 standard and that each intervenient may proceed to risk management and control (of the risks of which it is the owner).

1 Introduction

The “Best Value” Model (BVM) is a procurement model to any sort of services or product delivery, which may be applicable to the public and private sectors. The model’s main objective is to select and hire a vendor based on its past and future performance capability. According to the model, the vendors are experts in the service they offer and therefore are the best entity to develop that sort of product.

The model has three phases, in which the third respects to the delivery. The selection process occurs in the two first phases, which are divided into a series of 5 filters that allow the selection of the vendor who offers the best product at the best price, basing the selection on several criteria (beyond price).

The revision of the CCP (Portuguese “Public Procurement Code”) is being currently discussed, considering the development of the procurement procedures which have not been of much use until now, as the “competitive dialogue” (which background context is very close to the “Best Value” concept), and the research for procurement models that are based on other criteria beyond price. As so, the opportunity to study this concept and to make a critical analysis to its applicability to the building construction in the Portuguese context seems reasonable.

Simultaneously, considering the publication of the international standard for Risk Management (ISO 31000:2009) in 2009, it seems relevant to suggest an improvement to the risk management component presented in the model (which is shortly developed) considering the guidelines on that standard.

2 Best Value Concept – Definition and Basic Concepts Analysis

Information Measurement Theory (IMT)

The “Best Value” Model is based on a paradigm shift which main purpose is to guide the market into the production or purchase of the best value for the lowest price (Kashiwagi, 2012a). This paradigm shift is hardly directly applicable to any context. Firstly, it implies an arising consciousness of the context in which it is suggested that it occurs and secondly, it needs to be adapted to that very context, making it possible for the shift to occur (considering the activity sector and economical and sociocultural context).

The Information Measurement Theory presents information as the key element for this shift, as it allows a non-decision-making environment (considering that Kashiwagi (2012a) describes decision-making as the main source of risk in a project). However, as it is not possible to perceive 100% of the information related to a project, it seems important to collect as much information as it is possible in order to allow the informed decision-making, and therefore minimizing the risk that is inherently associated.

The classic information paradigm was, according to Vidal (2003), defined by the Information Technologies (IT) experts as a perspective in which information is the reflection of the world. In order to have a better understanding of reality, or to minimize the uncertainty that is associated to it, it is

necessary to collect as much relevant information as possible. Information is, therefore the basis of the decision-making, and the “Right information” should be given to the “Right person” at the “Right time”. Extending Vidal’s (2003) perspective on organizations to projects, if their success depends on how they are managed then that management implies several decision-making and the quality of that decision-making depends directly on how the information needs of the decision-maker are satisfied.

In a complex situation (as in construction), the problem is not choosing the best solution but it is to express the criteria and preferences of the playing actors, in order to build integrated solutions that can be accepted by the several intervenient in the process. To decide in a complex situation, it must be taken into account the technical dimension: the explanation of the different parts of the problem, the variables to consider, etc. And, simultaneously, there is a human dimension that can be articulated in individual (as decision is based on individual thought) and organizational (representation share and defining the existing thoughts) dimensions, according to Vidal (2003).

Considering the basic level, it is known by experience that the quality of the decision depends on the thoughts that build the decision-making process and the information that feed that process. Therefore, the risk comes from using unreliable, inadequate or outdated models or logics of thinking (Berger, 2003).

Kashiwagi (2012a) suggests the use of dominant information, which is important in order to allow that the processed information achieves all the intervenient (in such way that it can be easily understood by all of them).

The author also defends that experts are visionary individuals who can anticipate the future outcome of an event (using the available information on a previous moment to the event) and therefore bring no risk to the project once they dominate their area of expertise and by so their only risk is the one that they cannot control. Considering the previous observations, experts, even considering the definition proposed by Kashiwagi, are not immune to the decision-making process or the risk that is inherently associated. As so, and considering the concepts described in the ISO 31000:2009 standard, the experts should be able to identify not only the risks implied in the activities that they do not control (external factors) but also the risks that are implied in the activities that they do control (internal factors).

Services Industry Structure (SIS)

Kashiwagi (2012a) proposes a framework model that is extensible to any area of activity, despite being created in the construction industry. SIS is structured by two components of the industry stability (“perceived” competition and performance) and divides the industry in four quadrants (Kashiwagi, 2012a):

- Quadrant I – Low Bid or Price-Based Sector (described by high “perceived” competition and minimal performance);
- Quadrant II – Best Value Sector (described by high competition and high performance);
- Quadrant III – Negociated-Bid Sector (described by “perceived” high performance and controlled low competition)
- Quadrant IV – Unstable Market (described by low performance and low competition; It is not a natural sustainable market).

In Portugal, the “Public Procurement Code” (CCP) is the framework to the public procurement system, and can also be considered in the private sector. The main purpose of the present document is not to discuss the details of this code but it has been identified that the “competitive dialogue” express in CCP has a background context very close to the “Best Value” concept (which is pointed by Kashiwagi (2012a) as being the desirable quadrant to procurement).

However, preference has been given to Quadrants I and III in Portugal (following the international tendencies). The Kashiwagi (2012a) analysis seems to fit in the Portuguese context, and the use of models that are less used (despite being referred in CCP) has been and is being publicly debated. A GHK (2010) report identified the “competitive dialogue” as one of the three essential paths to innovation and procurement procedures in the European Union context.

Contracting Model

One of the main distinctive characteristics of the construction activity is that it is developed by projects that stand to satisfy determined clients’ needs (Teixeira, 2012). These needs must be translated and transformed in a construction product (building). This process of transformation and the specificity of each project make them unique, in spite of using products or techniques applied in other projects. Teixeira (2012) rephrases this idea by mentioning that the multiplicity of projects and products requires the adoption of distinctive production processes that appeal to a variety of technologies.

Kashiwagi (2012a) demonstrates that the current contracting models bring different sorts of problems to the client and defends a new contracting model. In the classic models, the final product is relatively well defined ahead of the construction, which leaves the client with the management of all the problems that can come from failure in the preparation phase (and design, when the client is in charge) of the project. The new model suggested by Kashiwagi (2012a) intends to solve these matters (as well as some other matters that he also identifies). As so, the author defends that the client does not need to know the details about the final product that will be provided, since many times the client does not have the technical expertise to understand them and also the client is hiring an expert who is supposed to have the expertise to transform the clients requirements into a product that responds to those requirements.

Teixeira (2012) refers that the end users of the construction products are hardly taken into account in the construction process (unless they are also the client), and their interests are supported by the client. More, the author states that (as Kashiwagi (2012a) also states) that this arises matters of translation of the requirements of the end users to the program and the defence of their interests through adequate procurement and control.

The new model defined by Kashiwagi (2012a) stands on the idea that the vendor should describe shortly and precisely the product that is being offered and the strategy to respond to the requirement and expectation of the client. However, considering the complexity of the construction product, it is necessary to consider an integrated approach, considering economic criteria, operation and maintenance costs, safety (in construction and during operation), time and flexibility (Kometa *et al.*, 1995).

This integrated perspective can only be seen by the client, who is the main interested (ou its representative), despite the end user being itself or some other entity (in case the building is associated to a business case), the client is the common intervenient in all of the building life cycle (viability studies, design, construction, operation and transformation).

Kashiwagi (2012a) defends that the client does not necessarily have the means to understand the technical details of the product, and therefore leaves the definition of the product to the vendor (who is an expert). However, being the environment suggested by Kashiwagi (2012a) based on performance and ensuring the best value (cost / benefit relationship) to the client, it is asked how that value will be ensured if the client cannot quantify it.

Kashiwagi (2012a) also defends that the contract should be based on the product that is being offered rather than on the client's requirements and expectations. It is asked how will that ensure that the requirements and expectations are achieved if the product is probably still being developed when the contract is signed and if the client does not have the technical means to analyse the vendor's proposal.

3 "Best Value" Model

The "Best Value" Model (BVM) is a model that takes into account other selection criteria beyond price and is structured in two systems: Performance Information Procurement System (PIPS) and Performance Information Risk Management System (PIRMS).

Performance Information Procurement System (PIPS)

The Performance Information Procurement System (PIPS) is a paradigm shift as it is the alignment of the expertise in an optimized environment that increases value and reduces cost (Kashiwagi, 2012b). The PIPS is developed in the following three phases: 1.Selection / 2.Clarification or Pre-award / 3.Management by Risk Minimization (as described in Figure 1).

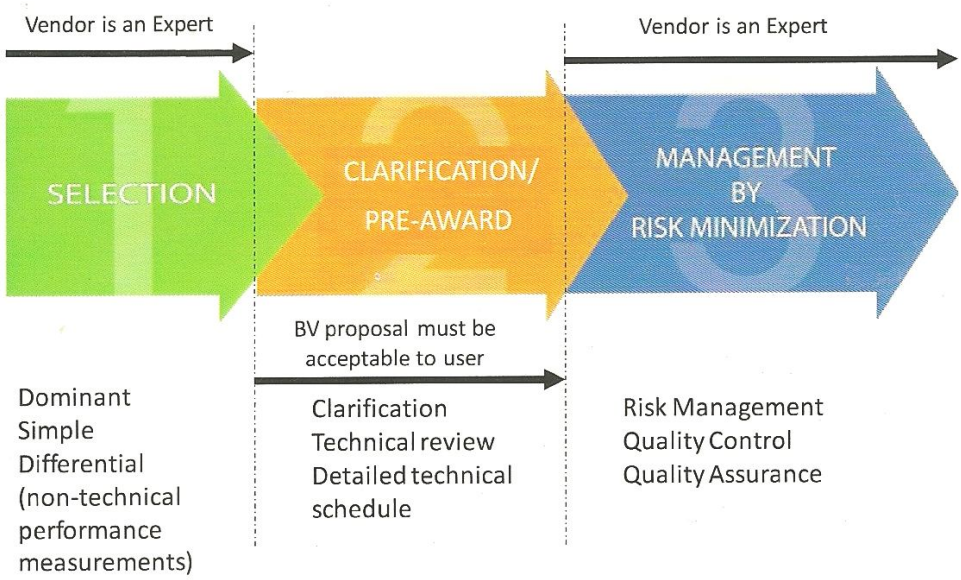

Figure 1 – Performance Information Procurement System (PIPS)
(Kashiwagi, 2012b)

The PIPS' main objectives include (Kashiwagi, 2012b):

- Deliver a service or a product from one party in the supply chain to another with the least amount of transactions (actions that do not add value to the deliver)
- Minimize effort (use of resources) of all parties;
- Minimize decision making (human thinking and participation) of all parties;
- Minimize direction, management and control of one participant over another participant or with participants in the same group.

In Phase I (Selection), dominant information is used to differentiate the proposals. In case there is no dominant information available, the BV is assumed to be the lowest price or the last excluded alternative. The dominant information should be supplied and analysed in six criteria divided in five filters (as shown in Figure 2).

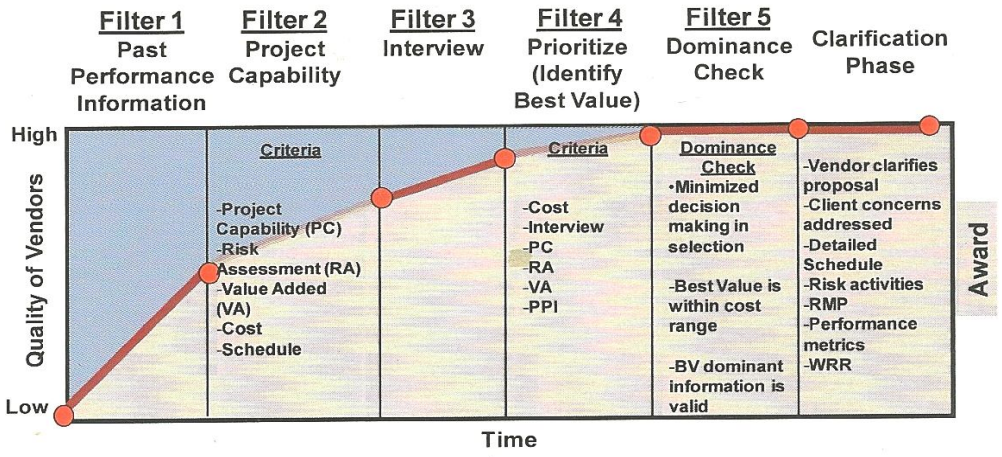

Figure 2 – BV PIPS Selection Filters
(Kashiwagi, 2012b)

After all the proposals are completed with the information mentioned in Figure 2, they should be integrated in a matrix that will allow selecting the BV vendor.

The BV vendor selected in Phase I will migrate to Phase II (Clarification or Pre-award) where there is the opportunity to clarify their proposal describing what is included or excluded and to present the several documents including a detailed schedule, performance measurement criteria, risk management plan and Weekly Risk Report (WRR) template. In case the vendor identified in the first phase as the BV does not respond to the client's expectations, the process should be repeated with the next vendor.

On Phase III (Management by Risk Minimization), the vendor that migrates from Phase II will develop the project and is responsible for the RMP and WRR. Therefore, the client will follow the project through the reports provided by the vendor.

Performance Information Risk Management System (PIRMS)

The PIRMS is a management system which main objective is the project monitoring through following projects' risk evolution based on performance information. This evolution is reported to the client using weekly (WRR) and monthly (Director's Report (DR)) by the vendor (Kashiwagi, 2012b).

“Best Value” Model

In this model’s perspective, the concept of price is associated to a certain performance. When the price varies, the performance will necessarily follow that tendency (positive or negatively). The current procurement models are based on the opposite perspective which has been proven to be fallacious, since many times there have been cost and time deviations (TC, 2009; Teixeira, 2012).

It is through price and performance association that Kashiwagi (2012) suggests the paradigm shift, explaining that if the client prefers a certain value should also be able to support that value. This is a perspective that seems reasonable considering the demands of a developed society. It also fits into the tendency of the presentation of requirement through performance criteria that is currently verified. However, this definition of performance criteria leaves an enormous range of possibilities when defining the final product.

Therefore, considering the complexity of the construction product, in order to ensure that the client’s expectations and requirements are achieved, it is proposed that the client should have a more participative role in the three phases of the model and that the product should be briefly presented during the second phase (through a preliminary general design) and developed during the third phase. Besides, it is proposed that the risk management should be extended to every intervenient, as it will only be effective if the variables associated to each entity are identified and correctly evaluated and treated by themselves.

4 Risk Management

According to Levi-Feunteun (2001), risks may have several natures: technological (development, equipment, guarantee), products, tools and investments’ cost / time / quality, selling price, human resources (available personnel and specialized competences), risks related to the country (politics, taxes), administrative (logistics, accountability, management control) and purchase (vendors procurement). This enlarged perspective challenges the Kashiwagi perspective, as most of these variables would be nullified by selecting an expert vendor.

The ISO 31000:2009 international standard defines the process to risk management, where the first step is necessarily the context establishment. Afterwards, the risk must be identified, analysed and evaluated in order to allow treatment and monitoring, within the context that was established.

Extending the Kashiwagi’s (2012) perspective on risk to the ISO 31000:2009 perspective, it is clear that every entity should perform their own risk management as the context in each entity is different (which will necessarily modify the steps ahead – identification / analysis / evaluation / treatment and monitoring).

A survey was elaborated, recurring to informal interviews, in order to list the variables associated to the main actors of the construction supply chain (client, designers and contractors). By analysing the lists, there are aspects that were pointed by all entities and other that were pointed only by one entity. In the first scenario, if a variable is pointed by all entities, the analysis and evaluation will necessarily be different from one another, considering that the context in which that evaluation takes place is necessarily different (what may be positive to an entity may be negative to the other, for

example). In the second scenario, those risks only were pointed considering the specific context of that entity.

5 Conclusions

The “Best Value” Model is based on a paradigm shift which main purpose is to guide the market into the production or purchase of the best value for the lowest price. Information is presented as the key element for this shift, as it allows the informed decision-making process, minimizing the risk that is inherently associated.

This procurement model, proposed by Kashiwagi (2012), suggests that the client should choose from the presented value (performance / price relationship) by the vendor, instead of forcing the vendor to adjust its performance to the price that the client expects. Therefore, this model proposes that the client should take into account other selection criteria beyond the price, which seems appropriate considering the demands of a developed society.

Considering the complexity of the construction product, it seems that if the client does not have the means to evaluate the proposals that are presented by the vendors, it will hardly find the best value (high performance for the lowest price). Also, if the client does not follow closely the product evolution, its expectations and requirements may not be achieved.

The risk management is essentially a way to ensure the informed decision-making which, to be effective, needs to be integrated into a context (that varies according to the entity who is promoting it). As so, it is proposed the risk management scope, presented in the model, is extended to the scope presented in the ISO 31000:2009 standard and that each intervenient may proceed to risk management and control (of the risks of which it is the owner).

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