Tracing the African Project Failure Syndrome: the significance of 'ubuntu'

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Abstract The lack of 'ubuntu' (African group solidarity) between project stakeholders in the Southern Africa Development Community (SADC) public building sector has been surrounded by controversy and strongly held opinions. The work reported in this paper attempts to indicate some salient issues affecting the relationships between project stakeholders. The Botswana public building sector is used as a main case study and follow-up studies are carried out involving another eight SADC countries. The paper addresses two propositions. *First, that the lack of 'ubuntu' between project stakeholders is primarily due to an inappropriate project organizational structure. Second, that a default traditional construction procurement system (TCPS) provides a poor relationship management system.* Information is obtained on the research areas through questionnaires to construction firm executives, contract managers, site managers, trade foremen and skilled tradespersons on the dominant procurement system used in Botswana. Furthermore, senior technical officers of Public Works Ministries of another eight SADC countries are interviewed as a follow-up to the Botswana study. The primary conclusion to be drawn is that the building procurement system purported to be in use in the SADC public building sector differs significantly from that recommended in the theory, resulting in poor relationships between project stakeholders. This is primarily due to the use of inappropriate building procurement systems. In general, the TCPS in the SADC public building sector is used as a 'default system'. This has led to a situation where project management is a 'fire fighting' activity, where group solidarity between project stakeholders is out of reach. Salient steps are proposed with a *proviso* that the SADC public building sector should establish appropriate methods of selecting building procurement systems as a prerequisite in formulating appropriate project organizational structures which will bring the spirit of real co-operation between project stakeholders towards project success.

Keywords Botswana, Southern Africa, construction procurement system, culture, project management

INTRODUCTION

According to Stewart (1982), project management is about controlling the demands of the project and making choices within constraints. The client's objectives (project parameters) are *cost*, *time*, *quality* and *utility* (Rwelamila & Savile 1994). Cost generally refers to first cost, and in this context choice means the allocation of budgets and contingencies. Time is better described as timing; choice means the adjustment of timing, time-scales and float(s). Quality is the level of specification, and choice, therefore, means the adjustment of the specification, i.e. to basic, medium or high. Utility includes such things as running costs, maintenance issues, buildability and flexibility for alterations or other uses. Choice, in this context, usually means making value judgements between higher initial costs and longer-term savings.

For the sake of completeness, it is important to recognize that projects do not occur in isolation, and that, consequently, they must be considered in relation to the prevailing environment. According to Rwelamila & Savile (1994), this background is specific to the country, year, location, project type, industry, etc. There is little choice for the project manager (PM); any changes that occur will probably be due to outside agencies, and will cause a risk of serious disruption to the project. These changes may be in regulations, union policy, markets, technological innovation, etc. Thus, an appropriate procurement system is necessary for the PM in order to balance the project parameters and allocate risk appropriately, hence the foundation for harmonious and symbiotic relationships towards project success.

This paper endeavours to identify one of the primary reasons that has contributed to poor public building sector general performance, in terms of time, cost, quality and utility. It will provide evidence that suggests that incorrect choice and use of procurement systems has contributed to creating tensions between

project stakeholders and this has consequently contributed to poor project performance in the Southern Africa Development Community (SADC) public building sector.

DEFINING TERMS

Construction procurement system

The principal argument of this paper rests on one fundamental aspect of the building process, which requires early and particular attention if project success is to be achieved. It involves the selection of the most appropriate organization for the design and construction of the project—herein referred to as the construction procurement system (CPS).

Reporting on an examination of past research and literature, Masterman (1992) refers to phrases such as 'building procurement method', 'procurement form' and procurement path', which have been used by various authorities when referring to this concept.

According to Franks (1984), CPS is 'the amalgam of activities undertaken by a client to obtain a building'. The term *construction procurement system* (CPS) has, therefore, been adopted and used throughout this paper. This term is generally used in this paper to describe:

The organizational structure adopted by the client for the management of the design and construction of a b uilding project.

Harmony

The Oxford Illustrated Dictionary (1981) defines harmony as 'a combination or arrangement of parts to form a consistent and orderly whole', 'agreement', 'congruity' or 'agreeable effect of apt arrangement'. The first definition will be used throughout the paper, but with a qualification. Since the study referred to in this paper is in Southern Africa, 'harmony' in this paper *will* be used in the African context as a metaphor that describes the significance of group solidarity, on survival issues. The word 'ubuntu', 'obuntu' or 'utu' will be used interchangeably with 'harmony'.

Looking at the 'spirit of African transformation management', Mbigi & Maree (1995) argue that, for African organizations and firms, the challenges of social and political innovation far exceed the technical challenges. They suggest that it is important to harness the social dimension of the African people and align them with successful management techniques from the West and the East. According to Boon (1997), people are life and business, and by not understanding the people in your project team, you are destined to remain in conflict. It is by examining the mindset that dictates why people act and think in a particular way.

Symbiosis (adjective: symbiotic)

The Oxford Illustrated Dictionary (1981) refers to 'symbiosis' as a noun, and is defined as an 'association of two different organisms living attached to one another (used especially of associations advantageous to both organisms)'. Using the ubuntu concept, and focusing on a construction project, 'symbiosis' is one of the four cardinal principles that make up the values of an African. Mbigi & Maree (1995) refer to this principle as 'the principle of interdependence'—the belief that collective co-operation of all stakeholders in any project can only be achieved by acknowledging interdependence.

Combination of the terms

The integration of the above terms is achieved by using the two equations below. The equations focus on the public building sector's general performance, in terms of the usual criteria of *time*, *cost*, *quality* and *utility*. The starting point in looking at performance is to accept the fact that the correct choice and use of the most appropriate CPS is one of the principal requirements for an efficient project management system. But selecting an appropriate CPS needs to be supported by good management, management that is responsible to both internal and external clients. In Africa, the appropriate way of dealing with internal clients is to apply the principles of 'ubuntu', 'obuntu' or 'utu' in addition to using an appropriate CPS.

$$\text{Selection of an appropriate CPS} \Rightarrow \text{balancing } (Q, C, T \text{ and } U), \tag{A1}$$

where CPS is construction procurement system, $\Rightarrow$ denotes will lead to, Q is quality, C is cost, T is time and U is utility.

$$\text{Balancing } (Q, C, T \text{ and } U) \text{ as in Equation 1} + \text{applying 'ubuntu' principles} = +P, \tag{A2}$$

where $+P$ denotes project success.

Equation (A1): Equation A1 is based on the argument that once a client is satisfied about the real need and feasibility of the building project within overall budgetary constraints, the instinctive reaction is to retain a consultant to help in the assessment of risk towards devising an appropriate CPS. The client

should decide how much risk to accept. No construction project is risk-free. Risk can be managed, minimized, shared, transferred or accepted. It cannot be ignored. The client who wishes to accept little or no risk should take different CPSs from the client who places emphasis on detailed, hands-on control.

The basic decision on the appropriate CPS to take should precede the preparation of the outline (project) brief, since it necessarily affects who shall assist with the design brief as well. That choice of an appropriate CPS must be determined by the nature of the building project and the clients' wishes over acceptance of risk. Such decisions are very difficult. There are a number of publications (e.g. Hughes, 1990, 1992; Masterman, 1992), which give detailed accounts of different CPSs, their risk distribution potential and merits and demerits of the same.

Once an appropriate CPS has been determined, the first stage of managing the project parameters (Q, C, T and U) has been reached. You now have a system with its associated project management structure, which will be partly able to manage the whole spectrum of dynamics associated with balancing the project parameters. *Why partly?* The second equation gives the answer to this question.

Equation (A2): For the selected CPS to lead to project success ($+P$), it is important to identify and understand the project client. In fact, there are many clients for a building project, e.g. a funding financial institution [external client (EC)], venture capitalist (EC), developer (EC), purchaser on completion (EC), the tenant (EC), and *in the current case, a public client (EC)—using tax payers money*, contractor [internal client (IC)] and subcontractors (IC) too, have different expectations of the project. Although profit may be a common desire, no one except the end user cares what is built. If the PM does not take it upon him/herself to assess the needs of all the building clients, especially the internal clients (ICs), who range from highly skilled to site cleaners, it is unlikely that anyone else will, and project success ($+P$) may not be achieved.

This raises many hard questions. Who are we building for, apart from the EC who sets the brief? How can the PM take account of other client's (ICs) demands? With who is the PM's building contract, and does this create a conflict of interests? The idea of the universal client (EC + IC) (e.g. in Rwelamila & Savile 1994) is not new, and nor is it impossible that we should be able to satisfy the universal client's demand. Focusing on the location of Botswana, there are two important facts that need to be considered. First, the majority of ICs are African; second, these ICs have, as part of their culture, a social survival strategy, which if challenged could make them feel threatened, and thus rebel against the project management through different ways to the detriment of the project.

According to Mbigi & Maree (1995), there are four cardinal principles, which are derived from the values of any African community. These are given an acronym MIST, Morality, Interdependence, Spirit of man and Totality, which are essentially based on 'ubuntu', 'obuntu' or 'utu'—literally translated as 'a person is a person'. This person (an African) is therefore entitled to unconditional respect and dignity.

The PM should understand the meaning of these four principles in order to manage the ICs. In other words, if the selected appropriate CPS is going to lead to project success, the ICs must feel part and parcel of the whole building project management system. Harmony, and symbiotic relationships, will depend on how the PM and his or her subordinates uses MIST to manage the ICs.

What is in MIST for the PM?

The principle of morality (M): the belief that no organization can attain its highest potential without touching its moral base. This is best expressed through a passionate living of the code of trust. The project and its management structure will lose credibility and effectiveness if there are indications of corruption in the project management system. If there is an indication to suggest that some members of the management team are involved in corrupt activities, e.g. diverting some project materials to the black market, favouring some labourers in various ways, outside the agreed principles, etc. The PM must declare his or her commitment to fair practices.

The principle of interdependence (I): the belief that the task of achieving success in the project requires the collective co-operation of all stakeholders in the enterprising community. This can only be achieved by acknowledging interdependence. Every worker from the PM to the unskilled operative cleaning the site yard is part of the project success formula, and any move to belittle any operative on the basis of qualification or position on the project management hierarchy will bring negative results to the project. This is the superiority of the Japanese firms because of their focus on stakeholder unity (Mbigi & Maree, 1995).

The principle of the spirit of man (S): the belief that the spirit of man recognizes that man is the creator and benefactor of all wealth creation. Every person is enti-

tled to unconditional respect and dignity. It does not matter if you are an engineer or a tea maker on site, you are all human beings first and your humanity deserves respect. The belief goes further to suggest that man is the purpose of all organizations and they must work in harmony with him or her in the spirit of service and harmony. In other words, a project is present to serve man. When it fails to do this, it ceases to exist. If the PM treats ICs as just cogs in the machine, he or she may create a situation where the operatives work in order to just make money for their livelihood and very little commitment to see the project successful.

The principle of totality (T): the belief that the task of making profit in a project is highly complex and involves the attention and continuous improvement of everything in the project, by every IC of the project. A project management system is made up of a number of variables. Therefore, a successful project requires a number of improvements by everyone in the project. The journey towards a successful project must start with little improvements. In such a process, every IC does his or her job and the PM relates to every IC, in terms of the improvements in universal standards, which include the project parameters and two additional 'ubuntu' standards, which are relationships and quantity—hence, the principle of totality rests on six universal standards of *relationships*, *quantity*, *quality*, *cost*, *timing* and *utility*. This is the essence of 'ubuntu', 'obuntu' or 'utu'—collective participation of every IC through freedom of enterprise is a precondition to the creation of harmonious and symbiotic relationships in a construction project. These six 'ubuntu' principles can simultaneously affect the project management issues of co-ordination, communication, competence, competitiveness and compassion.

Applying 'ubuntu' in Equation (A2) means applying MIST in managing the ICs. Any conscious or unconscious decision to neglect MIST principles will lead to poor project performance, because the human effort, which is responsible for using the CPS to balance the project parameters, will be frustrated and unable to be committed to the task in hand.

Is 'ubuntu' common and unique to Africa?

Although there is a limited amount of literature on African management and its metaphor that describes the significance of 'ubuntu', the available literature is clear on what 'ubuntu' means to the majority of Africans. According to Boon (1997), all the tribal peoples of southern Africa, and those of Bantu origin in Central, East and West Africa, come from a tradition that believes in 'ubuntu': morality, humanness, compassion, care, understanding and empathy. Simply put, it is the ethic and interaction that occurs in the extended family. Focussing on the other side of 'ubuntu', Mbigi & Maree (1995) further argue that in Afrocentric religion, no idea or situation can be transformed into reality unless there is a totally transformed human being driving it. They add that this person is normally called a spirit medium. The Western equivalent for this is a champion or a change agent.

Is 'ubuntu' *unique to Africa?* There are proverbs in which the philosophy of 'ubuntu' is very apparent among Bantu people. All these proverbs put emphasis on the reciprocity of kindness. Should one offer kindness, it is understood the individual may never be able to reciprocate. However, life's way is that one day someone, somewhere, will return this kindness. All 'ubuntu' based proverbs demonstrate the innate encouragement that all people give to those offering care, kindness, empathy, sharing and humanness. To a considerable degree, a Westerner's view of life, ethics and values are based on Greco–Roman philosophy entwined with Judaic and Christian religious beliefs (Boon 1997). The order in the universe as recorded by Aristotle and Plato continues to affect the Western approach to life. According to Boon (1997), it is here that one begins to see the most significant diversion from African thought (of ubuntu—*especially on humanism*). The Western philosophy of humanism, itself emanating from the Renaissance, is based on the Greco–Roman premise of man as a rational being. It intellectualizes the concept of humanity, and in so doing, makes it individual—something one can choose to follow if one accepts the rationale. According to Mbigi & Maree (1995) and Boon (1997), African 'ubuntu' does none of this. It simply exists. It is moral and good. It is emotional and deep, and people simply act in a way they intuitively know to be right. It is not something one chooses, and it is accepted as the way life is.

From the above, it is clear that 'ubuntu' is common to most parts of Africa, primarily to people of Bantu origin, who form the bulk of the African population and certainly to the majority of people within the SADC countries. Current developments in *partnering*, *team-working* and *other considerations of social–cultural factors that are playing an increasing role in the management of projects in the West* and currently filtering-in into Africa, and are based on Greco–Roman philosophy foundations. They cannot be equated with 'ubuntu', and hence the suggestion of including 'ubuntu' as a

project management parameter is unique to the procurement situation in the SADC construction industries.

PROJECT MANAGEMENT IN THE BOTSWANA AND OTHER SADC COUNTRIES PUBLIC BUILDING SECTOR

Botswana

It is purported that the dominant CPS in the Botswana public building sector is the conventional or traditional construction procurement system (TCPS). It follows a strictly sequential path of four phases: preparation, design, preparing and obtaining tenders and construction.

Briefly, the building project organization structure of this system is characterized by the appointment of a principal adviser, an architect (the PM), who leads the design team (the team may include structural, building services engineers, a landscape architect, etc.) which is assembled at his or her recommendation. The building project is designed and detailed up to a point where the various elements of the design can be taken-off and worked up into a bill of quantities or a schedule of rates. At this stage, the building contractor is invited to bid for the construction work and, if successful, is expected to start on site within a few days (quite often) with very little knowledge or understanding of the building he or she is to construct, and probably having made no acquaintance with the client for whom the building is to be produced. This project organization structure is normally formulated parallel with a standard project contract between the client and the building contractor. The contract defines what is to be built, the roles of the various parties concerned and the terms of the bargain between them. In so doing, it provides the framework of parameters balancing system. It specifies the client's requirements, it stipulates the measures to be taken to assure compliance and it states the remedies available to each party in the event of default.

The Botswana public building sector purports to use this project organization structure, and hence the framework of a project parameters balancing system in most public building projects, despite the basically transient and unique nature of various building projects. This is contrary to an increasingly stronger suggestion that organizational structures should be tailored to meet particular project needs (Barrie & Paulson 1978; Walker 1984; Hughes 1990; Rwelamila & Hall 1994). As will be demonstrated later, this underlines the nature of project performance problems in the Botswana public building sector.

Other SADC countries

The SADC countries include Botswana, South Africa, Tanzania, Zambia, Zimbabwe, Malawi, Lesotho, Swaziland, Namibia, Democratic Republic of Congo (DRC), Mauritius, Angola and Mozambique. Nine of these 13 countries were British colonies. These include Botswana, South Africa, Tanzania, Zambia, Zimbabwe, Malawi, Lesotho, Swaziland and Mauritius. Like Botswana, as discussed above, the other eight countries predominantly still use a standard form of building contract (for both private and public building works) that is identical to the UK Joint Contracts Tribunal (JCT) Standard Form, 1980 edition. The Process of design and construction within these countries follows the Royal Institute of British Architects (RIBA) outline plan of work. Like in Botswana, the process follows a strictly sequential path—in theory, a conventional or traditional construction procurement system is purported to be predominantly used. As will be discussed later, it could be strongly argued that the basic problems facing the Botswana public building sector are similarly facing the other eight SADC public building sectors.

THE CURRENT PRACTICE OF SELECTING PROCUREMENT SYSTEMS: A SURVEY

This section is devoted to reporting the results of an empirical survey to construction firm executives, site managers, trade managers and skilled operatives in Botswana, which was carried out in 1992. It also reports on five telephonic interviews and three face to face interviews with SADC Public Works Ministries officials on construction procurement, which were carried in 1997. A discussion of these results and their implications and relationship to the theory contained in Equations (A1) and (A2) will follow after this section.

Owing to the lack of space and for brevity sake, the statistical analysis of the results will be kept very simple, but retaining the logic of the results in relation with the established theme of this paper.

In general, the percentages associated with an opinion option are given, but where these results are misleading, this is explicitly stated. Hence, unless otherwise stated, where the term 'respondents' is used, it refers to item respondents as opposed to the overall response rate to the survey.

Description	CF ($N=369$)		CM ($N=123$)		SM ($N=492$)		TF ($N=615$)		ST ($N=2460$)	
	No.	%	No.	%	No.	%	No.	%	No.	%
Total actual sample	60	100	60	100	60	100	60	100	60	100
Total responses	30	50	35	58	28	47	32	53	25	42

Table 1 Response rates (Botswana)

CF, construction firm executives; CM, contracts managers; SM, site managers; TF, trade foreman; ST, skilled tradesman.

A questionnaire survey

The Botswana survey:

The number of respondents who replied by the due date, stipulated in the covering letter accompanying the questionnaires, was very good. A response rate of approximately 50% for each of the five groups canvassed was achieved. This is depicted in Table 1.

As reported above, the purported dominant CPS in the Botswana public building sector is the TCPS. This system is discussed in detail elsewhere (e.g. Franks 1984 and Rwelamila 1996). Because so little exists to confirm the general use of a TCPS, beside the extensive use of TCPS standard contract forms and traditional project management structures, it was necessary to examine the circumstances in which it is used in practice in the Botswana public building sector. The circumstances (statements) where the TCPS is likely to be successful as advocated by Franks (1984) and Hughes (1992), and as shown in Table 2, were tabulated and construction firm executives, contracts managers, site managers, trade foremen and skilled tradesmen were asked to indicate how true those statements were applicable to most of their public building projects undertaken within the last 6 years. The results are shown in Table 3.

Brief comments on Tables 2 and 3

- It is important to note that telephonic interviews to 10 of each of the five groups of the respondents were carried out (as a pilot study), 3 months prior to the main study. It was intended to get an indication of the dominant CPS and to test the respondents understanding of the TCPS.
- A 100% (50 respondents) response rate was received. This level of response is considered to be very good.
- All the respondents were purporting to use the TCPS in all their projects, a strong indication to suggest that there was very little understanding of what differentiates the TCPS from other construction procurement systems. Based on the researcher's experience in Botswana (the researcher worked in Botswana for 5 years before the study), it was important to avoid direct questions on the TCPS. The questionnaire focus was changed from direct reference to TCPS to the identification of TCPS by its major characteristics as indicated in Table 2.

From Table 3, it is clear that construction firm executives, contracts managers, site managers, trade foremen and skilled tradesmen are in agreement that, in most of their public building projects, the following TCPS characteristics apply:

- (A) the client commissions and takes responsibility for design of the works;

Table 2 Characteristics of the TCPS

A. The client commissions, and takes responsibility for the design of the works.
B. The design is complete at the time of selecting the contractor.
C. Prime cost sums, including nominated subcontractors do not form the major proportion of the contract sum.
D. The architect appointed by the client is adequately experienced to cope with the co-ordination of the design team, to lead the design effort, and to co-ordinate the interface between design and fabrication.
E. The client uses the quantity surveyor to plan and control the finance of the project, in conjunction with the architect.
F. The client requires the contractor selection process to be based upon the contractor's estimate of price and for the contractor to bear the risk of costs exceeding price.
G. The client reserves the right, via nomination, to select the subcontractors for certain parts of the work (but see C above).
H. An acceptable negotiated project contract form is used in order to ensure a fair and familiar distribution of risk.
I. The client does not know what else to do, and the consultants do not raise the choice of procurement method as an issue.

Source: Franks (1984) and Hughes (1992).

Table 3 Opinions regarding the characteristics of projects (%)

	True			More true than false			Difficult to say			More false than true			False		
P. Char.	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
A	100	90	85	—	—	—	—	10	15	—	—	—	—	—	—
B	—	—	—	—	—	—	—	—	—	—	—	5	100	100	95
C	100	85	80	—	—	—	—	15	20	—	—	—	—	—	—
D	—	—	—	—	—	—	90	20	15	—	10	5	10	70	80
E	100	80	90	—	—	—	—	20	10	—	—	—	—	—	—
F	100	100	100	—	—	—	—	—	—	—	—	—	—	—	—
G	100	100	95	—	—	—	—	—	5	—	—	—	—	—	
H	—	—	—	—	—	—	—	—	—	—	25	15	100	75	85
I	100	75	80	—	—	—	—	25	20	—	—	—	—	—	—

P. Char.	IV	V	IV	V	IV	V	IV	V	IV	V
A	98	100	—	—	2	—	—	—	—	—
B	—	—	—	—	5	—	—	—	95	100
C	88	90	—	—	12	10	—	—	—	—
D	—	—	—	—	40	30	—	—	60	70
E	100	100	—	—	—	—	—	—	—	—
F	95	100	—	—	5	—	—	—	—	—
G	85	100	—	—	15	—	—	—	—	—
H	—	—	—	—	—	—	—	—	100	100
I	65	70	—	—	15	—	—	—	20	30

P. Char., project characteristics; I, construction firm executives; II, contracts managers; III, site managers; IV, trade foremen; V, skilled tradesmen.

- (C) prime cost sums, including nominated subcontractors, do not form the major proportion of the contract sum;
- (E) the client uses the quantity surveyor to plan and control the finance of the project in conjunction with the architect;
- (F) the client requires the contractor selection process to be based upon the contractor's estimate of price and for the contractor to bear the risk of costs exceeding price;
- (G) the client reserves the right, via nomination, to select the subcontractor for certain parts of the work, without violating the requirements of characteristic; and
- (I) the client does not know what else to do, and the consultants do not raise the choice of procurement method as an issue.

While six TCPS characteristics apply in the majority of public building projects in Botswana, three TCPS principal characteristics do not apply:

- (B) the design is in most instances not complete at the time of selecting the contractor;
- (D) the architect appointed by the client is inadequately experienced to cope with the co-ordination of the design team, to lead the design effort, and to co-ordinate the interface between design and fabrication; and
- (H) a project contract form used is not normally negotiated in order to ensure a fair and familiar distribution of risk.

Interviews

The Tanzania, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland and Zambia survey:

A simple observation of the construction procurement regime within these countries, like in Botswana, supports the dominance of the TCPS based on the dominant project structure and contract documents. Two of the co-authors of this paper have practised in this region for more than 10 years and are in agreement with this observation.

The objective of this survey was to make a follow-up to the Botswana study and explore and identify if similar procurement problems facing the Botswana public building sector were faced in other SADC public building sectors.

Table 4 Question 1: The extent of use of CPSs in public building projects (%)

Country	TBPS	D&B	MC	CM	D&M	Other
Tanzania	99	1	—	—	—	—
Malawi	100	—	—	—	—	—
Mauritius	95	2	—	3	—	—
Swaziland	100	—	—	—	—	—
Zambia	98	—	—	—	—	2

TBPS, traditional building procurement system; D&B, design & build; MC, management contracting; CM, construction management; D&M, design and manage.
Tanzania (Ministry of Works, Communication and Transport); Malawi (Ministry of Works and Supplies); Mauritius (Ministry of Works); Swaziland (Ministry of Works and Construction); Zambia (Ministry of Works and Supply).

Table 6 Question 1: The extent of use of CPSs in public projects (%)

Country	TBPS	D&B	MC	CM	D&M	Other
South Africa	90	10	—	—	—	—
Mozambique	(Not able to assess the extent of use)					
Namibia	95	5	—	—	—	—

TBPS, traditional building procurement system; D&B, design & build; MC, management contracting; CM, construction management; D&M, design & manage.
South Africa (Ministry of Public Works); Mozambique (Ministry of Public Works and Housing); Namibia (Ministry of Works, Transport and Communication).

Tanzania, Malawi, Mauritius, Swaziland and Zambia telephonic interviews:
Telephonic interviews were carried out with senior technical officers of Public Works Ministries of the above countries. Two questions were asked and the results indicated in Tables 4 and 5 were received.

South Africa, Mozambique and Namibia interviews:
Face to face interviews were conducted by one of the authors to senior technical officers of the Public Works Ministries in the above countries. Two questions were put forward and the results indicated in Tables 6 and 7 were obtained.

Brief comments on Tables 4–7

- With the exception of Mozambique, the survey of public sector clients in Tanzania, Malawi, Mauritius, Swaziland, Zambia, South Africa and Namibia on the characteristics of their public building projects, produced similar and confirmatory patterns of information from each of the respondents. Each respondent showed a fairly high general level of agreement with the others on the characteristics, which are general to most public building projects. These are characteristics A, C, E, F, G and I: client commissions design, prime cost sums do not dominate, there is a traditional architect/Qs axis, contractor selection is based upon tendering (bidding), nomination of subcontractors is important to the client and there is absence of any other suggestions for alternative building procurement systems.
- Contrary to what is purported to be common knowledge that the typical traditional building procurement system is the dominant system in 10 (excluding Mozambique, Angola and DRC) of the SADC countries public sector, public sector clients in seven countries and Botswana contractors (Table 3) are in agreement that the dominant procurement system in the majority of SADC countries is the variant/hybrid version of the traditional building procurement system.
- The majority of respondents are in agreement that, for the majority of their projects, it is false to conclude that 'the design is normally complete at the time of selecting the contractor.' This strongly indicates that the majority of public building project designs are *incomplete at the time of selecting the contractor.* Furthermore, this strongly indicates that the selection of a contractor is based upon a provisional price, though in practice wrongly referred to

Table 5 Question 2: Opinions regarding the characteristics of projects (mean %)

Project characteristics	True	More true than false	Difficult to say	More false than true	False
A	100	—	—	—	—
B	15	—	—	—	85
C	80	5	10	—	5
D	10	—	—	—	90
E	100	—	—	—	—
F	100	—	—	—	—
G	85	15	—	—	—
H	—	—	5	—	95
I	90	—	10	—	—

in the contracts as 'a firm price'. Under this situation, it means that the client (employer) can not describe, with certainty, what it is that the contractor is being invited to carry out.

A BRIEF ANALYSIS AND SYNTHESIS OF FINDINGS

The section briefly discusses the significant results reported in the above section. Some findings are expounded by reference to the questionnaire and interviews results as a means of explanation and provision of further supporting evidence.

Each respondent group showed a fairly high general level of agreement with the others on the TCPS characteristics, which are general to most public building projects. These are characteristics A, C, E, F, G and I. The views expressed represent the opinion of those who commission public building projects and physically produce the work. Their opinions were compared with those established from the general perception as described in Section 3 and it could be argued that a more complete picture has evolved.

The majority of respondents were in agreement that, for the majority of their projects, it is false to conclude that 'the design is normally complete at the time of selecting the contractor' (B). This suggests that the majority of public building project designs in Botswana and the other seven SADC countries is incomplete at the time of selecting the contractor. Furthermore, this suggests that the selection of a contractor is based upon a provisional price, though referred to in the contract as 'a firm price'. Under this situation, the client can not describe with certainty what it is that the contractor is being invited to construct (from the documents available).

On the aspect of the architect being adequately experienced to cope with the co-ordination of the design team, to lead the design effort and co-ordinate the interface between design and fabrication, the majority of respondents were in agreement that this is not the case or it is difficult to say. A conclusion could be made from these results that, although the architect is contractually in-charge (client representative—and PM), the majority of Botswana contractors and Public Sector clients are not confident with the architect's role and his or her ability as a PM. Why are they not confident? The architect under the TCPS is required to supervise and co-ordinate the project teams. This is a very serious situation, which needs to be addressed if the project parameters are to be balanced.

SUMMARY OF FINDINGS AND THEIR IMPLICATIONS

One of the unique features of the TCPS is that it follows a strictly sequential path, where each of the four phases, as indicated in the early sections of the paper, can be viewed as separate entities and carried out, to a certain extent, in isolation of the others. The four phases are now used to summarize the findings and their implications to the project, with respect to the characteristics of the TCPS.

Summary of findings

Preparation. This is the inception phase of the building project, when the client establishes his or her needs in principle but not in detail, appoints the PM (architect) and selects and appoints his or her design team. This phase is covered under the TCPS characteristic A, which is supported by the majority of respondents as one of the characteristics of public building projects that seems to be adhered to.

Design. This phase sees the appointment of the design team who should develop the project through a series of subphases: briefing, feasibility, outline design, scheme design and detailed design with the scheme's

Table 7 Question 2: Opinions regarding the characteristics of project (mean %)

Project characteristics	True	More true than false	Difficult to say	More false than true	False
A	95	—	—	5	5
B	5	—	—	—	95
C	85	5	10	—	—
D	90	—	10	—	—
E	95	—	—	—	5
F	95	—	—	—	5
G	90	10	—	—	—
H	—	—	5	—	95
I	95	—	5	—	—

configuration and features becoming firmer at each subphase. According to Masterman (1992), progress during this phase should be carefully controlled and not unreasonably forced. Hastily prepared design details can lead to major misunderstandings and disputes during the construction stage, which may result in details and cost penalties (Rwelamila 1996). There is no evidence from the questionnaire results and interviews to suggest that 'designs are hastily prepared', but there is strong evidence to suggest that 'designs are normally incomplete' (TCPS characteristic B).

Preparing and obtaining tenders. Tender documentation on the TCPS normally consists of drawings, specification(s) and bills of quantities, with the latter document being prepared by a quantity surveyor (TCPS characteristic E, which seems to apply in Botswana and the other seven SADC countries) on the basis of measurements 'taken off' from the designer's drawings in order to provide each tenderer with a common base from which to price the bid. For the TCPS to operate successfully, and to minimize the financial risk to the client, it is imperative that the design is fully developed before the bills of quantities are prepared and tenders invited. If this is not done, as is clearly the case in Botswana and the other seven SADC countries (TCPS characteristic B not being adhered to), excessive variations and disruptions of works are likely to occur.

While selection of the contractor by limited competitive tendering should offer the assurance of achieving the lowest price for the project, the Botswana case seems to be the opposite and interview results from the other seven SADC countries support this situation; the respondents comments that TCPS characteristic B does not apply in their projects suggest that designer's drawings are rarely in sufficient detail to enable a bill of quantities to be prepared with any accuracy and the art of evaluating from the drawings the exact amount of work required must be a tall order to achieve.

Construction. When using the TCPS, an adequate period should be allowed for the contractor to plan the project thoroughly and organize the required resources. Undue haste in making a physical start on site, which seems to characterize the Botswana and the other seven SADC countries situation, may result in managerial and technical errors being made by both the design team and the contractor, which could lead to time overruns rather than a reduction of the construction period.

WHAT ARE THE IMPLICATIONS OF THESE FINDINGS?

The characteristics of the majority of public building projects in Botswana and the other seven SADC countries do not conform to the principal characteristics of the TCPS (characteristics B, D and H). There are very strong indications to suggest that the same applies in the other seven SADC countries. Masterman (1992) describes this situation as the 'application of variants of the TCPS'. Rwelamila (1996) refers to this situation as 'the application of TCPS hybrids'. The use of hybrids/variants of a particular procurement system is based on an appropriate selection of procurement systems. If a variant of a particular system is formulated through a systematic procurement approach and project stakeholders are aware of this fact, then the project management strategy will be formulated to fit into the framework of the variant/hybrid procurement system in use. The survey results support a different situation from the practitioners in Botswana and other the seven SADC countries. Hybrids/variants of the TCPS are used by chance and project management structures are maintained as if a typical TCPS is in use. This further suggests that the TCPS is basically used as a default system. In other words, the TCPS management structure and its respective contract arrangements are used merely because the clients and project consultants do not seem to consider the issue of selecting an appropriate procurement system.

The extensive use of default TCPSs in the Botswana and the other seven SADC countries public building sectors suggest that in the majority of projects, PMs do not have appropriate management structures to balance project parameters. This further suggests that the gap between an appropriate CPS and an inappropriate one (default CPS) remains a hidden challenge to the PM in trying to balance the project parameters.

The gap between an appropriate CPS and a default CPS lead us to speculate with a strong argument, that any of the PM's efforts to balance project parameters under this condition will automatically lead to more pressures, and the possibility of balancing project parameters is very remote indeed.

- The use of a default TCPS changes Equation (A1) to

$$\text{A default TCPS} \Downarrow \text{balance } (Q, C, T \text{ and } U), \qquad \text{(A3)}$$

where $\Downarrow$, denotes unable to.

A default TCPS (which means using a variant/hybrid of TCPS by chance) is unable to balance the

project parameters, and the PM's work is reduced to 'fire fighting'. Because the project organization structure falls short of what is required, the PM's ability to keep track of the IC's dynamics is lost. As a last resort, the PM keeps his or her focus on the ECs, and uses the ICs, as cogs in the machine and conflicts become a common phenomenon between ICs (operatives) and management.

It is important to note that a hybrid/variant of TCPS is not the same as a default TCPS. When a PM refers to a variant/hybrid of a particular procurement system, it is in most situations likely to mean that he or she is aware of the changes in certain characteristics of the particular typical procurement system. But when a particular procurement system is used by default, the users believe that a typical procurement system is the same as a default procurement system and all principles of a typical procurement system are applied on a default system.

- The inability to balance parameters due the use of a default TCPS changes Equation (A2) to

Unable to balance (Q, C, T and U) as in Equation (A3) $(-)$ 'ubuntu' $= -P$, (A4)

where $(-)$ 'ubuntu' means that the MIST principles are not applied (all the forces of harmony are lost), and $-P$ denotes project failure.

The fact that the PM does not have an appropriate CPS to balance project parameters, which leads him or her to 'fire fighting', suggests that he or she does not have time at all to deal with the human side of the ICs. The 'ubuntu' principles do not mean anything to the PM, and the majority of ICs interprets this as follows:

In the eyes of the ICs, the project has no moral base. Since the PM does not show any interest in the majority of ICs, the credibility of the PM is lost and the forces of effective strategic implementation in the project are lost—there is zero principle of morality.

The PM's inability to pull every project stakeholder together leads to a situation where the majority of ICs do not feel as a collective towards project success. The project collective becomes a myth and hence interdependence is lost in the eyes of the ICs, hence zero principle of interdependence.

The PM's attitude of trying all aspects of manoeuvring to turn the default CPS into a workable system—an impossible task, makes the PM and his or her subordinates to become aggressive. This leads to a situation where work and work only becomes a measure of every ICs contribution. The project becomes more important than those who are working on it, hence the ICs are no longer the purpose of the project. The stakeholders become servants of the project; hence the principle of the spirit of man is lost.

The PM's attitude towards ICs when trying to deal with the odds of a default CPS, becomes that of divide and manage—coming closer to those he or she feels are putting more effort to turn the project around, and those he or she feels that are not pulling themselves together become project eye sores. The essence of 'ubuntu', which is collective participation of every project stakeholder through freedom of enterprise becomes nothing in the project success equation. In short, the principle of totality or system thinking becomes an empty shell.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This paper has shown that in the majority of public building projects, no project characteristics are identified, hence inappropriate CPSs are used. This has led to a situation where the ICs are neglected and feel unimportant. This again has led to a situation where all their 'ubuntu' principals are lost and their commitment to the project lost—the harmony of foundation gets lost and hence the relationships between project stakeholders remain in the peripheral of the project domain.

The extraordinarily use of a TCPS as a 'default system' in most public building projects in the Botswana and the other seven SADC countries public building sectors shows that the sectors need a paradigm shift in their choices of CPSs.

Under this culture of default CPSs, there is no chance for harmonious and symbiotic relationships to be part of the Botswana and the other seven SADC countries public building sectors; project success will remain a dream until such time when the practice of selecting appropriate CPSs will become a norm.

There are strong indications to suggest that the Botswana and the other seven SADC countries public building sectors procurement practices are primarily based on the legacy of their colonial past. While the British have significantly moved from the TCPS, towards embracing other CPSs, Botswana and the majority of other SADC countries have remained predominantly using the TCPS (Rwelamila 1996). There has been very little change in procurement practices in Botswana since colonial days. There are strong indications to suggest that the same argument is relevant to the other two English speaking SADC countries.

Recommendations

In order to establish the basic principles of formulating appropriate CPSs, the Botswana public building sector and the other nine SADC countries should establish appropriate methods of selecting appropriate CPSs. There are a number of ways in which this can be achieved; these are discussed in detail by various authors listed in the reference section of this paper. As a starting point, a literature survey should be carried out as an audit of available methods of selecting appropriate CPS. This should be followed by intensive validation and checking exercises in order to establish methods that are appropriate to the Botswana or SADC public building sector.

It is recommended that work be done in establishing a standard but flexible contract document, which could be used for any selected CPS. This means that it will be possible to have a contract document, which could go along the above recommendation. For any selected CPS based on the actual tasks peculiar to the project, the contract document will be adjusted to deal with respective tasks.

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