Case Studies in South African Public Administration: A Review of Masters Dissertations from 2005 to 2012

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ABSTRACT

The study, on which this article reports, applied a conceptual framework to obtain an integrated and deeper understanding of case studies in South African Public Administration. For this purpose, a systematic content analysis and review was done of 23 masters dissertations that were completed between 2005 and 2012. The aim of the analysis was to understand the appropriateness of case studies for contributing to scientific knowledge. Following the application of the conceptual framework in the analysis of the selected dissertations, this article reports on the selection strategies, case study designs, research purpose, nature of data collection, nature of data analysis and the expected outcomes of typical case studies. This article contributes to the literature on Public Administration research methodology by enhancing an integrated and deeper understanding of, firstly, the concept and phenomenon 'case study' and, secondly, the appropriateness of case studies for theory building in Public Administration.

Keywords: Case study research, case selection strategy, public administration research, case study design, concept analysis.

Introduction

Case study research has shown to be widely used in Public Administration (Adams & White. 1994:574; Brower, Abolafia & Carr, 2000:373; Orosz, McKenna & Reding, 1997:1983; Perry & Kraemer, 1986:223; Zongozzi & Wessels, 2016:212-214) as well as in other related fields, such as political sciences (Gerring, 2004:341) and international business (Piekkari, Welch & Paavilainen, 2009:567), Van Thiel, author of a recent textbook on research methods in Public Administration, describes the case study as a "very intensive form of research" (Van Thiel, 2014:93). Despite this evident popularity of the case study, Gerring observes, "the case study method is held in low regard or is simply ignored" (Gerring, 2004:341). Several Public Administration authors have criticised its appropriateness for contributing to theory building (Adams & White, 1994:573; McCurdy & Cleary, 1984:49; Perry & Kramer, 1986:224). Kelman (2005:967), for example, uses the case study as an example of the relatively primitive research methods used in Public Administration.

The conflicting views on the appropriateness of case study research for Public

Administration have been raised amidst an apparent lack of a shared meaning of the concept 'case study' amongst scholars (Adams & White, 1994:573; Brower et al., 2000:371; Piekkari et al., 2009:567; Zongozzi, 2015:1). Flyvbjerg, in a noteworthy study on the case study, concludes that these misunderstandings "indicate that it is theory, reliability and validity that are at issue; in other words, the very status of the case study as a scientific method" (Flyvbjerg, 2006:221). It, thus, seems that, despite the popularity of the case study amongst Public Administration researchers, the scientific status of the case study is in dispute. The unresolved question is thus: Is the case study appropriate for making a scientific contribution to Public Administration and, if so, why?

In order to obtain some clarity on the meaning of 'case study' within the context of Public Administration research, as well as its appropriateness for contributing scientific knowledge to Public Administration, Zongozzi and Wessels (2016:229-230) propose a conceptual framework for an integrated and deeper understanding of the concept. This framework explains 'case study' as the appropriately designed study of a purposefully selected single instance of a phenomenon within a real-world public administration context (Zongozzi & Wessels, 2016:228). As such, a 'case study' has an idiographic focus (Wagstaff & Williams, 2014:8). The purpose of the study reported here was to use this conceptual framework (Zongozzi & Wessels, 2016:229-230) to obtain a deeper understanding of the appropriateness of the case study design for making a scientific contribution to the field of Public Administration. This article consequently reports on the insights gained from a review of the case

studies as reported in a selection of Public Administration masters dissertations

METHODOLOGICAL CONSIDERATIONS

This article reports on the use of the conceptual framework to obtain a deeper understanding of the appropriateness of Public Administration case studies (as reported on in scholarly articles, scholarly books, doctoral theses or masters dissertations) for making a scientific contribution. For this purpose, the researchers decided to use a single-case study design (Yin, 2009:52) by selecting South African masters dissertations reporting on case studies, during the period 2005 to 2012, as a typical instance of case studies in Public Administration (Zongozzi, 2015:51). The Nexus database, which is administered by the National Research Foundation (NRF), was used to identify those 43 dissertations whose titles contained the words "case study" (Zongozzi, 2015:51). Only 23 of those dissertations were available for a systematic content analysis (see Bauer & Gaskell, 2000:4; Carter & Little, 2007:1316: Druckman. 2005:5: Mathison. 2012:2; Mouton, 2001:165, for a discussion of systematic content analysis). Although this sample of dissertations excluded dissertations with titles not revealing the fact that they report on case studies in Public Administration, the researchers of this study hold the view that this exclusion does not inhibit the purpose of this study, namely to obtain a deeper understanding of the phenomenon of case study. The results of this study will, thus, be transferrable to Public Administration case studies in other settings, at other times (Graneheim & Lundman, 2004:110) to the extent that

those instances meet the defining attributes used for the concept 'case study' in the current study.

APPROPRIATENESS OF A CASE STUDY FOR MAKING SCIENTIFIC CONTRIBUTIONS

The purpose of this section is to construct a thesis statement on what is necessary for a case study to make a scientific contribution to the field of Public Administration. The conceptual framework for case studies in Public Administration, as proposed by Zongozzi and Wessels (2016:229), consists of three broad categories of complementary concepts, namely the defining attributes, the antecedents and the consequences of the concept 'case study' (Zongozzi & Wessels, 2016:215-229). This conceptual framework is used to link concepts to each other in order to construct a useful theoretical statement (Walker & Avant, 2014:179).

The defining attributes of a concept are those characteristics most frequently associated with the concept and the phenomenon to which it refers (Walker & Avant, 2014:168). Zongozzi and Wessels (2016:229) identify three defining attributes for the concept 'case study', namely a purposeful case selection strategy, an appropriate case study design and a case (see Figure 1 on the next page). The research purpose and the phenomena or units of analysis for Public Administration research have been identified as the antecedents of 'case study'. The antecedents are "those events or incidents that must occur or be in place prior to the occurrence of the concept" (Walker & Avant, 2014:173), while the consequences of 'case study' are "those events or incidents that occur because of the occurrence of the concept" (Walker & Avant, 2014:173). Appropriate methods and techniques for data collection and analysis, as well as scientific outcomes (e.g. theory building), have been categorised in this conceptual framework as the consequences of the concept 'case study' (Zongozzi & Wessels, 2016:229).

Since the publication of this framework, the researchers have revisited the logical structure of the framework. Considering that 'case study' is defined as "the appropriately designed study of a purposefully selected single instance of a phenomenon" (Zongozzi & Wessels, 2016:228), one may ask whether the word 'study' does not imply the collection and analysis of data or material. In our previous contribution (see Zongozzi & Wessels, 2016), we have argued that methods and techniques of data collection and analysis are attributes of all scholarly research and are not unique to case studies. We have subsequently decided to classify data collection and analysis as consequences of the concept. However, the implication of this decision is that the meaning of 'case study' has been limited from being a study to being a design. Considering our definition of 'case study', the inclusion of methods and techniques of data collection and analysis as defining attributes can be justified. If they are not defining attributes, the concept and its referring phenomenon will not be a study, but only a design. Although the use of appropriate methods and techniques for data collection and analysis are not unique to case studies, the simultaneous presence of all the defining attributes is necessary for the unique meaning of the concept (Walker & Avant, 2014:168). This conclusion is confirmed by the attention Yin (2013) and

FIGURE 1: The relationship between the antecedents, defining attributes and consequences of the concept 'case study' within a real-life context

Antecedents						
Research purpose	Explain Describe Explore	Describe Explore	Explain Describe	Explore	Explain	Explain Describe Explore
Phenomena/categories of units of analysis	Groups or collectives/organisations and institutions/social actions and events/social artefacts or cultural objects/interventions/constructs					



Defining attributes						
Case	Instance of a phenomenon/unit of analysis					
Purposeful case selection strategy	Typical	Extreme	Critical	Revelatory	Longitudinal	Replication logic
Appropriate research design	Single/multiple	Single	Single	Single	Single	Multiple
Appropriate data collection methods and techniques	Conceptual/qualitative/quantitative					
Appropriate methods and techniques for data analysis	Pattern matching/logic models/explanation building/time series Cross-case synthesis					



Consequences

Scientific contributions

Tested theory/Tested hypothesis/Theory building/Analytical generalisation/Understanding

Source: Authors

Gerring (2004) pay to appropriate methods for the collection and analysis of data in their discussions of case studies. We have consequently revised the conceptual framework presented in our previous contribution by moving "Use of appropriate data collection methods & techniques" (see Zongozzi & Wessels, 2016:229) and "Use of appropriate methods & techniques for data analysis" (see Zongozzi & Wessels, 2016:229) from being consequences to being defining attributes of the concept (see Figure 1 above).

The reservations about the appropriateness of a case study for contributing to Public Administration theory building (Adams & White, 1994:573; McCurdy & Cleary, 1984:49; Perry & Kraemer, 1986:224) postulates a possible breakdown in the conceptual relationship between the antecedents, the defining attributes and the consequences of this concept. The conceptual framework for the current study suggests a logical relationship between the antecedents, the defining attributes and the consequences of the concept. The relationship of these three categories of concepts, as illustrated in Figure 1, implies a direct link between the research purpose (an antecedent), the case selection strategy (a defining attribute) and the scientific outcomes (the consequences). The conceptual framework of the study reported here suggested that the scientific contribution (consequence) of a case study in Public Administration depends on the extent to which the defining attributes (the case, the selection strategy, the case study design, the data collection methods and techniques, and the methods and techniques for data analysis) were appropriate for achieving the research purpose (antecedent).

CASE STUDIES: DEFINING ATTRIBUTES, ANTECEDENTS AND CONSEQUENCES

This section provides a description of the defining attributes, antecedents and consequences of a selected number of South African Public Administration case studies. This description results from applying the conceptual framework (Figure 1 on the previous page) for an analysis of 23 masters dissertations that were reported in case study research (see Zongozzi, 2015, for the complete list of dissertations) during the period 2005 to 2012.

Defining Attributes

The analysis of the 23 dissertations revealed that all of the defining attributes of the concept 'case study' were present in the case studies. Those case studies could, therefore, be regarded as model cases of the use of the concept 'case study' (Walker & Avant, 2014:169). A case study has been shown to have five defining attributes (see Figure 1, page 263) namely:

- a case as a single instance of a phenomenon;
- a purposeful case selection strategy;
- an appropriate case study design;

- appropriate data collection methods and techniques; and
- appropriate methods and techniques for data analysis.

These attributes, which were also present in 23 studies, are described in the following paragraphs.

Cases as Instances of a Phenomenon

The first defining attribute of 'case study' may be regarded as the essence of the concept, namely "an intensive study of a single unit" (Gerring, 2004:352) of a larger set of (similar) units or phenomena (Gerring, 2004:352; Rule, Davey & Balfour, 2011:302). As a main argument regarding the so-called 'N question' (see Gerring, 2004), Gerring argues that a case study is distinguished from all other methods by "its reliance on covariation demonstrated by a single unit and its attempt, at the same time, to illuminate features of a broader set of units" (Gerring, 2004:343). As a case does not have the same characteristics as a sample of a population, the "classic N=1 research design ... is not logically feasible" (Gerring, 2004:344) in case studies. Consequently, a case study is not used to generalise from the specific instance to the phenomenon. However, a case can be:

- a person being an example of a larger group or collective (Gerring, 2004; Walshe, Caress, Graham & Todd, 2004);
- an intervention such as a programme, process or policy, similar to a specific category of interventions (Andrade, 2009; Baxter & Jack, 2008); or
- one organisation from a specific category of organisations or institutions (Walshe et al., 2004).

Adams and White (1994:573) provide a few examples of cases within the context of Public Administration in the United States of America, namely single-country agencies, state governments and a specific policy area of the federal government. The majority (60,9%) of cases, which were used in the dissertations analysis in the current study, were interventions. This preference for focusing on interventions is consistent with earlier studies analysing South African Public Administration scholarly articles and doctoral theses (Wessels & Thani, 2014:171). The distribution of cases, per categories of units of analysis, is provided in Table 1 below.

Purposeful Case Selection Strategy

The second defining attribute is that of a purposeful case selection strategy. Accepting the logic that a strategy follows a purpose, the choice of a case selection strategy (a defining attribute) may be determined by the relevant research purpose (an antecedent) which mandated the case study. This implies that a case selection strategy ensures that the

case is part of a category of units of analysis, which is implicit in the purpose statement (Flyvbjerg, 2006:230). The conceptual framework provides for six selection strategies, namely typical (Yin, 2009:48), extreme (Bengtsson, 1999:3; Yin, 2009:47), critical (Flyvbjerg, 2006:230), revelatory (Bengtsson, 1999:4; Yin, 2009:48), longitudinal (Yin, 2009:49) and replication logic (Bengtsson, 1999:3: Zongozzi & Wessels. 2016:217-219). A definition for, and an example of, each of these case selection strategies is provided in Table 2 on the following page. Although a purposeful case selection strategy is a defining attribute of Public Administration case studies, the choice of a case selection strategy may differ according to the research context and the antecedents applicable to the concept.

Nearly 35% of the 23 case studies used the typical case selection strategy, 17,4% the critical selection strategy, 13% the replication logic, and 4,3% each for the extreme and the sampling logic as selection strategy (Zongozzi,

TABLE 1: Distribution of South African Public Administration cases per category of unit of analysis

Category of unit of analysis	Example of case	Percentage (n=23)
Groups or collectives (e.g. regional integration institutions)	Organisational effectiveness of regional integration institutions: A case study of the East African community (Omoro, 2008).	17,4%
Organisations or institutions (e.g. public accounts committees)	Adopting the public accounts committee model for financial oversight in South African municipalities: A case study of the public accounts committee in the city of Cape Town (Botes, 2011).	13,0%
Social actions or events (e.g. systematic corruption)	Systemic corruption in public enterprises in the Harare Metropolitan area: A case study (Dube, 2011).	8,7%
Interventions (e.g. public service reform)	Public service reform in South Africa: An overview of selected case studies from 1994–2004 (Fraser-Moleketi, 2006).	60,9%
Total		100,0%

Source: Zongozzi (2015:57)

TABLE 2: Definitions and examples of case selection strategies

Case selection strategy	Definition	Example		
Critical case selection	Specifies a "clear set of propositions as well as the circumstances within which the propositions are believed to be true" (Yin, 2009:47).	The study begins with a hypothesis stating. "If internal processes are attended to, service delivery is affected" (Kaseke, 2011:5). This becomes a critical case, since the above department (the selected case) had already attended to problems relating to its internal processes (Kaseke, 2011:4).		
Extreme case	A rare or extreme phenomenon worth documenting and analysing (Bengtsson, 1999:3; Yin 2009). Such situations commonly occur in psychology, such as a specific rare injury or disorder (Yin, 2009:47).	Decentralisation in Namibia: A case study of the Hardap Regional Council (Tsamareb, 2006). Decentralisation is a rare intervention in the context of a country; thus, it is worth documenting and analysing.		
Typical / Representative	Representative or typical studies "capture the circumstances and conditions of an everyday or commonplace situation" (Yin, 2009:48). For example, a project amongst different projects or a manufacturing company that is believed to be typical of manufacturing companies in that industry.	Adopting the public accounts committee model for financial oversight in South African municipalities: A case study of the public accounts committee in the city of Cape Town (Botes, 2011)		
Revelatory	Scholars study a phenomenon that was previously inaccessible to social science research (Bengtsson, 1999:4; Yin, 2009:48).	None of the dissertations was identified to have used this strategy.		
Longitudinal	Studying the same case at two or more different points in time (Yin, 2009:49).	None of the dissertations was identified to have used this strategy.		
Replication logic in multiple case studies	Applies in the selection of multiple case studies, which involve two selection types: First, the researcher can select similar cases with similar predicted results. This process is known as literal replication (see Bengtsson, 1999; Yin, 2009). Choosing similar cases could imply that the contextual conditions are the same in all cases. Conversely, cases could be selected based on the assumption that they will produce contrasting results for theoretical replication purposes (Bengtsson, 1999:3; Yin, 2009:60).	Public service reform in South Africa: An overview of selected case studies from 1994–2004 (Fraser-Moleketi, 2006).		

Source: Zongozzi (2015:44–45)

2015:62-63). A lack of clarity in the methodological reporting in some of the dissertations made it impossible to classify the strategies used in 26,1% of the dissertations.

The analysis confirmed the direct link between the case selection strategy (a defining attribute) and the scientific outcome (a consequence) of the case study, as:

- 75% of the case studies, following a typical case selection strategy, resulted in theory building;
- 75% of the critical cases resulted in hypothesis testing, while
- the replication logic selection strategy resulted in either generalising or theory testing (Zongozzi, 2015:71).

A purposeful case selection strategy thus has been shown to be the defining attribute serving as a direct link between the purpose of a case study and the outcomes of that study (see Zongozzi & Wessels, 2016).

Appropriate Case Study Design

The third defining attribute of a 'case study' is an appropriate case study design, which could be either a single-case design or a multiple-case design (Baxter & Jack, 2008:548; Yin, 2009:47). The theoretical sampling, as opposed to representative sampling, addresses the N=1 problem. By following a single-case design, the current study focused on only one instance of a phenomenon to obtain scholarly insight into the phenomenon by comparing the specific instance with the phenomenon (Bengtsson, 1999:4; Yin, 2009:50; Zongozzi, 2015:23). A multiplecase study design, however, explores and compares the similarities and contrasts of two or more cases to identify their distinctive features as part of the specific phenomenon (Daymon & Holloway, 2011:119; Leedy & Ormrod, 2010:137).

No less than 82,6% of the masters dissertations analysed have reported on single case studies (Zongozzi, 2015:60). The low percentage of multiple case studies indicates a low preference among researchers for the comparative analysis of different,

but related cases. However, Eisenhardt and Graebner justify the choice of single cases as "opportunities to explore a significant phenomenon under rare or extreme circumstances" (Eisenhardt & Graebner, 2007:27).

Appropriate case study design also implies the selection of appropriate methods and techniques for data collection and analysis, which are discussed below (Rowley, 2002:18; Yin, 2013:13).

Appropriate Methods and Techniques for Data Collection

The conceptual framework (see Figure 1, page 263) implies that the appropriateness of methods and techniques for data collection are determined by the purpose of the case study, the nature of the case as well as the design within the context of Public Administration research. The analysis of the selected dissertations revealed a relatively even distribution between the application of mixed methods (52,2%) and pure qualitative methods (47,8%). The techniques included the reading of documents (65,2%) as well as involving human participants through interviews (87%), focus groups (21,7%) and surveys (8,7%) (Zongozzi, 2015:65). The preference for techniques that involve human participants through either interviews or surveys, is substantially higher than is revealed in studies that are done on scholarly articles and doctoral theses (Wessels & Thani, 2014:176-177). However, the preference for using secondary data (e.g. data not collected or compiled for the purpose of the specific case study project), such as official documents and archives as sources, resembles the preferences in the studies reported on by Wessels and Thani (2014:176-177).

Appropriate Methods and Techniques for Data Analysis

While the methods and techniques for data collection in case studies are much like the methods and techniques used in non-case study Public Administration research, the analysis of the selected dissertations revealed a preference for data analysis methods and techniques that relate directly to the distinctness of case studies. Table 3 on the next page provides a summary of each of these techniques. While most the studies (52,2%) applied the pattern-matching technique (see Gillham, 2010; Yin, 2009), other techniques, such as statistical modelling (13%), logic modelling (13%), explanation building (8,7%), time series (8,7%) and crosscase synthesis (4,3%), were also applied (Zongozzi, 2015:67).

Antecedents

The antecedents constitute the second category of concepts in the framework for the concept 'case study'. Antecedents refer to "those events or incidents that must occur or be in place prior to the occurrence of the concept" (Walker & Avant, 2014:174). Two antecedents were identified for the concept 'case study', namely research purpose (Yin, 2009:8-10) and units of analysis (Gerring, 2004:342; Rule et al., 2011:302; Stake, 1995:xi). Although research purpose and units of analysis can be regarded as attributes of research, in general, they are not defining attributes of 'case study' as a concept or phenomenon. However, the review of scholarly literature on case study confirmed that for a 'case study' to occur, a research purpose and unit of analysis needs to be in place (Leedy & Ormrod, 2010:182; Yin, 2009:8-10).

Research Purpose

A review of South African Public Administration research has shown that research purpose statements are directly associated with the choice of research designs and the subsequent relevance of the research results (Wessels & Thani, 2014:171-173). Similar associations between research purpose and case study design have been reported by Yin (2009:9,50), Kohn (1997:3) and Leedy and Ormrod (2010:182). The concept 'case study', as well as the practice of case study research, will evidently not exist in the absence of the antecedent 'research purpose'. Regarding the current study, it was, in some instances, difficult for the researchers to identify the research purpose from the analysed Public Administration dissertations due to a lack of clarity in the texts (Zongozzi, 2015:58). However, the content analysis revealed a range of purposes, which can be categorised as follows (Zongozzi, 2015:59): exploratory (30,4%), descriptive (8,7%), explanatory (13,0%), evaluating (43,5%), and reflecting (4,3%). A closer reading of the dissertations revealed that the research purposes of those case studies that indicated their purpose as evaluating were, in fact, descriptive, resulting in the case studies with a descriptive purpose being 52,2%. This percentage is relatively comparative to the findings of earlier studies where 49,6% of scholarly articles and 50% of doctoral theses reported on research with a descriptive purpose (Wessels & Thani, 2014:173).

Units of Analysis

The units of analysis (see Table 1, page 265) that served as antecedents for both the concept as well as the phenomenon of the case studies, which were analysed in the current study, were typical Public Administration

TABLE 3: Methods and techniques for data analysis

Method/Technique	Explanation	Example
Pattern matching	Comparing an empirically-based pattern with a predicted one (Gillham, 2010:82; Yin, 2009:136).	The study "analyse[s] for patterns in observations through the entire data collection phase" (Kaseke, 2011:64) to match the standards of the studied case against those envisaged by the Service Delivery Improvement Plan (SDIP) (Kaseke, 2011:19-27).
Logic models	Complex chain of events "over an extended period of time" (Yin, 2009:149).	The study observed the researched decentralisation process against the decentralisation implementation plan with an instrument meant to guide through the various implementation phases (Tsamareb, 2006:23-25) as it represents the theoretically predicted implementation process (Yin, 2009:149).
Explanation building	A special type of pattern matching aimed at analysing data by building an explanation about the case (Yin, 2009:141).	"When analysing data, one has to go through the process of identifying themes and describing what has been found during the observation and interviews. Once the questionnaires are completed, the readings will be done for the purposes of analysis. Rajit (2004:15) states that data analysis is at the core of the aim, as it enables one to drive a description on the essential feature of a specific experience" (Baloyi, 2012:10).
Time series	Matching observed (empirical) trends with the theoretically significant trend as specified earlier (Yin, 2009:144–148).	"[T]he research approach will be that of a single case, which comprises the public service transformation and reform initiative, as embodied in three specific areas, i.e. organisational culture, structuring of the state and the composition and profile of public service employees. The specific life-history phase that it covers is the period 1994-2005" (Fraser-Moleketi, 2006).
Cross-case synthesis	Uses multiple cases. Creating word tables displaying data from the individual cases per some uniform framework. Argumentative interpretation (Yin, 2009:160).	"It is presumed that the intention for establishing the committee was that it should function in a manner like public accounts committees elsewhere in the world, or at least in South Africa" (Botes, 2011:61). "The next step was to compare the two sets of findings with one another to determine the degree to which the findings coincided" (Botes, 2011:66).

Source: Zongozzi (2015:46-47)

units of analysis. As in previous studies on South African Public Administration research (Wessels & Thani, 2014:171), most of the cases were instances of units of analysis,

which were categorised as interventions. Examples of interventions, which served as antecedents for case studies reported in these dissertations, were service delivery, local government reforms, housing delivery, housing policy and the management of HIV/AIDS in the workplace (Zongozzi, 2015:100-101). Although a unit of analysis is not defining an attribute of the concept 'case study', it is, due to its direct relationship with the defining attribute 'case', a necessary condition for the concept 'case study' to occur.

Consequences

'Consequences', as the third category of concepts in this conceptual framework, refers to those "events or incidents that occur because of the occurrence of the concept" (Walker & Avant, 2014:173) and phenomenon to which the concept refers. For the current study, the consequences of this concept and its occurrence are expected to be evidence of scientific contributions to Public Administration (Figure 1, page 263).

Scientific Contributions

The conceptual framework (Figure 1, page 263) provides different categories of scientific contributions of case studies, namely theory building, tested theory, tested hypothesis, generalised theory, analytical generalisation and replication. Eisenhardt and Graebner show that theory building from case studies "is an increasingly popular and relevant research strategy" resulting in "fresh theory that bridges well from rich qualitative evidence to mainstream deductive research" (Eisenhardt & Graebner, 2007:31).

In the present study, systematic content analysis revealed that the consequences of the majority of the selected case studies (56,5%) met the characteristics of theory or

explanation building. While critical realists have argued for the use of case studies for theory testing to confirm or disconfirm a specific theory (Piekkari et al., 2009:271), the content analysis has shown that 13% of the case studies resulted in the testing of theories. One of the general concerns about the scientific appropriateness of case studies relates to a perception of a case study as an effort to generalise from a single case to a large population of cases (Yin, 2013:325). Yin, however, refutes this concern by emphasising that the preferred manner of generalising from case studies "is likely to take the form of making an analytic or conceptual generalisation, rather than of reaching for a numeric one" (Yin, 2013:328). The content analysis for the current study showed that 13% of the studies aimed at theoretical generalisation as understood by Yin (2009), Flyvbjerg (2006) and Van Thiel (2014). Tested hypotheses, as a consequence of case study research, have shown to be something different from "large-scale hypothesis testing" (Eisenhardt & Graebner, 2007:26). Gerring articulates the advantage of the so-called fuzziness of case studies, especially in the exploratory stages, for testing "a multitude of hypotheses in a rough-and-ready way" (Gerring, 2004:350). No less than 17.4% of the case studies analysed had resulted in tested hypotheses. Although content analysis could identify the characteristics of the different categories of scientific contributions, the quality of these outcomes was not assessed.

While the analysis of the dissertations confirmed the value of case studies for contributing to scholarly knowledge, it simultaneously revealed that, among the masters candidates, there was inadequate "familiarity

with the theoretical literature on case study strategies" (Zongozzi, 2015:62). Considering the long-standing concern about the ability of case studies to contribute to theory building (Houston & Delevan, 1990:678; Perry & Kraemer, 1986:224), it is noteworthy that the current study confirmed that Public Administration case studies could contribute to trustworthy, scholarly knowledge. Furthermore, the analysis has revealed a strong association between the nature of these outcomes and the case selection strategies (Zongozzi, 2015:71-72).

Conclusion

The study, on which this article reported, set out to use a conceptual framework for understanding the appropriateness of case studies in Public Administration research for contributing to scientific knowledge. Consequently, a single-case study design was used to analyse a selection of Public Administration masters dissertations reporting on case studies during the period 2005 to 2012. The analysis was done according to a conceptual framework which was developed to understand the case study in the context of Public Administration research (Figure 1, page 263). The conceptual framework has shown that a case study is an appropriately designed study of a purposefully selected single instance of a phenomenon. Furthermore, the framework identified two antecedents, namely research purpose and phenomena (categories of units of analysis) as necessary conditions for 'case study' to exist as a concept. The current study revealed that most of the case studies had a descriptive research purpose as antecedents and a public administration intervention as phenomenon.

The appropriateness of a case study for making a scientific contribution is determined by the nature of the case, the case selection strategy, the research design as well as the methods for data collection and analysis. While the case selection strategies. which were followed in the case study dissertations, have shown to be strong predictors of the nature of the scholarly outcome of a case study, the absence of reporting on this matter in 26,1% of the dissertations may not only be an indication of a possible lack of methodological competence amongst researchers, but may have an influence on the quality of the scholarly outcomes of a case study. The methodological competence of researchers, although not included in the conceptual framework, is evidently an integral part of the scholarly context of any 'case study'.

By improving and using the conceptual framework for understanding case studies within the context of Public Administration research, this article contributes to the literature on Public Administration research methodology, in general, by providing clarity on the meaning of the concept 'case study'. While some scholars may still criticise the suitability of case studies for contributing to trustworthy Public Administration knowledge, the study reported here provided a deeper understanding of the consequential relationship between the antecedents and the unique combination of defining attributes of 'case study', making trustworthy Public Administration knowledge possible. Although this relationship does not guarantee trustworthy knowledge, the current study has shown that case study research is appropriate for contributing to trustworthy knowledge in Public Administration. Further research is necessary to fully understand the influence of the methodological competence

of researchers on the expected scientific contribution of case study research.

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