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STRATEGIC REAL ESTATE DEVELOPMENT: MIXED METHOD USING SEQUENTIAL EXPLANATORY STRATEGY – RESEARCH METHODOLOGY

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Abstracts

Strategic Real Estate Development (Strategic RED) is the contemporary framework that integrate both Resorce-based View (RBV) and Industrial Organization (IO) paradigm. Strategic RED have many complex variables and indicators, to test the hypotheses need a mix method, combination of QUANTITATIVE and qualitative methods, because the results of the first quantitative study needs to be deepened with qualitative study. The research design using sequential explanatory strategy, This model of combination research give more higher weight to the use of quantitative research methods. This mixed sequential explanatory design first examined the relationships between environment riks, core competence, competitive strategy, competitive advantage, and organizational performance. 200 real estate companies will asked the hypotheses and analyze with partial least square technique in the quantitative design. In a second phase of the study, further exploration of result of relationships between contributing variables was explored through qualitative semi-structured interviews with CEO, Senior Manager, and Expertist in real estate development. Interviews were recorded, transcribed, and then analyzed for themes.

Conceptual paper

Keywords: *Mix Method Research, Sequential Explanatory Design, Real Estate Indonesia*

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Introduction

The arguments of mixed methods in business management research have continued over recent decades. These arguments focus on the consistence and relevance when applying different methods with different philosophical paradigms in a single research study. In fact, one study can follow different research styles. As pragmatists postulated the compatibility of the research, the mixed methods are used to achieve the complementary results by using the strengths of one method to enhance the other one in a single study. In social science, mixed method can be used to refer to the combination of both quantitative and qualitative data sources in a single study. Creswell (2013) suggested a combination method study "is one in which the researcher uses multiple methods of data collection and analysis". These methods may be drawn from within methods approaches, such as different types of quantitative or qualitative data collection strategies, for example a survey and an experiment. Alternatively, it may be between methods basing on quantitative and qualitative data collection procedures, for instance a structured interview and a survey questionnaire (Abro et al, 2015: p. 104-105)

Mixed methods research has now become established as a legitimate methodological choice and is utilised by many academics and researchers from across a variety of discipline areas. However, there would appear to be no one single definition of mixed methods as pointed out by Thurston *et al.* (2008, p. 3). "*Mixed methods studies can either combine methods from different paradigms or use multiple methods within the same paradigm, or multiple strategies within methods*". The *Journal of Mixed Methods Research* (2006), in its call for papers defines mixed methods as "*research*

in which the investigator collects, analyses, mixes, and draws inferences from both quantitative and qualitative data in a single study or a program of inquiry". Creswell and Plano Clark (2007, p. 5) define mixed methods as follows:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone.

Creswell and Plano Clark (2007) mapped a brief history of mixed methods research and its evolution to date and have posited four, often overlapping, time periods in the evolution of mixed methods. These four time periods are the: formative period (1950s-1980s); paradigm debate period (1970s-late 1990s); procedural development period (late 1980s-2000) and; the advocacy as a separate design period (2000+). Cameron and Molina-Azorin (2014, p. 14-15).

Generally, there are some points of view that explain why both quantitative and qualitative methods should be combined in a single study. Prevalently, in current literature there are two main reasons for the combination of qualitative and quantitative methods in a single study that are gaining a more complete understanding of the phenomenon and achieving complementary results by using the strengths of one method to enhance other one. Furthermore, the significance of combination is that by combining methods in the same study, the researchers can partially

overcome the deficiencies or biases that arise from one method. In other words, each method has its own weakness or disadvantage, for instance, a quantitative research method may be unable to capture the inner meaning of the research problem, whilst a qualitative method may miss the importance of the objective issues that have influences on the final results of the study.

Mix Method Design for Strategic Real Estate Development Research

Creswell suggested three models of combination of research designs in social science (Creswell, 2013). In detail, the first model relates to the two-phase design approach in which the researcher proposes to carry out a separate qualitative phase of the study together with a separate quantitative phase of study. The second model concerns the dominant-less dominant design. In this design, the researcher presents a study within a single dominant paradigm with one small component of overall study coming from the alternative paradigm. In other words, the researcher use two methodologies in one single study, but one is dominant and the other is less dominant. The final model design is the mixed-method design. This design requires a high degree of mixing paradigms. The researcher can mix different perspectives from the qualitative and quantitative paradigms at all methodological steps in the research. These paradigms can be mixed in the introduction, literature review and research question Harrison and Reilly (2011: p. 7-8)

There are two main factors which can help determine the various types of mixed methods design (Morse 1991; Morgan 1998; Tashakkori and Teddlie 1998; Creswell 2003; Onwuegbuzie et al. 2009):

- Priority/weight/emphasis of approaches. In a mixed methods study the researcher can give the same priority, weight or status to the quantitative and qualitative aspects (equal weight designs), or alternatively may give greater weight to one of them (different weight designs).
- Implementation of data collection/time orientation. This refers to the order in which the researcher collects quantitative and qualitative data. The two options are collecting information at the same time (simultaneous, concurrent or parallel designs) or obtaining data at different points (sequential or two-stage designs).

The way in which these two factors are combined will determine the resulting design. The notation proposed by Morse (1991) is useful for representing the different possible designs. In her system the abbreviations “quan” and “qual” are used to represent the quantitative and qualitative parts, respectively. When one method has greater weight than the other the former is shown in capitals letters (QUAN, QUAL), while the latter is written in lower case (quan, qual). Furthermore, the symbol “+” is used to indicate a simultaneous design, whereas the arrow “→” refers to a sequential design. Therefore, the various combinations of data collection strategy and priority produce four blocks that give rise to nine mixed methods designs (Johnson and Onwuegbuzie 2004):

- Equal weight, simultaneous: (1) QUAL + QUAN.
- Equal weight, sequential: (2) QUAL → QUAN; (3) QUAN → QUAL.
- Different weight, simultaneous: (4) QUAL + quan; (5) QUAN + qual.
- Different weight, sequential: (6) qual → QUAN; (7) QUAL → quan; (8) quan → QUAL; (9) QUAN → qual.

As regards the purpose of conducting mixed designs by integrating different types of data in the same study, several potential reasons have been noted by various authors (Greene et al. 1989; Morgan 1998; Creswell 2003). Two of the most widely stated reasons are triangulation and complementarity. The main aim of triangulation (Jick 1979) is to achieve a convergence of the results obtained via the quantitative and qualitative approaches, such that these results are more reliable. What is sought, therefore, is a corroboration or correspondence of results obtained through different methods. Regarding complementarity, the main objective is to clarify or illustrate the results obtained with one method by also applying the other. In this case the designs used are usually sequential.

This study use sequential explanatory strategy. Sequential Explanatory Strategy in mixed methods research is characterized by the collection and analysis of quantitative data in a first phase followed by the collection and analysis of qualitative data in a second phase that build on the result of initial quantitative results (Creswell, 2009). A QUAN → qual design, whereby the qualitative part may help to evaluate and interpret the results obtained from the main quantitative study. In this purpose of mixed methods designs may be to enable expansion, the quantitative part of a study may focus on relationship of variables of strategic real estate development, while the qualitative analyze of quantitative results for theory development.

Sequential Explanatory Research Design combination models are shown in Figure 1. This model is called sequential explanatory because after proving the next sequence is deepening.

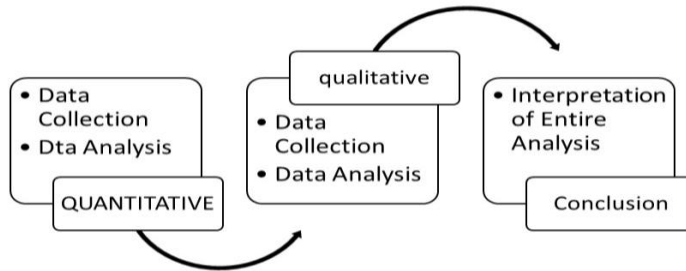


Figure 1. Sequential Explanatory Research Design (Source: Author)

The model of combination research give more higher weight to the use of quantitative research methods. Based on the figure 1, in the early stages of research in data collection and analysis both using quantitative methods, and followed by qualitative methods. Data collection and analysis for the two methods is carried out separately, but made continued. This method is used because I think the results of the first quantitative study needs to be deepened with qualitative study. The combination of the two method data connecting the results of the first phase and second phase of the study. Step-by-step this research process by sequential explanatory models shown in figure 2.

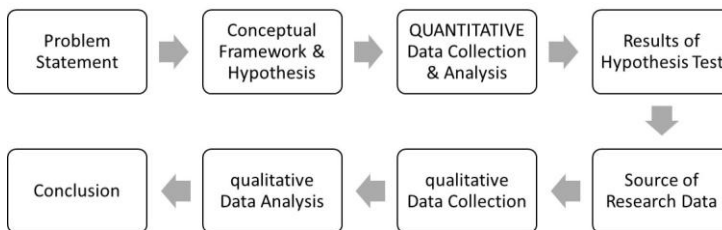


Figure 2. Research Process (Source: Author)

Based on figure 2 The combination of research conducted to answer the problem statement of quantitative research and the problem formulation of qualitative research that is result of the hypothesis test. So, qualitative research complement and reinforce the conclusion.

Strategic Real Estate Development Variables & Indicators for PLS - SEM

The popularity of structural equation modeling (SEM) has grown out of the need to test complete theories and concepts. Much of SEM's success can be attributed to the method's ability to evaluate the measurement of latent variables, while also testing relationships between latent variables. Although the initial application of this method embraced a covariance-based approach (CB-SEM), researchers also have the option of choosing the variance-based partial least squares technique (PLS-SEM).

PLS is an SEM technique based on an iterative approach that maximizes the explained variance of endogenous constructs. Unlike CB-SEM, which aims to confirm theories by determining how well a model can estimate a covariance matrix for the sample data, PLS-SEM operates much like a multiple regression analysis. This characteristic makes PLS-SEM particularly valuable for exploratory research purposes:

PLS is primarily intended for research contexts that are simultaneously data-rich and theory-skeletal. The model building is then an evolutionary process, a dialog between the investigator and the computer. In the process, the model extracts fresh knowledge from the data, thereby putting flesh on

the theoretical bones. At each step PLS rests content with consistency of the unknowns.

While CB-SEM is the more popular method, PLS-SEM has recently received considerable attention in a variety of disciplines including marketing, strategic management, management information systems, operations management, and accounting. Much of the increased usage of PLS-SEM can be credited to the method's ability to handle problematic modeling issues that routinely occur in the social sciences such as unusual data characteristics (e.g. nonnormal data) and highly complex models.

PLS-SEM provides numerous advantages to researchers working with structural equation models. Given the popularity of CB-SEM, the use of PLS-SEM often requires additional discussion to explain the rationale behind the decision ([9] Chin, 2010). As our meta-analysis of PLS-SEM review studies has shown, the most prominent justifications for using PLS-SEM are attributed to:

- nonnormal data;
- small sample sizes; and
- formatively measured constructs (Table I [Figure omitted. See Article Image.]).

Nonnormal data. Data collected for social science research often fails to follow a multivariate normal distribution. When attempting to evaluate a path model using CB-SEM, nonnormal data can lead to underestimated standard errors and inflated goodness-of-fit measures. Fortunately, PLS-SEM is less stringent when working with nonnormal data because the PLS

algorithm transforms nonnormal data in accordance with the central limit theorem. However, the caveat to PLS-SEM providing the end-all solution to models using nonnormal data is twofold. First, researchers should be aware that highly skewed data can reduce the statistical power of the analysis. More precisely, the evaluation of the model parameters' significances relies on standard errors from bootstrapping, which might be inflated when data are highly skewed. Second, because CB-SEM has a variety of alternative estimation procedures, it may be problematic to assume that PLS-SEM is the automatic choice when considering data distribution.

Small sample size. Sample size can affect several aspects of SEM including parameter estimates, model fit, and statistical power. However, different from CB-SEM, PLS-SEM can be utilized with much smaller sample sizes, even when models are highly complex. In these situations, PLS-SEM generally achieves higher levels of statistical power and demonstrates much better convergence behavior than CB-SEM. A popular heuristic states that the minimum sample size for a PLS model should be equal to the larger of the following:

- ten times the largest number of formative indicators used to measure one construct; or
- ten times the largest number of inner model paths directed at a particular construct in the inner model

Formative indicators. The central difference between reflective and formative constructs is that formative measures represent instances in which the indicators cause the construct (i.e. the arrows point from the indicators

to the construct), whereas reflective indicators are caused by the construct (i.e. the arrows point from the construct to the indicators). While both, PLS-SEM and CB-SEM can estimate models using formative indicators, PLS-SEM has received considerable support as the recommended method. Because analyzing formative indicators with CB-SEM often leads to identification problems, it is not uncommon for researchers to believe that PLS-SEM is the superior option. However, formative indicators should be approached with caution when using PLS-SEM. Researchers should be aware that the evaluation of formatively measured constructs relies on a totally different set of criteria compared to their reflective counterparts. Prior PLS-SEM review studies have criticized the careless handling of formative indicators and researchers should apply the most recent set of evaluation criteria when examining the validity of formatively measured constructs.

When applying PLS-SEM, researchers need to follow a multi-stage process which involves the specification of the inner and outer models, data collection and examination, the actual model estimation, and the evaluation of results. In the following, this review centers around the three most salient steps:

- model specification;
- outer model evaluation; and
- inner model evaluation.

The model specification stage deals with the set-up of the inner and outer models. The inner model, or structural model, displays the relationships between the constructs being evaluated. The outer models, also known as the measurement models, are used to evaluate the relationships

between the indicator variables and their corresponding construct. Once the inner and outer models have been specified, the next step is running the PLS-SEM algorithm, based on the results, evaluating the reliability and validity of the construct measures in the outer models. By starting with the assessment of the outer models, the researcher can trust that the constructs, which form the basis for the assessment of the inner model relationships, are accurately measured and represented. When evaluating the outer models, the researcher must distinguish between reflectively and formatively measured constructs. The two approaches to measurement are based on different concepts and therefore require consideration of different evaluative measures. Reflective indicators constitute a representative set of all possible items within the conceptual domain of a construct. As a result, reflective items are interchangeable, highly correlated and capable of being omitted without changing the meaning of the construct. Reflective indicators are linked to a construct through loadings, which are the bivariate correlations between the indicator and the construct.

According to Chen and Khumpaisal (2009) and Rymarzak & Sieminska (2012), the uncertainty associated with the risk of industrial environment in all phases of real estate development, these risks can occur at this stage of the feasibility study, design, tendering, construction, or marketing or even during the handover period. On the demand side, factors that influence the location's attractiveness from a market perspective for the product, information, or service include the number of consumers, their purchasing power, and transportation between consumers and the site. The supply-side factors are determined by the location's conditions that allow the specific business to be conducted, which directly or indi-

rectly impact the size of investment outlays in the construction phase as well as the firm's net profitability level at this location. In this research business environment variables are operated as seen on figure 3.

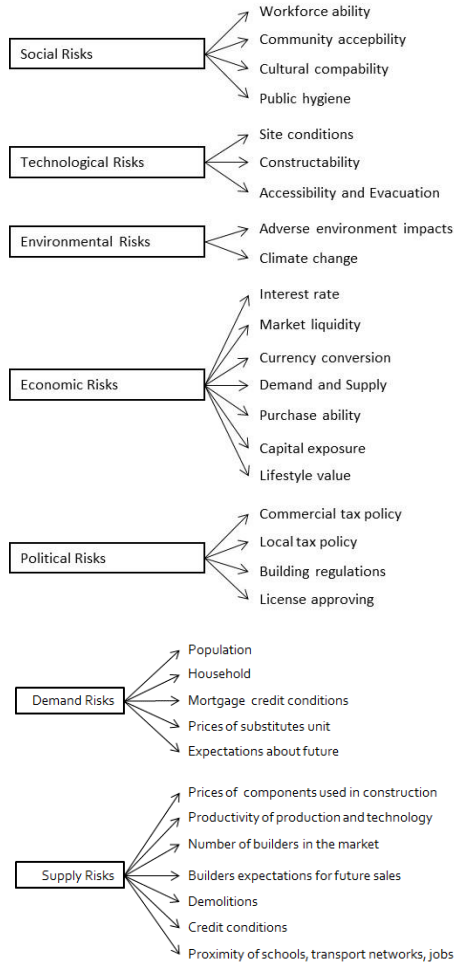


Figure 3. Business Environment Sub Variables and Indicators (Source: Author)

According to Wei, et al. (2007), Hewlett and Kaufmann (2008), and Zhang et al (2010). Core Competence variables are operated as seen on figure 4.



Figure 4. Core Competence Sub Variables and Indicators (Source: Author)

Adapted from Porter (2004), Jing-min et al (2010), and McDonagh et al (2009) Competitive Strategy variables are operated as seen on figure 5.



Figure 22. Competitive Strategy Sub Variables and Indicators (Source: Author)

According to Sigalas et al (2013) and Krumm and Vries (2003) Competitive Advantage variables are operated as seen on figure 23.

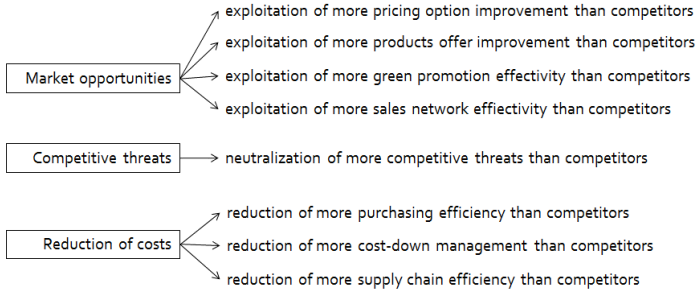


Figure 5. Competitive Advantage Sub Variables and Indicators (Source: Author)

Based on BSC technique and Lindholm & Nenonen (2006) Organization Performance variables are operated as seen on figure 6.

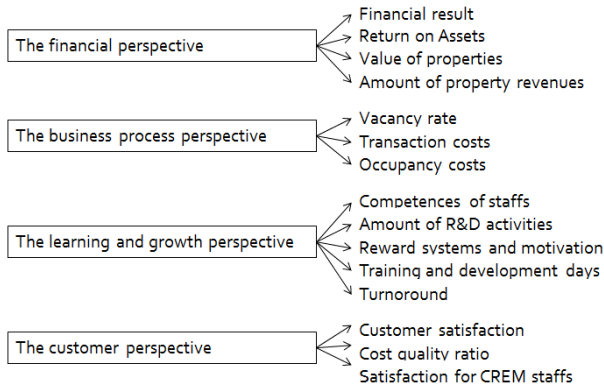


Figure 6. Organization Performance Sub Variables and Indicators (Source: Author)

Grounded Theory Research of Strategic Real Estate Development for Theory Development.

There are several major characteristics of grounded theory that might be incorporated into a research study:

- The researcher focuses on process or an action that has distinct steps or phases that occur over time. Thus, a grounded theory study has “movement” or some action that the researcher is attempting to explain. A process might be “developing a general education program” or the process of “supporting faculty to become good researchers”.
- The researcher also seeks, in the end, to develop a theory of this process or action. There are many definitions of a theory available in the literature, but, in general, a theory is an explanation of something or an understanding that the researcher develops. This explanation or understanding is a drawing together, in grounded theory, of theoretical categories that are arrayed to show how the theory works. For example, a theory of support for faculty may show how faculty are supported over time, by specific resources, by specific actions taken by individuals, with individual outcomes that enhance the research performance of a faculty member (Creswell & Brown, 1992).
- Memoing becomes part of developing the theory as the researcher writes down ideas as data are collected and analyzed. In these memos, the ideas attempt to formulate the process that is being seen by the researcher and to sketch out the flow of this process.
- The primary form of data collection is often interviewing in which the researcher is constantly comparing data gleaned from participants with

ideas about the emerging theory. The process consists of going back and forth between the participants, gathering new interviews, and then returning to the evolving theory to fill in the gaps and to elaborate on how it works.

- Data analysis can be structured and follow the pattern of developing open categories, selecting one category to be the focus of the theory, and then detailing additional categories (axial coding) to form a theoretical model. The intersection of the categories becomes the theory (called selective coding). This theory can be presented as a diagram, as propositions (or hypotheses), or as a discussion (Strauss & Corbin, 1998). Data analysis can also be less structured and based on developing a theory by piecing together implicit meanings about a category (Charmaz, 2006).

In this research results of hypotheses test will be analyze with structured approach, the model of strategic real estate development presents a coding paradigm or logic diagram (i.e., a visual model) in which the researcher identifies a central phenomenon (i.e., a central category about the phenomenon), explores causal conditions (i.e., categories of conditions that influence the phenomenon), specifies strategies (i.e., the actions or interactions that result from the central phenomenon), identifies the context and intervening conditions (i.e., the narrow and broad conditions that influence the strategies), and delineates the consequences (i.e., the outcomes of the strategies) for this phenomenon.

In selective coding, the researcher may write a “story line” that connects the categories. Alternatively, propositions or hypotheses may be specified that state predicted relationships. The result of this process of data collection and

analysis is a theory, a substantive-level theory, written by a researcher close to a specific problem or population of people. The theory emerges with help from the process of memoing, in which the researcher writes down ideas about the evolving theory throughout the process of open, axial, and selective coding. The substantive-level theory may be tested later for its empirical verification with quantitative data to determine if it can be generalized to a sample and population (see mixed methods design procedures, Creswell & Plano Clark, 2011). Alternatively, the study may end at this point with the generation of a theory as the goal of the research. (Creswell, 2013: p. 85 & 89).

This study proposes the model of the relationship between business environment, core competence, competitive strategy, competitive advantage and organizational performance. Therefore:

- CRE Competitive strategy can be the strategic options on real estate development for anticipate the new competitive landscape on real estate industry to achieve organizational performance
- Dynamic core competence can be build from external and internal organization resources to gain sustainable competitive advantage (SCA).
- Core competence as capability from value chain analysis can be strategic competitive resources.
- Core competence as strategic competitiveness sources to gain SCA
- Competitive strategy, of course, as the SCA resources.

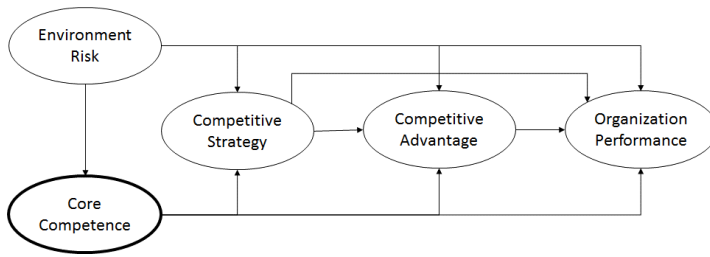


Figure 7. Theoretical Model of Strategic RED (Source: self elaborated)

Conclusion

The use of mixed methods across disciplines is growing, especially in applied disciplines in the social and behavioural sciences and in nursing, health and medicine. The aim of this study was to explore the prevalence rates of mixed methods across specific business and management fields and to gauge the level of acceptance mixed methods has within these fields. In this research, mixed method will applied in real estate development management. Mixed methods it is argued here will become increasingly used by business and management researchers especially those continually trying to innovate, add value and gain greater insights into increasingly complex business and management phenomena and discipline based inquiry.

Mixed methods research allows researchers to be "more flexible, integrative, and holistic in their investigative techniques, as they strive to address a range of complex research questions that arise". However, mixed methods researchers have suggested that there is a need for distinguishing between studies that utilize the two types of data without serious integration and studies that "mix" the data sets effectively. The benefits of such integration include, but are not limited to, the possibility of redirecting one

or both studies given earlier results, adding questions to a revised questionnaire so that the quantitative data address the issue more systematically, or seeing new issues from "other" responses to surveys that can be supplemented qualitatively.

The inclusion of both deductive and inductive logic allows for a more holistic view of a given real estate development problem rather than a strictly positivistic or interpretivist slant to the data. From a practical standpoint, many seemingly "empirical" articles already utilize qualitative methods while conducting scale construction, pre-tests, manipulation checks, and other research tasks where simply asking research subjects their opinions is more diagnostic to researchers than running multiple tests.

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