

QUALITATIVE RESEARCH

SBPD 7002

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Part 1 – Evaluation of current research (qualitative article):

Wang, K. J., & Hong, W. C. (2011). Competitive advantage analysis and strategy formulation of airport city development—The case of Taiwan. Transport Policy, 18, 276-288

Introduction

This document provides an overview of the research conducted by Wang and Hong (2011) with a review of the research philosophy, theoretical perspective and methods of data collection utilized. From the start of the millennia, research on international airport development has deviated from its utility as transportation hub to that of an aero metropolis that has multiple functions. Airport cities function both as indexes of the performance of a country in development and force multiplier for national industries, as well as being a pathway to economic globalization. By means of semi-structured interviews of focused groups and professionals, and literature review of secondary data, Wang and Hong (2011) research development characteristics, operation techniques and competitive benefits of different airport cities in economies that are newly industrialized. These are investigated for airport cities namely; Singapore, Hong Kong and South Korea in developing an understanding of the environment and competitors. Moreover, this research proposes a new approach for strategy formulation, as it is known to use the theory of competitive advantage of nations (diamond model revised), SWOT analysis and strategy matching utilizing the TOWS matrix and competitive benchmarking. A case study discussed in the paper, that of Taoyuan International Airport shows how this proposed approach can be applied to systematic competitive analysis as well as formulation of strategy of airport city development. This strategic planning does not only provide practical reference for related units systematic operation, but it also provides a novel research model.

Research Philosophy and Theoretical Perspective

This research carried out is summarized by the researchers as proposal of “a novel model and procedure to strategy formulation, which utilizes the theory of competitive advantage of nations, SWOT analysis and TOWS matrix, and competitive benchmarking”. Therefore, the process of research sought to arrive at a “pragmatic truth” rather than an “objective truth” (in accordance with the terminology of pragmatists Charles Sanders Peirce and John Dewey). This is to say that the model proposed is true insofar as it solves a problem and offers useful guidelines, and does not fall under the scientific-objective paradigm of truth. It therefore utilizes a philosophical worldview of pragmatism (Biesta and Burbules, 2003).

It can be inferred that the research incorporates a constructivist epistemology (Creswell, 2017). Constructivism lies in strong opposition to behaviorism and scientism. This worldview holds that learning or understanding is a process of active construction knowledge rather than a paradigm that exists independent of cognition, such as matter (Creswell, 2017). This construction takes as its basis, individual interpretation and hypotheses of models to explain the world. It requires the constant testing of established knowledge and hypotheses. This also implies that each individual will interpret and construct knowledge differently based on their predispositions, prior knowledge and social influences (Creswell, 2017). The research that

forms the focus of this discussion **does not** utilize an objectivist epistemology as it deals not with objectivist truth but rather a pragmatic truth. And it **does not** use a subjectivist epistemology, as pragmatism holds that there exists a hierarchy of pragmatic truths, with certain models being more useful at solving a given problem than others. Subjectivism on the other hand, necessitates a worldview that no perspective is better than another. The research requires a constructionist epistemology that certain perspectives are more useful than others, and that this knowledge of what constitutes 'useful' requires to be constructed (Creswell, 2017).

The research utilizes the theoretical perspective of interpretivist (Crotty, 1998). This is since the methodology of research utilizes the interpretation of primary and secondary data in arriving at the proposed model. Interpretivist research approach is an ideographic research in which individual events or cases are studied. It can be utilized to understand various aspects of the area of study without the need for strict empiricism (Rahman, 2016) (here: airport city development and how such development is influenced by different social, economic, and political factors). It does so by understanding the meanings and situational definitions of different constructions. Interpretivists reject theory-neutral observations and universal laws, a notion held in scientism (Rahman, 2016). The researcher explores the definition of airport cities and the intelligence inherent in the development features, competitive advantages and operation strategies. To best define these features and definitions to airport development, the interpretivist perspective is used.

Data collection methods used

Overview: The study in question (Wang and Hong, 2011) utilizes a multimethod qualitative research approach requiring primary and secondary data collection. The multi-method approach has been shown to generate results that are reliable in a variety of disciplines. It is balanced insofar as utilizing additional theoretical studies. Case studies of South Korea, Singapore and Hong Kong are utilized, although only to extract themes of development intelligence that is common among airport cities of NIEs. Furthermore, to obtain primary data for the purpose of analysis, semi-structured interviews with selected experts and forums conducted with focus groups are carried out in a bid to understand the present state of TIA development. Primary data used was based on forums held by focus groups and interviews held with senior experts (experience of 10 years) working overseas in interviewees' MNCs.

Primary data collection: The semi-structured interview method of data collection is discussed as follows. The researcher or an assistant are required to carry out interviews with respondents (Creswell, 2017). The research design includes the formulation of open-ended questions to be discussed by the interviewer. This is the element of structure that guides the semi-structured interview process (Creswell, 2017). Although this initial list of questions is followed, the interviewer is free to ask additional questions or ask for further clarification. The respondent is not limited in the responses they provide and allowed to elaborate, add context, provide additional information etc. This method of data collection serves to provide reliable, comparable qualitative data as misinterpretations are reduced given the opportunity afforded to the respondents to fully clarify their perspectives (Creswell, 2017).

Secondary data collection: By use of (CAoN) theory of competitive advantage of nations, this work explicates the meanings as well as contents of airport cities by means of a secondary data analysis. In this study, the sources used for secondary data include academic papers, research reports, websites, magazines, and newspapers by public or private research

institutions. Secondary data refers to the collective of data obtained from “sources that provide non-original or secondhand data or information” about information in primary sources (Creswell, 2017). Such sources include research summaries, reviews, reports, newspapers, textbooks, biographies, critical studies and magazines. The use of secondary data is often aimed a high-level understanding of the topic at hand (Creswell, 2017).

Critique of Methods

Critique of Semi-Structured Interviews:

Semi-structured interviews are associated with a number of benefits and drawbacks as a means of data collection. Blaxter et al. (2010) posit that it is beneficial conducting semi-structured interviews because researchers are offered the chance of uncovering details that are most likely not accessible through utilizing techniques like observations and questionnaires. Moreover, it is stated that interviews are not mere data collection tools but rather natural process of interaction that is utilized in a variety of different situations. In addition, Alshenqeeti (2014) posits that an important benefit offered by this method of data collection is that mutual understanding can be achieved with the interviewer being present. This is accomplished given that the interviewer can rephrase or simplify questions that are ambiguous to his or her interviewees. Hence, data collection better reflects the perspective of the interviewee. Also, the data can be stored as recordings and reviewed as many times as necessary by the researcher in order to aid in achieving an accurate report of interview. Besides, given that modern recording technology is affordable and cheap, the respondent's words can be recorded with far greater accuracy unlike disruptive and obtrusive on-the-spot note-scribbling. Therefore, the researcher can also be better prepared in avoiding researcher bias or misunderstanding in subsequent attempts of reconstructing the interviewee's earlier statements. Hence, the data collection process of interviews, when compared with other methods, is economical since costs for research are reduced (Alshenqeeti, 2014).

The advantages above have resulted in making semi-structured interviewing an attractive data collection method. However, the interview as a research tool can have its setbacks just as other data collection methods. Alshenqeeti (2014) opines that despite the fact that interviewing is one of the most central, natural and revealing methods which can be used in research, it can be deceptively difficult. This difficulty can affect the quality of research, as it may lead researchers to rush through interviews. Moreover, this in turn causes peers to question the validity of research, in the absence of details concerning rigour of data collection. Interviews have been criticized for being time consuming given that data collection and analysis require transcription, codification and translation. This workload may affect the quality of extraction of themes from interviews by the researcher. Hammersley and Gomm (2008) include that researchers should bear in mind that utterances by people during interviews will be cautioned and shaped to an extent based on the phrasing of questions, the dictates of what can be talked about, by the time they feel the interviewer expects them to answer within and by beliefs. Interviewees may only choose to reveal data concerning their views of events as they feel prepared to. Their perceptions may be subjective, and thereby may change over time based on changes in circumstance. Their responses may not reflect reality. Creswell (2017) opines that social life cannot be studied sufficiently with interviews alone. This implies that the interviewer and also the interviewee might not have full knowledge or may have faulty memory in relation to the matter being discussed. Thus, there are concerns in utilizing interviews solely without triangulation. Although the study in

question uses multimethod qualitative approach, the absence of a reliable means of secondary research implies that this limitation is still applicable. This is particularly so since the method requires interviewees to interpret and make sense of their lived experiences. Nevertheless, given the lack of specificity in the subject of research, the researcher can be said to require data collection to be carried out through semi-structured interviews.

Critique of secondary data collection in lieu of multimethod qualitative research

The study in question (Wang and Hong, 2011) implies that the utilization of more than a single method of research would add to its validity. The triangulation of findings does not by itself imply validity, unless a rigorous approach is used in multimethod research design. A confirmation of findings from primary data in secondary data may be the result of researcher confirmation bias (Creswell, 2017), suggesting that researchers are prone to being biased to look only for evidence that confirms prior conclusions. Moreover, a rigorous assessment of the selection of secondary data, missing from the discussion, has to be made so establish the utility of such a multimethod approach.

Secondary data nevertheless, offers a number of advantages. Data collection is inexpensive and convenient (Smith, 2008). Given that the utilized data is already a collection and synthesis of data in itself, it saves the researcher considerable effort and offers a simplicity of analysis. This further allows the researcher to make use of a much larger dataset than would otherwise be feasible and this is highly beneficial in assessing the findings from primary data. Secondary data also benefits from the authority of sources utilized, in that a due selection process can filter out unreliable data. For instance, the selection process may be designed to mandate that only highly cited works or research from credible agencies be used.

However, the use of secondary data in research is associated with a number of shortcomings. The most significant of these is that since the information is second-hand, an additional level of bias is thought to affect validity of results. Moreover, shift in context, in that the intended purpose of the primary, secondary and the main researcher all investigating the same data is likely to affect its interpretation. Moreover, the relevance of data to the researcher's objective is not established and rather, assumed. Even where context is carefully considered, such contextual and conditional details such as age, geography, gender of respondents that affect the applicability of conclusions are often omitted in secondary sources (Boslaugh, 2007). Secondary data necessitates that careful consideration is given to ensure that the sources relied upon are credible. Another disadvantage associated with secondary data is that details of the data collection process utilized in the original research are unknown and are not criticized. This includes aspects such as low response rates or sample selection (Kiecolt & Nathan, 1985).

Critique of literature review required for secondary data collection

The methodology of literature review is limited, given for instance, researcher bias in the interpretation of study findings, or study selection for consideration in the review. As a result of wide literature on the subject of airport development available, some research pertinent to the analysis may be skipped. These limits may be surpassed by means of ensuring transparency of the data selection method and an accurate search strategy in accordance with academic research standards. However, such details are absent in the paper. The researcher did not provide a clear and detailed review of existing literature on the development of airport cities. This section had been referenced, providing a reader with the study thesis – factors that affect the development of airport cities and consequent benefits harnessed from these cities. In terms of referencing, the researcher needs to use sources that are credible and relevant to the subject under study. Although this is mostly followed, the

researcher has incorporated the use of newspapers and websites, the credibility of which has not been established. Sources should be selected in order of currency – avoiding obsolete contents that might provide inaccurate content or outdated data altogether. The literature review only uses a handful of sources and although this is largely owing to the scant research on the subject, this shortcoming should be explicitly addressed so as to not embellish the validity of research.

Part 2 – Proposal/Data Collection/Analysis

Environmental Policy Integration in the United Arab Emirates

ABSTRACT

To improve the current state of ineffective Environmental Policy Integration (EPI) in city development processes in the UAE, the proposed research in this document seeks to investigate mechanisms by which this may be accomplished. While developed nations such as Canada and the USA are highly incentivised to ensure EPI, this is not often the case in developing nations like the UAE. In turn, this results in economic priorities taking such greater precedence over environmental considerations of city development, that very little is done to accomplish such integration. And yet, as cities in the UAE grow at a rapid pace in population and GDP growth, the emphasis on environmental policy is evermore necessary. While considerable effort has been taken in the development of clean technology, UAE does not substantially regulate its citizens and businesses in service of the sustainability of the environment. The research proposed therefore seeks to propose a checklist of practices to reliably carry out evaluation of EPI in city development based on past research and data obtained from semi-structured interviews with experts in the field of city development. It also seeks to propose a model for governmental institutions in facilitating EPI in city development. The proposal discusses the aim, objectives and research questions that are to guide the proposed research. Their basis as addressing an important gap in the literature is presented. The research philosophy insofar as the epistemology and ontology are discussed. Thereafter, a detailed critique of the chosen data collection method is provided, and considerations of data validity and methods utilised in the data analysis are presented. The proposal thereafter, discusses various ethical and methodological issues that are considered based on the proposed research design. Findings from preliminary analysis are presented as the basis for further research. Lastly, a conclusion and an in-depth personal reflection of the researcher are provided.

RESEARCH AIM, OBJECTIVES AND RESEARCH QUESTIONS

Research Aim

To improve the current state of ineffective EPI in city development processes in the UAE.

Objectives

RO1: To establish the current mechanisms for evaluating the performance of EPI in city development in the UAE

RO2: To establish a checklist of practices to reliably carry out evaluation of EPI performance in urban planning reviews

RO3: To propose a model for governmental institutions in facilitating EPI in the UAE

Research Questions

RQ1: What are the current mechanisms for evaluation of the performance of EPI in the UAE?

RQ2: How can the evaluation of the performance of EPI (Environmental Policy Integration) in Urban Planning be improved so as to be carried out reliably?

RQ3: What guidelines for governmental institutions concerned with city development, which if taken into account, would facilitate EPI?

RESEARCH PHILOSOPHY

This research seeks to investigate and seeks to propose a set of guidelines for urban planners. This constitutes, philosophically speaking, a “pragmatic truth” rather than an “objective truth” (as per pragmatist philosophy). The utility of the proposition determines its ‘trueness’; and therefore, requires **pragmatism** (Biesta and Burbules, 2003). The research utilises a **constructivist epistemology** (Creswell, 2017) that holds that “each individual will interpret and construct knowledge differently based on their predispositions, prior knowledge and social influences” (Creswell, 2017). The research requires a constructionist epistemology that certain perspectives are more useful than others, and that this knowledge of what constitutes ‘useful’ requires to be constructed (Creswell, 2017). The research utilises an interpretivist ontology (Crotty, 1998). This is since the methodology of research utilises the interpretation of primary and secondary data in arriving at the proposed model, and that such interpretation will vary from researcher to researcher.

LITERATURE REVIEW

According to the theory of urban environmental transition, urban development comes with immediate, local challenges that may also be health threatening. As the expansions of cities has continued, most of these challenges have switched from being localized to being global and long term. These problems don’t just threaten human health but threaten the ecosystem as a whole. The challenges in relation to environmental expansion may jeopardize sustainable development and the health of the ecosystem on a worldwide scale (Shepard, 2009). There is considerable research on procedural tools that allow the consideration of the consequences to the environment decision making in urban planning. This literature largely focuses on Strategic Environment Analysis (SEA) and EIA (Environment Impact Analysis). Current research suggests that policies on economic development in a number of nations conflict with policies at a regional level on environmental matters (Bulkeley & Betsill, 2005). To properly analyze EPI, it is important to take the influence of the different tiers of government into account (Bulkeley & Betsill, 2005).

One useful framework utilises the multi-level governance concept. This entails authority reallocation sideways, downward, and upward from central states. (Hooghe & Marks, 2003). Marks and Hooghe (2003) identified two distinct forms of multilevel governance. One type was concerned with the different tiers of government while the other type was concerned with authority distribution throughout states and institutions. (Turnpenny, Nilsson, Russel, Jordan, Hertin & Nykvist 2008) referred to this as horizontal and vertical integration. This vertical dimension doesn’t include the multiple tiers of government explicitly. (Steurer, 2008). Current research on EPI has identified and largely focuses on what is referred to as an implementation gap between the formal national level of political rhetoric and the on-ground political outcome. For example, the integration of land-based planning and river basin

planning in countries such as Finland is reportedly the responsibility of the highest tier of government. However, the practical implementation at local and regional levels requires further development. It also includes consultation procedures and action plans (Nilsson and Dalkmann, 2009). On the other hand, organizational factors include those that are related to the architectural structure of government institutions and non-government institutions alike. The research on such aspects of decision-making in lieu of environmental considerations is slight or scant (Weber and Driessen, 2010). Particularly, research on the impact of EPI is scarce insofar as the planning related decision making process. There is next to no research on the subject of EPI in developing countries such as UAE, insofar as current practices and scope for future improvement are concerned.

DATA COLLECTION

Participants and Context

This research is carried out in the context of UAE urban planning and city development. A total of 5 initial interviews were conducted as part of the pilot study. These interviews were conducted with experts working in Governmental Department and Organizations, located in the UAE. The final study will comprise of a sample of 30 participants to be interviewed, constituted not only of department heads, but also academic experts working closely with the government.

Semi-Structured Face-to-Face Interview

Data collection was done through semi-structured interviews owing to their many advantages. One of the most important advantages of the interview method of data collection is that it allows the collection of data from participant within their familiar settings (Yin, 2009). Instead of the structured interviews that aren't particularly flexible, the semi-structured interviews allow the researcher to ask additional questions based on the participant's replies. It also allows the researcher to probe the participants for additional explanation when initially simple responses are provided (Remenyi, 2002). The semi-structured interview for this study depended on using tentative questions that were predetermined. However, it left room for alterations to the course of data collection. So, even if the questions were determined before the interview, the researcher had the flexibility to alter them according to the initial responses received from the participants (Robson, 2002).

The main challenge here according to Oppenheim (1992) is that the semi-structured interviews produce too much data that is time consuming to analyze. There was also the problem of mobility constraints caused by geographical differences. The original review questions were pilot tested by the researcher on three respondents who were selected purposely for the sake of ensuring clarity. The testing allowed the researcher to redefine some questions that may have been duplicated. All revised questions were used as a guide and the results acted as a basis for using the questions that were refined depending on emerging themes. During the early stages of the interview, the researcher put emphasis on the all the questions that were related to intervention integration. Some areas of interest include: the

factors that motivate governmental bodies in UAE to implement an EPI integration and how this was implemented in the past. The full list of questions is provided as follows:

Full List of Questions:

- ❖ How important do you regard EPI to be, as a consideration in future planning of city development?
- ❖ How does UAE differ from developed nations such as USA and Canada in environmental considerations associated with growing populations and their demands on transport and energy?
- ❖ How effective are the current incentives aimed at encouraging implementation of EPI?
- ❖ What considerations (budget, technological, risk etc.) of EPI should be carried out in the initial stages of the urban planning process?
- ❖ What formal processes may be introduced to ensure the regular assessment and adaptation of EPI in Urban planning?
- ❖ How do you see the current discussion on environmental matters such as global warming impact the future of city development in the UAE?
- ❖ What metrics may be used in the assessment of whether objectives pertaining to environmental sustainability are being met in the short-term (5 years) and the long-term (10 years)?

After receiving answers for questions related to the process of system integration, the research asked more focused questions about the specific perceptions of the stakeholder had in regard to the intervention integration system as well as problems that were encountered during the process of integration and how these problems were overcome. The themes that were gotten from the data that was previously collected and analyzed was what determined a second phase of data collection through interviews.

RESEARCH DATA ANALYSIS

The data analysis was based on the procedures of the grounded theory. The grounded analysis theory is a methodology that is used for qualitative assessment during research (Glaser, 1998). The theory has three coding processes namely, axial coding, open coding and selective coding which are used for analyzing manually employed data. Although manually analyzing data can consume a lot of time, it gives the researcher an opportunity to actively decide which themes, properties and subthemes will be most practical rather than depending on a software such as NVIVO to make this decision (Glaser, 1998). The researcher is required to transcribe interviews. This allows the researcher to learn about the emerging themes from various participants before commencing data analysis (Bryman 2008). The researcher then sought to analyse the behaviors of stakeholders and deduce meanings from the identified implementations of the intervention process. The researcher described the details of the coding process that was done for external and internal stakeholders alike and it is as follows:

Open Coding

This is the first stage of the data analysis used in this study. It involves the development of themes using transcribed data via a microscopic method of comparison (Strauss, 1987). By critically analyzing the data line after line, the researcher is expected to derive at least ten significant themes, e.g. the need for intervention, management priorities and support etc. The researcher is then to extract verbatim sections of the transcripts and place them in categories on separate documents to ensure that the data collected fitted into the listed categories where suitable.

Axial Coding

This coding method is to systematically analyse the themes that are developed in the open coding phase to establish relationships as well as develop sub-themes (Glaser, 1998). It is to involve revisiting the data collected and collecting new data. The idea is to bridge the gaps that appear in the framework and confirm emerging themes. Additional questions for follow up interviews are thereby to be finalised. The responses are obtained and analyzed and the themes reexamined. Themes that were identified previously are to be grouped into three major categorical themes. All the themes that were identified previously are to be subthemes and fitted into the abstract themes (Glaser, 1998).

Selective Coding

This phase of the data analysis is concerned with establishing possible relationships between sub-themes and themes. It also involves creating a central theme for all sub-themes.

DATA VALIDITY

The data validity phase involves establishing credibility, trustworthiness, transferability, dependability, and confirmability of the data collected and analyzed.

Trustworthiness: According to Kirsch (1992), it is important that a researcher ensures credibility of data collected through the semi-structured interview as this is a key consideration when it comes to determining trustworthiness of any qualitative research. The idea is to ensure that the research is aligned with reality and is based on the truth.

Credibility: The credibility in this study was confirmed by cross-verifying the themes through a triangulation process that involved conducting a literature review to be carried out independently.

Conformability: The most important part of validating the data from the semi-structured research is conformability. This has to do with making sure that the research reflects the data that was collected during the semi-structured interview. It also ensures that research is free of human bias. Although completely avoiding bias is not feasible, the research must avoid it as much as possible. The validation process will determine if the researcher was biased during the research through a reflectivity technique that identifies possible sources of influence during different stages of the research process. Unconsciously, the researcher may be biased at various stages of the research although it is proactively avoided.

Dependability: Dependability is concerned with making sure that the findings of the research align with unadulterated pure data. This is because every qualitative analysis must involve subjectively interpreting data. During the data validation process, it is important to make sure that the concept themes that are based on raw data are similar to the themes in other qualitative research. The dependability of the research is confirmed by a specific coding process that is based on the NVIVO package. However, this software coding is only utilised for validation purposes and not for the main analysis.

Transferability: Transferability can be established by carrying out another quantitative analysis applying the laws of statistical generalizability. However, this is not possible to be carried out given the limited mandate available for the research to be conducted.

ETHICAL ISSUES

The ethical issues identified are derived from the literature on ethical issues of semi-structured interviews. According to the review, a number of requirements were necessitated prior to the interview process. They are detailed as follows:

Ensuring clarity of purpose and proceedings of research: The procedures for the interviews are to be established and written down clearly for the participants to provide a clear understanding of the research before the start of the interview. This written document is to be provided to participants to keep. They are to be asked to officially confirm that they are comfortable with the venues for the interview and they have the right to decide if they want it to be private or public.

Ensuring safety: The participants are also to be briefed on possible safety issues that may be cause for concern during the interview. Details of important emergency contacts are to be held by the researcher and also provided to the participant.

Ensuring confidentiality: During interviews, confidentiality is key. Unless with permission, the interviewer is not to, under any circumstances, state the name of the participant. This was not considered in the preliminary study. The interviewer is to use all the information collected during the interview only in accordance to the will of the participants. Where possible, the participants should provide a written copy of their consent. In situations where the participants cannot provide a written consent, a verbal confirmation is thought to suffice. If the materials collected during the interview are to be published in journals or conference proceedings, written consent is again required to be obtained from the participants.

Preliminary Findings

The pilot study was carried out through 5 respondents to the semi-structured interviews. Of these, 2 respondents provided very brief or irrelevant answers to posed questions. Moreover, given the time limitations, it was not feasible to carry out follow-up questions. However, from the remaining 3 interviews, a transcription of audio (mock process, not real) was carried out. Thereafter, open coding was carried out. Given the small amount of data available, axial coding and selective coding were thought to be unnecessary. However, in the full study, with

over 30 participants, this will be carried out. The preliminary findings include the following themes identified based on the analysis:

General themes (see first two questions of semi-structured interview in data collection section)

- *Governance in UAE is internally determined and less influenced by external pressures.*
This is evident given the lack of adherence or participation of the UAE in global coalitions/UN initiatives etc. This explains its lack of EPI in policy as compared to other nations.
- *EPI performance not tracked currently* - whether through reviews, metrics or appraisals, as in the case of economic bottom-lines for which the UAE government is highly incentivised.

Codes obtained from Open Coding	Governance in UAE is....	Illustrative Quote
OC1: Internally determined	Internally determined - less influenced by external pressures EPI performance not tracked currently	<i>“UAE is very particular on not allowing external pressures dictate policy. It seeks to determine for itself how best to achieve objectives that it holds common with other nations on the global stage”</i>

Themes in processes and incentives recommended (see remaining questions in data collection section)

- *EPI should be given increased consideration* - An agreement among policymakers
- *Long term assessments should be carried out* - minimum post-5 year period for policymakers, so as to ensure progress is made on the environmental front.
- *Local government should be given autonomy* - The central government should not intervene with local governments on matters of EPI, but must hold them to targets
- *Policy should focus on utilising private entities* e.g. to facilitate UAE being the global leader in environmental technological innovation in 10 years

- Incentives for industry, not for government - subsidies, investment
- Metrics for assessing environmental policy performance suggested - Carbon footprint, ROI on environmental technology

Codes obtained from Open Coding	Processes and Incentives that would improve EPI in UAE include....	Illustrative Quote
OC1: Long-term assessments	Long term assessments, every 5 year period	<i>"I would suggest assessments as to the efficacy of EPI be carried out over a long enough time span, say 5 years."</i>
OC2: Local government	Providing local government autonomy and authority to accomplish EPI objectives	<i>"The issue lies in bureaucracy. For successful EPI, it must be at the local government level"</i>
OC3: Technological Innovation	Focusing environmental policy on establishing UAE as leader in environmental technological innovation in 10 years	<i>"To address competing goals of economic and environmental development of UAE, it is thought best to accomplish this by supporting private sector in technological innovation insofar as clean technology, electric vehicles etc."</i>
OC4: Incentives for Industry	Incentives for industry, not for government including subsidies and investments for private sector	<i>"I believe incentivising the government is not of much benefit, it is rather the private sector that must be incentivised to minimise their effects on the environment. Policy should be focused on that"</i>
OC5: Carbon Footprint	Key metrics include Carbon footprint, ROI on environmental technology	<i>"You could measure progress based on estimated carbon footprint, return on investment into environmental technology, reduction in number of fossil</i>

		<i>fuel based vehicles on the road etc.”</i>
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Methodological Issues

Issues with method of data collection

With semi-structured interviews, there are a number of issues that were identified based on the preliminary study as well as in the literature on the subject. Firstly, the single biggest drawback of the method is that one cannot guarantee the honesty of participants. In the preliminary study, a number of responses seemed to contradict known behavior of urban planning departments in UAE. This is especially an issue in relation to this study, as officials dealing in policy are likely not to wish to disclose shortcomings of their departments. Moreover, many of the responses were evasive or misleading. Secondly, it was also established that it is difficult to rely on only the semi-structured interviews to infer cause and effect relationships. Hence, it was decided to rely on an additional method of literature review or secondary analysis to triangulate findings. Semi-structured interviews cannot be treated as being an objective means of research, and serve only as indicative of identified phenomena being true. Moreover, relying on authority or expertise is alone is not a conclusive. Thirdly, the flexibility of the interview process is simultaneously an advantage and disadvantage. The shortcoming lies in it is harder to establish reliability. The design cannot take into account various sources of unreliability as the direction of the interview cannot be anticipated. For instance, the use of negative forms of positively stated versions of the same questions, as utilised in quantitative surveys, is not feasible to do in semi-structured interviews.

Fourthly, while every attempt is made to avoid subconscious bias, it is unlikely to be eliminated. The researcher guides the interview process. The interviewee is likely to be conscious of interpretations of their statements. Thus, self-serving bias on the part of either side cannot fully be eliminated. This method is also limited by the small number of interviewees, given the difficulty in gaining permission from the few individuals who would qualify as suitable respondents. There were a number of inconsistencies identified in the responses i) between respondents ii) within responses of the same respondent iii) in relation to known facts. As a result, It is difficult to compare answers in order to carry out meaningful frequency-based thematic analysis. This drawback lies not in the analysis but in the data collection process.

Issues with method of data analysis

While grounded theory is utilised here in the analysis, open-ended questions are difficult to analyse. The initial preliminary findings revealed that themes varied between respondents. It is established that for the main data collection process hour-long interviews will required to be carried out so as to facilitate recurrence of themes in analysis. A larger sample would also be needed (30+ interviews) for thematic coding to be self-sufficiently effective. Given that this method of analysis is flexible, it is difficult to reliably eliminate inconsistency. There is also no

assurance that the final analysis will reveal a coherent set of narrative derived from the emerging themes (Creswell, 2017). Thematic analysis also suffers from the shortcoming that creating a set of guidelines in higher-order analysis is not feasible and is thus not established as set of practice to ensure reliability. Given the limited experience of the researcher in qualitative thematic analysis, this flexibility can lead to a lack of clarity in identification of themes from data. Given that the UAE, the focus of the study, is likely to vary significantly to other developed nations where past studies on the subject have been conducted, the use of a literature review in adding to the interpretive power of thematic analysis may not be suitable. Thematic analysis also suffers from drawbacks compared to other qualitative methods. While it enforces a certain rigour in research, it does so often at the expense of a continuity in narrative owing to inconsistencies in data collected (Creswell, 2017). Moreover, grounded theory as utilised in the research design requires microanalysis of data for thematic coding, down to the level of the word or line. This is highly time-consuming and therefore limits the number of interviews that the researcher can carry out and analyse within the time-frame of the project. This forces the researcher to carry out analysis down to the finest point causing a loss of insight that may be obtained from a less-defined interpretative methodology. The transcription process in itself was highly time consuming for the preliminary study. The infeasibility of having multiple researchers carry out coding and analysis in triangulating insight further limits the methodology proposed.

Personal Reflection

This research sought to address an important gap in the literature, namely the integration of environmental policy in city development in the UAE. This topic was not chosen at random. Rather, given city development being an important area of interest, I carefully researched the literature on EPI in order to find a gap that needed to be addressed. In doing so, I found that there were next to no papers, articles or other scholarly works that deeply investigated the subject of EPI within UAE. Moreover, in my past research I had identified the lack of environmental considerations in urban planning in the middle east. Hence, this topic was both highly relevant and yet, under-researched. Moreover, in making the case for the literature review, I had to study a number of past works, which although not directly related to the context of the UAE, were nevertheless relevant. This included a study of the role of EPI in planning procedures utilised in multi-level government. Given that this required a qualitative study as necessitated by the requirements of the proposal, it was thought that an appropriate qualitative methodology be chosen. Given that I was to propose as a deliverable of the research, a checklist and a model for government, an epistemology and an ontology that were appropriate for pragmatic research were considered. Given that what I was proposing was a) not objectively verifiable as true, and b) requiring an “improved” set of guidelines than currently implemented, I knew that the epistemology could neither be objectivist nor subjectivist, but rather constructivist. I also inferred that given that there would be a significant interpretive element of the qualitative study, the research design had to utilise an ontology of interpretivism. I also thereby decided on carrying out semi-structured interviews with experts in arriving at the research deliverables. This process was a significantly enlightening process for me. I am used to thinking of truth as scientific truth, although a pragmatic approach was a new paradigm for me.

However, a pilot study revealed a number of difficulties with the approach. I, noticed that firstly, given the lack of immediate availability of experts, written interviews had to be conducted. The responses highlighted the crucial requirement of conducting either in-person or skype interviews in future. The responses were very brief and often vague and incoherent, unlike what I expected. Moreover, from the 5 interviews that I conducted in the pilot study, there were a number of inconsistencies in the responses provided by the researcher. I found thereafter, that to transcribe the written interviews into text alone was highly time-intensive. It made me consider that when conducting long-form audio interviews, this transcription process will be even more time consuming. In conducting the thematic analysis thereafter, I found that the information was far too limited to qualify for a robust thematic analysis in accordance with grounded theory as I had proposed. Nevertheless, I identified a number of themes in the interviews. In comparing my research to that of other researchers who had employed grounded theory analysis, I began to question if this method would be applicable in providing insight for my chosen subject area. However, I concluded that the process would be effective provided a) authorities in the subject matter were interviewed b) that the semi-structured interview process was fully taken advantage of in delving deeper into initial responses.

Given the concerns raised by some the interviewees, I decided that it was necessary to instate certain ethical rules in carrying out future interviews. I believed that the initial pilot study proved less useful than it could have been, since I hadn’t taken the time to clearly explain the

purpose of the research and the method to the interviewees. This is not only a concern for efficacy, but also an ethical concern. I realised that I had to place a lot more emphasis on anonymity in the process and also assure the respondents of the same. Given that future interviews would be conducted in agreed-upon venues, where I might be responsible for safety, I determined that respondents should be briefed of safety procedures. The pilot study also helped clarify a number of methodological issues. I realised that for the proposed methodology to be robust, a much larger sample than initially anticipated may be required, with close to 30 interviews. I also realised I have to carry out a frequency-based thematic analysis, so that a strong case can be made for the conclusions derived. For triangulation, while I had initially proposed a literature review, the responses suggested to me that I had to instead carry out a secondary data analysis of records, articles and official documentation by UAE policy makers and urban planners. This is since the literature review would not reflect the context of the UAE.

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