The relative merit of two segmentation approaches: Executives views and a cost-benefit analysis
**Purpose:** This study aims to capture the views of executives about the merit of using the two segmentation approaches (quantitative vs qualitative). Furthermore, this study aimed to examine costs and benefits (CBA) for two different segmentation approaches, employing a minimax simple cost benefit analysis matrix.

**Design/methodology/approach:** A total of 16 semi-structured interview were conducted with executives within University of Sharjah (UoS). Furthermore, a minimax approach was applied to the cost benefit analysis study.

**Findings:** Evidence in this study found that, the financial cost of quantitative segmentation approaches was higher than qualitative approach. However, the decision makers trusted the quantitative approach more regardless of the incurred costs. The study also, found that there was a limited knowledge about social marketing and segmentation among executives.

**Research limitations/implications:** Limitations of this study relate to the methodology applied, the sample selected and the lead research. Another factor is selection bias, which limited this study to the one organization executives. It is conceivable that middle-level management would have had the desire to participate because they make the recommendations to top management in decision making. The researcher did not collect precise data on time taken to design, implement and analyses the two segmentation studies, which qualified the precision of the cost benefit analysis. Also, the fact that the sample includes participants from a relatively narrow range of disciplines should be noted as a limitation of the study

**Practical implications:** The current study provides a case study demonstrating how CBA provides a dollar amount estimate permitting alternate segmentation approaches to be compared and contrasted, assisting in value estimation of any social marketing project.

**Social Implications:** The paper draws upon two streams of the literature: social marketing and cost-benefit analysis. The paper focused on understanding of the literature CBA offers a technique applicable to demonstrating cost savings that can be derived from choosing one method over another. Moreover, CBA assists in understanding the benefits or potential opportunity costs both financially and non-financially.

**Originality/value:** This paper presents one of the first studies conducting a cost-benefit analysis to compare and contrast two segmentation approaches in social marketing. The study provides interesting insights into the perceptions of management executives over alternative research methods, although results are limited to a case study.
Abstract

There is a strategic need for marketers to explore and understand the target market. This closer understanding of target audience added a new value to the marketing mix. Therefore, segmenting the target market in social marketing can give a more nuanced understanding of a market, given that different segments may have different characteristics which impact their response to social marketing programs. Different segmentation approaches can be applied, and each approach may offer unique benefits and costs, yet studies have not, to date, considered the relative costs and benefits of different segmentation approaches. Responding to this gap, the current study examines costs and benefits for two different segmentation approaches, employing a minimax simple cost benefit analysis matrix and decision maker perspectives. While the financial cost of quantitative segmentation approaches was higher, decision makers trusted the quantitative approach more. This study bridges a gap in the literature by applying cost benefit analysis as a tool and combining this with decision maker perspectives to examine two alternate segmentation approaches. This study was not without limitations. Future research should consider a wider sample from different levels of management and utilize different segmentation methods to extend our understanding of the relative merit of segmentation approaches.

Keywords: Costs Benefit Analysis, Qualitative Segmentation, Quantitative Segmentation, Social Marketing.
Introduction

Kotler and Zaltman (1971) conceived social marketing as “the design, implementation, and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution, and marketing research”. This definition was later updated by Andreasen (1994) to “the adaptation of commercial marketing technologies to programs designed to influence the voluntary behavior of target audiences to improve their personal welfare and that of the society of which they are part” (p.110). This shift in focus oriented social marketing’s main goal towards the attainment of behavioral change in an extension of social marketing’s focus beyond communication to become social advertising.

The primary objective of social good differentiates social marketing from commercial sector marketing. The key objective of commercial marketing is the financial profits, which may not always be in the best interests of the individual or society as a whole. Another difference between social and commercial marketing is that in social marketing the competition is not always other organizations offering similar goods or services. Instead, competition may be viewed as the current or preferred behavior of the target audience (French, Blair-Stevens, McVey, & Merritt, 2010). Social marketing relies on voluntary compliance rather than legal, economic or coercive forms of power (Kotler, Roberto, & Lee, 2002), distinguishing it from other behavior change disciplines such as law. Andreasen (2002) listed a six-point set of integrated concepts to look for in a behavioral change intervention to ascertain the extent that social marketing principles have been employed therein. In the UK, the six points were later expanded into what were termed social marketing benchmark
criteria by French and Blair-Stevens (2006). Segmenting the target audience is considered one of the main benchmarking criteria in social marketing.

Segmenting a target market can lead to identification of segments, giving a more nuanced understanding of the differences between identified distinctive market segments (Czinkota, Kotabe, Vrontis, & Shams, 2021; Sarstedt & Mooi, 2014). This understanding can help social marketers to more effectively apply limited social marketing resources (Dibb & Simkin, 2016). Furthermore, application of a segmentation strategy helps social marketers to make the most of limited resources (Ibrahim, Rundle-Thiele, & Knox, 2021; West, Ford, & Ibrahim, 2015). Social marketers promote desired behaviors to an audience, offering an exchange that aims to enhance benefits and reduce barriers (Xia, Deshpande, & Bonates, 2016). Therefore, there is a need to adopt a greater number of these benchmarks.

Segmentation is one of social marketing’s benchmarks, or a key principle need to be utilized in order to design effective social programs and reach the targeted audience (Andreasen, 2002; French & Blair-Stevens, 2006; Ibrahim et al., 2021).

A review of the literature indicates that social marketing is still behind in applying segmentation approaches to inform program planning, implementation and evaluation regardless, of the importance of market segmentation in social marketing (Dietrich, Rundle-Thiele, & Kubacki, 2017). For example, in a recent study about the use of the social marketing benchmarking criteria in 17 social marketing interventions in low- and middle-income countries. The study found that there was limited use of insight, competition, and segmentation principles in these interventions (Schmidtke, Kubacki, & Rundle-Thiele, 2021). Furthermore, a systematic review of 173 social marketing interventions reported that 7.5% interventions applied marketing segmentation. Furthermore, this review highlighted that interventions utilizing more
social marketing benchmarks criteria were more successful than their counterparts (Xia et al., 2016). Potential reasons for low use of segmentation may include (but are not limited to) difficulties in gathering sufficient quality data to conduct segmentation studies (French, 2017), and limited available financial resources and/or analytical capability (Lefebvre, 2013). A further reason for limited application of segmentation in social marketing programs may be a consequence of a lack of key decision maker (e.g. executives) knowledge of the benefits that can arise from applying segmentation in social marketing program planning and design. In a review of 93 social marketing interventions, only 15 studies (16%) reported the application of segmentation (Dietrich et al., 2017). Taken altogether, while evidence points to the benefits of applying segmentation in order to better utilize limited resources available for social marketing programs, segmentation is rarely applied and/or reported in social marketing programs (Newton, Newton, Turk, & Ewing, 2013).

A review of the literature also, indicates that qualitative approaches may be applied to identify different segments (Bond & Morris, 2003; Ibrahim et al., 2021) for organizations challenged by limited marketing budgets, given lower research costs and expertise (Longfield et al., 2016), and/or organizations targeting small populations given that large sample sizes are needed for quantitative segmentation methodologies. On the other hand, quantitative segmentation approaches are more frequently used to identify distinct segments (Dibb & Simkin, 2016; Dolnicar, Grün, & Leisch, 2016; Ibrahim et al., 2021). Quantitative approaches may, however, involve longer researcher time, advanced software application, expertise, and proportionately higher financial costs (Randle & Dolnicar, 2017).

**The aim of this study:**

While a range of alternative segmentation approaches are available to social
marketers, limited consideration of different segmentation approaches has been put forth. Responding to this gap, the current study first aims is to examine the relative costs and benefits of a qualitative and quantitative segmentation approach in a water use reduction context by applying cost benefit analysis. Second, this study has sought to capture administration view mainly executives’ perspectives for the two segmentation approaches applied in the same context to gain insights into executive knowledge about and the perceived usefulness of segmentation, ensuring comparisons extended beyond financial cost.

**Cost benefit analysis in social context**

Cost-benefit analysis (CBA) is a tool frequently used by business and government officials to support trade-off analysis between competing alternatives (Kleindorfer & Saad, 2005; Roy, 2021). Furthermore, a CBA can be expressed in monetary terms permitting a direct comparison to be made. For example, in a quantitative cost benefit analysis the relative cost-benefit is articulated in terms of either a benefit/cost ratio, or the *net economic benefit*, which is simply the sum of the value of benefits less the sum of costs (Ackerman & Heinzerling, 2002). In the case of a qualitative cost benefit analysis, such a direct comparison cannot be made (Funnell & Scougall, 2004). Rather than summarising the ratio of benefits to costs, a qualitative cost benefit analysis considers relationships and trade-offs between alternate approaches (Ackerman & Heinzerling, 2002; Bergh, 2004).

Chicago Child-Parent Centres was undertaken CBA, using data from a cohort of 1,539 program and comparison-group children born in 1980 who participated in the Chicago Longitudinal Study. This analysis indicated that the measured and projected benefits of preschool participation, school-age participation, and extended program participation exceeded costs. In 1998 dollar values, the preschool program provided a
return to society of $7.14 per dollar invested, increasing economic well-being and tax revenues, and through reduced public expenditures for remedial education, criminal justice treatment, and crime victims (Reynolds, Temple, Robertson, & Mann, 2002).

In the case of a quantitative CBA.

The costs of a social marketing project are the resources expended in both financial and non-financial terms, as well as negative outcomes resulting from any social marketing project (Agénor, 2003). Contrasting costs, benefits include positive outcomes achieved and negative outcomes avoided in the short term (during the life of the project) and longer term. It is usually easier to get evidence of positive outcomes that have been achieved than negative outcomes that have been avoided (Sabates-Wheeler, Mitchell, & Ellis, 2008). In some analyses, benefits also include additional resources leveraged if these are then effectively utilised (Agénor, 2003).

**The challenges of applying CBA in social marketing**

In social marketing, converting benefits into monetary value can present a challenge (De Groot et al., 2012). For example, in early childhood social marketing interventions it is difficult, if not impossible, to attach a monetary value to outcomes such as a mother’s greater satisfaction with her relationship with her child (De Groot et al., 2012). We cannot easily determine the monetary value to society of the greater academic readiness of children participating in an early childhood project (Agénor, 2003), given many subsequent years of schooling where value can be more easily attributed. Furthermore, separating out the outcomes of the social marketing project from those outcomes that would have occurred anyway (in the absence of the project) is rarely straightforward (Robson & McCartan, 2016).

While it’s difficult to consider, identifying and describing related costs, both financial and non-financial, of social marketing remains critically important, given
that monetary and other resources are expended and negative outcomes resulting from conducting projects may arise (Robson & McCartan, 2016), all of which bear a cost to the community. Similarly, should a project not proceed, potential positive outcomes and resources leveraged might be lost (Sweetman, Luthans, Avey, & Luthans, 2011). More attention, then, needs to be directed towards examining the relative value of social marketing activities.

A major challenge of any cost benefit analysis arises from the risk of over-or under-estimating costs or benefits (Funnell & Scougall, 2004). Therefore, any cost benefit analysis must err on the side of caution to ensure that any estimates of costs/benefits in monetary terms are conservative and not inflated in any way. Equal consideration must also be given to ensuring the accuracy of estimates.

Using cost benefit analysis

Cost benefit analysis (CBA) may look intimidating and complex. However, CBA is a useful technique for providing information about the accuracy of applications and additionally, guidance for future projects (Boardman, Greenberg, Vining, & Weimer, 2017). Using CBA has been a consideration of the literature since the early 19th century. This analytical technique has been used by US governmental agencies in environmental management (Hanley, Spash, & Walker, 1995). Since the 1960s the application of CBA has expanded to “human beings” and “physical investment programs” (Sherman, Siebers, Aickelin, & Menachof, 2013). CBA allows comparison of a wider range of scenarios. For example, in the New South Wales Area Assistance Scheme – Australia (2002) a quantitative and a qualitative cost benefit analysis of funded projects was undertaken to evaluate the scheme (Funnell & Scougall, 2004). The CBA was conducted in areas such as funding not-for-profit organizations and local governments to run programs that deliver concrete change to vulnerable
communities. The outcomes of the project were enhanced by CBA: more fully developed proposals and better-planned projects; more coordination between different project areas; distribution of funds to areas with relatively high benefits; and organizations involved were encouraged to explore alternative funding sources and increase available funding (Boardman et al., 2017).

The World Health Organization (WHO) used CBA to evaluate the results of eight interventions that aimed to reduce levels of indoor air pollution and improve health. The use of CBA played an important role in guiding public policymaking and investment in further interventions. CBA permitted alternatives judged to have a high ratio of benefits to costs to be funded and, in turn, these projects succeeded in influencing community and people’s health. Overall, interventions were of high value because the model developed by the project was expected to be transferable to other communities (Hutton, Rehfuess, & Tediosi, 2007).

CBA has been used to evaluate the effectiveness of water resource management projects in Europe and North America. For example, the results of one study led to high value outcomes, and additional funding was attracted from a variety of sources, producing outcomes that far outweighed the value of the initial funding committed to evaluating the projects using CBA (Brouwer & Pearce, 2005). Overall, applying CBA was deemed to have enhanced the performance of the project (Brouwer & Pearce, 2005). Furthermore, in a Spanish study aiming to evaluate economic, environmental and resource availability of water-reuse projects, CBA indicated that only a proportion of projects were economically viable (Molinos-Senante, Hernández-Sancho, & Sala-Garrido, 2011).

In a cross-sectional sample of 1,272 persons to estimate the benefits in a cost-benefit analysis of a condom social marketing (CSM) program in Tanzania, the
analysis supported the program’s social value, showing a benefit-cost ratio in the range of 1.31 to 1.72 (Brent, 2009a). In another social marketing project drawing on panel data captured over an eight year period from 20 Tanzanian regions, the direct and indirect effects of female primary education on HIV/AIDS rates were estimated through identification of the benefits and costs of educating girls (Brent, 2009b).

The above studies showcase deploying CBA in social projects to examine program outcomes and compare and contrast the relative merits of alternate approaches. Quantitative cost-benefit analysis approaches were, however, observed to predominate, and this focus on economic approaches has been criticised (Bergh, 2004). It is argued that a qualitative stance complementing monetary approaches is needed to ensure that attention is also directed towards understanding extreme events, structural change and the complexity of the situation (Bergh, 2004). In the face of uncertainty, quantitative analysis can omit important, often nuanced, information and information can be unreliable if its underlying assumptions deviate substantially from reality (Hanea et al., 2017).

There are several approaches to cost benefit analysis which can be deployed to evaluate program outcomes in the social field, such as the United Nations Industrial Development Organization (UNIDO) method (Kumar, 2002), the Little-Mirrlees approach (Little & Mirrlees, 1990), Shadow Prices (Zhou, Zhou, & Fan, 2014), Integrative Cost-Benefit Matrix, and Minimax Simple Cost Benefit Matrix (Ziller & Phibbs, 2003). This study applied the minimax in simple cost benefit matrix, in order to make a direct comparison between the two segmentation approaches, quantitative vs. qualitative. The minimax approach has been applied previously to evaluate natural disaster mitigation investments (Kramer, 1995) and in the UK in social defence protection programs (Schofield, 2018).
Method

This study has been divided into two main studies. The first study, is a qualitative study, aiming to collect data from the University of Sharjah (UoS) executives, about their views on segmentation approaches (quantitative vs qualitative), and the privileges of using each approach. The second study is the CBA of the two segmentation approaches.

Study one:

Sampling approach

Study one employed a purposive sampling approach to focus enquiry on University of Sharjah (UoS)- executives because the selected informants can inform the understanding of the research questions (Creswell, 2012).

Unit of analysis

A semi-structured interview protocol was used to collect data from 16 executives of the UoS. Part of this study’s rationale was to capture the views of executive-level UoS personnel on the alternative segmentation approaches, the focus of this study, as applied in the research phase. In addition, the study sought to understand their viewpoint on the perceived costs and benefits of the respective segmentation approaches applied to their organization as the research setting. Beliefs about segmentation and the optimal approach, and the segments identified within the UoS audience were explored. The UoS executives are representative of the stakeholders whose trust social marketers need to gain to proceed with any future social marketing project.

First, an overview of results from the two segmentation studies (qualitative and quantitative studies) that were conducted by the researcher were shared with participants. Next, participants were asked their opinions on the different
segmentation approaches applied. Finally, participants were asked to identify the costs and benefits associated with each approach.

Participants were informed that the qualitative segmentation study used six focus groups and consisted of 43 participants who were students, staff members, and faculty members. This approach generated four major segments (comfort, careless, contradictory, and price-sensitive users) (Ibrahim, Rundle-Thiele, & Knox, 2019). The quantitative segmentation study used an online survey that collected data from 1,350 participants encompassing faculty, staff, and students living on and off the university site. The two-step cluster analysis method was used to analyse collected quantitative data, and this approach was theoretically informed. The quantitative segmentation approach generated three distinct segments (regular users (50%) conscious users (24%), and careless users (26%) (Ibrahim, Knox, Rundle-Thiele, & Arli, 2017).

Executive interview data analysis
Following procedures outlined by Bryman (2008) and Guba and Lincoln (1994), the participant opinion data was organized accordingly. The first-level coding phase was completed through the process of manual coding of the transcripts. The manual coding of the raw data developed the memo-code, to which the following labels were assigned: expected available segments, qualitative segment study, quantitative segment study, reliable segmentation approach, and preferred segmentation approach based on perceived cost-benefit analysis.

During the second-level coding process (pattern coding), the researcher recoded the data from the first-level coding by grouping the executives’ perspectives and opinions into the following stages/phases:

1. Beliefs of executives about target audience segmentation;
2. Opinions of the executives about the segmentation approaches and the associated costs and benefits; and

3. Decisions of executives based on cost-benefit analysis (qualitative vs. quantitative segmentation approach).

It is important to note that while the process of analysis was taking place, the researcher contacted interviewees for additional data in two instances: (1) to gain a more detailed response, and (2) where doubt or inconsistencies were perceived. The data were organized in a sequential and coordinated manner, reviewed recurrently, and coded regularly. Because this research collected data from four different key executives, the researcher analysed each unit separately, and undertook a cross-unit analysis for comparative analysis after completing each executive. Each semi-structured interview averaged 45 minutes.

**Study two – cost benefit analysis**

*Cost benefit analysis approaches*

A cost-benefit analysis was undertaken drawing on staffing costs for the project. This cost benefit analysis study followed the minimax approach applying a simple cost–benefit matrix (Ziller & Phibbs, 2003) in order to identify the costs of the two segmentation approaches, namely qualitative and quantitative. In order to track the time and the costs of each study a clear record of the time spent, and financial costs has been kept since the proposal has been accepted. The simple matrix gave the two applied segmentation approaches equal standing in unquantified data and other impact variables. The simple cost-benefit matrix did not indicate where relative importance for each approach should lie. Furthermore, there is nothing to clearly identify that one cell in the matrix is more important than any other and no formula applied for
comparison (Ziller & Phibbs, 2003). In addition to financial costs, the cost benefit analysis considered nonfinancial costs and benefits (Ziller & Phibbs, 2003).

**Results**

The results section presents the outcomes of the two studies, namely study one and study two.

**Study one results**

Interviews began with executives being asked if they could identify segments from the target population. Results suggested that understanding of possible segments varied substantially. Typically, executives selected one or two factors as a segment base (e.g. place lived), dividing the market into two segments:

P1 “Aware (of the water shortage situation) and unaware residents. I think more people will fall into the unaware category” (Male 55 year old, chair of sustainable committee).

P6 “I think we have two clusters, males and females, mainly housewives and maids” (Male 64 year old).

P13 “Two major segments inside the university are locals and expatriates” (Male 69 year old, living inside the campus).

P14 “I guess that the residents inside the university can be categorized into older and younger people” (Male 73 year old, living inside the campus).

After viewing segments obtained from the two different approaches, executives were asked to outline the costs and perceived benefits of the segmentation approaches they had been presented with. Executives believed the collected data for the quantitative study had come from a larger sample pool of residents, and this was viewed as being a more trustworthy approach. According to the executives the quantifiable criteria for conducting the segmentation provides better outcomes in terms of the resulting segments. It also will provide more reliable descriptive factors for each of the segments.
P2: “I trust the quantitative segmentation approach, because the generated segments were from a larger participant pool” (Male 65 year old, chair of sustainable committee).

P13: “Nice to have such results, form unknown field for us, to me both approaches gave remarkable results, but I think quantitative more trusted, because it’s less biased than the qualitative, regardless of higher costs”.

P16: “definitely, the quantitative study needs more time, people, and investments in the applications and computers, but outcomes benefits supposed to be higher and reliable”.

Additional benefits of the quantitative segmentation approach that were identified by executives included accuracy and a more scientific approach.

P1: “I know costs are going to be high, but results are going to be accurate”. “I am an engineer, so I am with the scientific approach quantitative approach” (Male 64 year old).

P12: “I have no doubt that the costs from time, expertise, and software will be higher, but you have to invest in your studies”.

P9: “I’m a strong supporter of quantitative approach because it is done based on opinion of the majority of residents” (Male 73 year old, living inside the campus).

Analysis indicated a clear preference for the quantitative segmentation approach. While the relative perceived advantages of deeper information from the qualitative approach were noted by executives the power of a quantitative segmentation to deliver the confidence that segments were derived on the basis of a larger sample of respondents was viewed favourably by executives.

P3: “the large sample of the quantitative approach, made me feel confidence in the generated segments. However, the qualitative has the advantage of talking to the people and to get more insights” (Male 68 year old, living inside the campus).

Analysis indicated a clear preference by executives for the quantitative segmentation approach. Executives clearly indicated that the perceived advantages of
the quantitative approach outweighed the higher costs on the basis that a wider and potentially more representative sample could be gained.

P5 “Yes, the cost is higher in doing quantitative segmentation, but the benefits are also higher and the data is more trustworthy. If we have to do something like that, it should be worth it. I would choose the quantitative approach” (Male 55 year old, chair of sustainable committee).

P6 “You know the university has all kind of resources, funds, time, and expertise. Therefore, if we want to do a research it should be at a larger scale, in order to generate valid results. Thus, I will choose the quantitative approach to do a segmentation study, regardless of higher costs, I expect more solid outcomes and results. In the meantime, the qualitative approach is a good to do at a small scale for quick feedback” (Male 64 year old).

P11 “May be for small organizations or a quick study, the qualitative approach might be helpful, but for larger scale studies the quantitative approach is more convincing and appealing for decision makers. May be costs of this approach are higher but also the benefits should be more and can be used in different areas” (Male 68 year old, living inside the campus).

P16 “I will use the qualitative segmentation approach to gain more insights, then I will conduct a quantitative approach. So, I don’t want to miss any chance from the two approaches. Good results “benefits” important to me than “costs” at this level” (Male 68 year old, living inside the campus).

4.2 Study two results

The following, table (1), summarizes the CBA of the two segmentation approaches considered in this study, namely qualitative and quantitative segmentation.

TABLE (1) ABOUT TO BE HERE

CBA indicated that quantitative segmentation incurred a higher financial cost compared to a qualitative approach. Non-financial costs and benefits can also be identified by CBA. Table (2) summarises the costs and the benefits for the two segmentation approaches employed in this project (qualitative vs. quantitative) drawing on CBA and decision maker perspectives.

TABLE (2) ABOUT TO BE HERE
Combining cost benefit analysis with executive viewpoints delivered an understanding of the relative costs and benefits of the two segmentation approaches. Executives agreed on the importance of conducting segmentation for the targeted audience and also identified that both approaches helped to uncover insights which may have not otherwise been produced. Importantly, executives trusted the segments generated from the quantitative approach, due to the large sample size and the ability to validate the results, notwithstanding the higher costs.

**Discussion**

The aims of this study were twofold. First, decision makers were interviewed to identify the costs and benefits of different segmentation approaches. Second, a cost benefit analysis was applied to examine the relative perceived benefits and costs of each segmentation approach, qualitative versus quantitative segmentation.

This study contributes to knowledge in the field of social marketing in different ways. This study revealed that UoS executives lack knowledge about market segmentation and how segmentation might be conducted, along with the importance of segmenting the market prior to designing and planning a social marketing intervention and other programs. The lack of detailed understanding of segmentation demonstrated by executives may provide one explanation for the low utilisation of segmentation in social marketing research and practice (Kubacki & Rundle-Thiele, 2017). Executives were interested in the results, presented by the lead researcher, of the two studies conducted inside the UoS that had been undertaken to derive segments for the water use market. Therefore, it is suggested that social marketers offer support to executive stakeholders to make strategic marketing decisions. Rather than limiting their attention to everyday business, executives should be directed to take a big-picture approach to the core services they administer (Randle & Dolnicar, 2017).
Researcher questioning of executives revealed that they were unable to identify clear segments. Their understanding of possible group differences as occurs in segmentation analysis was limited to one or two variables which, in turn, would describe two distinct groups (e.g. locals versus expatriates). Therefore, executives were unable to assess the validity of different market segments using assessment criteria such as size of the segment, and the extent to which identified segments are substantial, measurable, accessible, differentiable, and actionable (Dolnicar, Grün, & Leisch, 2018; Kotler & Lee, 2008). This study provides further evidence which suggests that executives have a limited understanding of market segmentation which, again, may describe partial use of this key social marketing benchmark (Kubacki & Rundle-Thiele, 2017). The results of this study suggest there may be a need for investment in segmentation (Dolnicar et al., 2016), given that application of segmentation can assist decision makers to direct resources to disadvantaged sectors, potentially strengthening communities most in need. This study indicated that decision makers from a non-business background (the four participants were from applied science backgrounds − engineering, mathematics, and physics) nominated quantitative segmentation over qualitative segmentation. This preference occurred, despite the higher costs, because of higher perceived benefits and their greater confidence due to the number of people included in quantitative segmentation analysis.

A quantitative approach was viewed by executives as more likely to be generalised to the targeted population and a key strength was the ability to validate segments derived analytically. The preferences expressed by decision makers were reflective of the dominant approaches applied within social marketing research and practice. Most social marketing segmentation studies use quantitative approaches
(Ibrahim et al., 2017; Warner, Chaudhary, Rumble, Lamm, & Momol, 2017), consistent with executives’ preferences identified in the current study. Another strength of the quantitative segmentation approach nominated by executives was that data analysis procedures and results can be validated at all stages (Rundle-Thiele, Kubacki, Tkaczynski, & Parkinson, 2015). Finally, executives highlighted that the quantitative approach gave a comprehensive description of the different segments, valuable for informing the design of a successful marketing mix (Randle & Dolnicar, 2017). Executives also perceived weaknesses in the quantitative approach such as the higher financial costs and time involved, and the requirement for expensive software and special expertise (Dolnicar et al., 2018).

Finally, application of CBA was demonstrated in the current study. CBA can facilitate the calculation of the relative costs and benefits of alternate approaches which may not be otherwise comparable. The current study provides a case study demonstrating how CBA provides a dollar amount estimate permitting alternate segmentation approaches to be compared and contrasted, assisting in value estimation (French, 2017). CBA analysis has previously been used to compare different programs (Schofield, 2018), with considerably less attention directed towards comparing different analytical approaches applied in social marketing, and behavioral change practice more broadly. CBA offers a technique applicable to demonstrating cost savings that can be derived from choosing one method over another. Moreover, CBA assists in understanding the benefits or potential opportunity costs both financially and non-financially.

Finally, this paper demonstrates the utility of using two different approaches to consider the relative costs and benefits of different analytical approaches. A purely financial CBA would have selected qualitative segmentation, costing considerably
less than quantitative approaches. A mixed method approach yielded a different outcome with executives indicating a clear preference for quantitative segmentation, which was viewed as a more trustworthy data source than qualitative segmentation due to larger sample sizes and statistical validation of segments generated.

**Limitations**

Limitations of this study relate to the methodology applied, the sample selected and the lead researcher (Creswell, 2013). Semi-structured interviews require data collection in an environment constructed by both researcher and participants, in order to increase credibility and dependability; it is possible that different executives would yield different study outcomes (Bryman & Bell, 2015). Another factor is selection bias, which limited this study to UoS executives. It is conceivable that middle-level management would have had the desire to participate because they make the recommendations to top management in decision making (Bryman & Bell, 2015). The researcher did not collect precise data on time taken to design, implement and analyses the two segmentation studies, which qualified the precision of the cost benefit analysis. Also, the fact that the sample includes participants from a relatively narrow range of disciplines should be noted as a limitation of the study.

**Future research**

This study provides a starting point to support future social marketing research demonstrating the potential for CBA to be applied to compare and contrast alternative approaches. It is important for future research to capture the opinions of all three levels of management – first line managers, middle management, and top management – and it is recommended that more than one data collection approach be utilised, extending insight beyond executive viewpoints. It is also necessary to include more stakeholders, such as participants and recipients, non-government agencies,
service providers, multiple levels of government, and the broader society and economy in any future research.

It is necessary for future social marketing projects and studies to apply specific cost benefit analysis terms, to capture the complex nature of many of the costs and benefits of the programs, and understand the multiple stakeholders involved in the programs in order to respond to inconsistencies in data across stakeholders. Therefore, it is recommend that social marketers use advanced reporting systems such as integrative cost benefit matrices (Ziller & Phibbs, 2003).

**Conclusion:**
The purpose of this study was to explore the executives’ views about the two social marketing segmentation approaches. Therefore, a semi structure interview has been conducted with 16 executives of the UoS, the cost benefit analysis (CBA) used to validate the results. The study revealed that executives were preferring the quantitative segmentation approach regardless the higher costs, furthermore that executives from non-business background lack the knowledge about social marketing and segmentation.

The main limitation of this study is a sample which only consist of top management, in any future research, researcher need to include managers from all three levels.
References:


