



APPLIED QUANTITATIVE BUSINESS RESEARCH

Report Assignment

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Disclaimer

The selection of reference articles was taken from journals of rating levels 1 and 2 due to no availability of journals in rating level 0 or 1* in Marketing subjects.

Abstract

This study is inspired by the ethical consumption based on 2 research studies done by contributors to 1 and 2 rated journals in marketing journals rated by Academic Journal Guide by Chartered Association of Business Schools (2018). The 2018 ratings indicate the rating 1 is in modest publications contributing to the subject and as an indicator of the journal subscribing to normal scholarly standards. Rating 2 indicate that of journals of acceptable, original, and fully refereed publications. However, given the instructions of the lecturers to rely on 4 or 4* publications, there is still a significant gap between acceptable and modest publications to highest of distinction publications.

The journals of choice are of rating 1 and 2 and both the journal articles focus on both green consumption of ethically manufactured products and the focus of young consumers in ethical consumption. The avenues of research lead to making awareness of ethical consumption, perceived customer value of selecting an ethically manufactured product and the concern of cost.

The report aims to understand the specific impact of quantitative research in the field of consumerism, producing an ethical consumer and green marketing. As part of the task, part of the task focuses on the alternative methods of research, that can produce alternative research paths as well as results.

As the journal articles concentrate on structural modelling as a technique, the alternative approaches of using software as an analysis method (SPSS) is studied as a suggestion as well as qualitative research. The qualitative research provides further in-depth analysis into the green consumption field as the in-depth discussions can support the holistic picture of the research matter.

The task contributes to the understanding of the general use of quantitative research, hypothesises building and the research process that follows. Although the general direction suggest that the quantitative research had been employed to its optimal potential, the added value from qualitative research can support the addition of individual's subjective experience. Strengthening the whole research area just as the compared most cited journal articles had done.

Introduction

Green Resonance and Consumer Behaviour

From what was started by Rachel Carson, a marine biologist from America, the retrospection to respecting and responding to the climate emergency in consumer behaviour is highlighted in the modern business practices. McCarthy (2012) and Williams and Prest (2020) productions on retrospective written and audio podcasts of green revolution highlight what Rachel Carson's findings were with gradual silence befell in American countryside due to dying species of birds including American Eagle. Another perspective from Carson's work was pointed out by Pittsburgh Green Story (2017) as currently human consumption of chemicals had reached to a greater amount than ever before.

"Only within the moment of time represented by the present century has one species; man acquired significant power to alter the nature of his world."-Carson (2020).

In agreement with the above statement, the responsibility of humankind and the essential need of responding to climate emergency is imperative. The consumer behaviour related to ethical consumers and motivators have become a popular choice of discussion with millennials as well as being conscious of the actions as pointed out by The Guardian Labs (2019).

Understanding ethical consumer, if divided into marketing, consumerism and green consumer, ethical consumption is defined by Jobber and Ellis-Chadwick (2013, pp218) as the consumers interest to making purchase decisions based on not only the personal interests, but also the environmental and societal concerns. The results of this concerns include, challenging corporate brands employing democratic purchase behaviour, being responsible into researching before and after buying and boycotting brands who do not employ ethical best practice as pointed out by Ethical Consumer (2020).

Impact of Research in Ethical Consumerism Field

Currently, the ethical consumer, ethical marketing, consumerism has headed to directions of customer purchase intentions, moral obligations, key interests based on the moral obligations and organisation-oriented CSR. Most quoted publications of past 3 decades from Google Scholar include Carrington et al (2010), Polonsky (1994), Peattie and Crane (2005), Cronin et al (2011), Uusitalo and Oksanen (2004) and Strong (1996)(Appendix 1). In relation to research methodologies, mostly quantitative research methods are used in the form of in-depth questionnaires while some researchers used quantitative research in the form of surveys (Appendix 1).

The Assignment

The assignment focuses on current research and past research in comparison to the research methodology. The objective of this research activity is to understand the usefulness of the quantitative research to this research area taking two example research studies. The task also addresses the alternative approaches to the green consumer values taking the underpinning knowledge built on the above knowledge.

The research that has been taken to this report are from journals of rating 1 and rating 2 from Academic Journal Guide. Putting the concept of green consumption into practice, the work here administers the process of research, methodology and findings to understand the current impact. As a research student, with limited experience of quantitative research, the work here underpins the authors knowledge on quantitative research method, reliability and validity tests and alternatives as prospective additions to methodology.

Rationale for the choice of articles

Eco-friendly millennials

Millennials choice of being eco-friendly consumers seems mostly inspired by sustainable development goal by the United Nations. Cheng (2019) indicate the qualities like millennials eagerness to be technologically savvy, ethnically diverse, be knowledgeable and most importantly be conscious about their decision support this behaviour.

Sadani (2019) describes millennial buying habits and ultimate intention as “mindful about what they are seen flaunting, they believe in their duty towards the world and attempt to connect the dots to make the society a better place.”

Belonging to this generation, the authors inspiration to research about this specific topic come from previous research into collaborative consumption, shared economy, and ethical consumption. Collaboration consumption and shared economy have core needs like redistribution market, collaborative lifestyle and product service system as pointed out by Botsman and Rodgers (2010). However, the main goal seems to be sustainability as suggested by Heyman (2017).

Working towards a better responsible future

United Nations has established the 12th sustainable development goal as the Ensure sustainable consumption and production patterns. The prediction of United Nations of the life in the planet by 2050 require the resources of 3 planets, furthermore the concern of endangerment of resources in combination with goals like clean water, life under sea and life on land (United Nations, 2020).

Key statistics on UK shoppers by Briggs (2019) indicate that the consumers are aware of the ethical consumption, labelling and the perceived costs included in sustainability. The definition by shoppers include consideration of the needs of future generations over present generations, using renewable energy, environmentally friendly, caring people, plans and planet equally.

However, despite the international and national widespread concern, the practices on sustainable consumption, fashion, food, beauty, and travel consumption are suggested by Rahman-Jones (2019). Small steps to a better eco-friendly future are seemingly encouraged through news media, academic interest, and industrial commitment.

Academic publications inform the opinions of managers and decision makers

Green marketing for public awareness has come a long way from where Rachel Carson started 50 years ago to now. Scholarly interest on interest, preferred brands, costs, and prices are encouraging when starting to plan for the stakeholders of the academic publications.

The choices made for this report were inspired by the interests in the previous decades and the impact of research that can inspire future managerial decisions. The additions from alternative methods and the alternative research that can be added to the field.

Methodology and research design

Summary of the chosen articles

Young Consumer's Green Purchasing Behaviour: Opportunities for Green Marketing by Uddin and Khan (2018)

Journal title- Journal of Global Marketing

Journal rating- 1

This study is aimed at understanding the green purchase behaviour of young Indian consumer groups by analysing 3 attributes: altruism, interpersonal influence, and environmental knowledge. The hypotheses are based on the 3 attributes in young consumers and arrive on the hypothesis 4 as below.

H1: Interpersonal influence significantly influence environmental attitude.

H2: Altruism significantly influence environmental attitude.

H3: Environmental knowledge significantly influence environmental attitude.

H4: Environmental attitude of young consumers significantly affects their green purchasing behaviour.

The demographic data is also part of the collection and the variables include the gender, age, monthly income of the family and the level of education. In addition, the authors conducted a pilot study resulting the authors to concentrate on a 19 factor based measurements compared to the starting 23 factors.

The study concluded that the young consumers of India are supportive of learning and being purposefully engaged in green consumer behaviour. Their positive interaction towards the environment and related purchase intentions are also supported by the academic implications of facilitation of environmental attitude. Lastly, recommendations for managers include acknowledging the pivotal role played by young consumers in India and other emerging economies and using that population to respond to what the market demands; in prospects, to see young consumer groups to mature into environmentally conscious decision makers and be sensible in the market.

Types of value and cost in consumer–green brands relationship and loyalty behaviour by Papista et al (2018)

Journal title- Journal of Consumer Behaviour

Journal rating- 2

The study analyses the customer value generated by 3 main attributes: value dimensions, purchase costs and switching costs. The research is conducted by employing the quantitative research and structural modelling. The research displays with the findings establishing the significance of values-attitude-intention approach.

The survey is building up the conceptual model to identify the supporting and rejecting 6 hypotheses which are based on the 5 variables as below and ultimately reaching to hypothesis 6;

H1-Perceived value dimensions

H2-Perceived purchase costs

H3-Perceived switching costs

H4-Customer value

H5-Relationship quality

H6a-Perceived value dimensions on the customer value of a green brand is stronger (vs. weaker) for

consumers with high (vs. low) involvement in the product category.

H6b: Perceived purchase costs on the customer value of a green brand is weaker (vs. stronger)

for consumers with high (vs. low) involvement in the product category.

H6c: Perceived switching costs on the customer value of a green brand is weaker (vs. stronger)

for consumers with low (vs. small) involvement in the product category.

In addition, the authors have taken the demographic factors into account such as gender, age, level of education, marital status, base location, and preferred brands of green products. The study concludes by offering recommendations to managers that different product categories might have different customer values applied by the customers and specific studies can support more tailored outcomes or strategies.

Research design

Opute (2020) points out that the purpose of conducting quantitative research is to explain, predict and investigate. Furthermore, it explores the relationships between variables assuming the linear relationships between the factors of analysis. On the contrary to qualitative research which undergoes in-depth research in a research matter, and it is also an exercise of understanding meaning given by an individual or a group to an experience as a solution to a social problem as pointed out by Creswell (2014, pp32).

Sampling techniques

Both the studies have used the convenience sampling technique. The convenience sampling is a technique to get a sample with convenient access according to Muijs (2004, pp50). It allows the researcher to work in a population and pick a sample in the most convenient manner. Although convenience is an advantage, in technicality, the opportunity for everybody in the population to be selected is the same.

However, Etikan et al (2016) argue that by employing the convenience sampling the sample might not be relevant to the study resulting a low-quality data collection. Within these studies, the convenience sampling can be an element that reduces the participation of knowledgeable subjects.

Although, all research must have a sample or population to study, the use of convenience sample can be compared to a purposive sample which can also lead to the researchers to recruit subjects from more relevant backgrounds. Etikan et al (2016) further point out that this is due to the researchers attempt to firstly understand what should be studied and then find subject who have expertise on the research area.

Quantitative research vs qualitative research

The task of analysing the journal articles require the knowledge of quantitative research knowledge whereas the authors previous research is conducted in qualitative research. Hence, a comparative account of authors experience of analysing the research articles follow the analysis under this topic.

Qualitative and quantitative research, both in different levels search in-depth or more measurable content about a research problem. In this case, the quantitative research has given the researchers the foundation to understand the research hypotheses in relation to the demographics involved.

The quantitative research is defined by Gunderson (2000 cited Muijs, 2004, pp1) as “explaining phenomena by collecting numerical data that are analysed using mathematically

based methods (in particular statistics)". The numerical data were collected from 2 samples in each case by using research instruments, surveys, and Likert scales.

Working with numerical data, processing the numerical data involve software and modelling techniques and the authors familiarity is within IBM SPSS. One of the most important factors to determine the relationship between two variables or relationships between two or more sets of parameters include significance test which have been used in the 2 studies referred to in this report.

Significance test determines the accepting or rejecting of the null hypothesis while the significance value also can indicate the one-tailed or two-tailed significance (SPSS Tutorials, 2020). However, although the statistics and the significance values are used in the referred studies, the data analysis techniques differ resulting more structured models of results.

Data collection: Likert scale

The instrument of data collection in both studies is the Likert scale. Likert scale can be defined as a 5 point or 7 point scale that allows degrees of opinions rather than yes/no answers as given by Mcleod (2019). However, the constructs in both studies are different, measuring the significance and relationships between variables.

Bertrum (2007) further adds that Likert scale also works as unidimensional and statistically independent psychological measurement. The Likert scales use of social sciences research can be given in examples in surveys. However, Likert scale can have disadvantages when being used as the translation and reversing from positive to negative scale can be confusing as given by Hartley (2013).

As an instrument, Likert scale can be considered as an important part for both of the referred studies due to the amount of data collected in an elaborative yet in a measured manner. For example, the statements made in the study 2 are combining 2 constructs at once. Although appearing to be confusing as discussed before, the nature of the statement are responsive to scales of strongly agree to strongly disagree.

However, based on that assumption, the recommendations on part 4 is covering how mixed method research would be more appropriate to understand research areas like this, that requires expert or at least an interest in the subject area. If the Likert scale is put to the test here, the researchers' approach can be justified as the questions/constructs are not autonomous or singular. According to Bishop and Herron (2015), the usage of Likert scale (or any version of questionnaire that demand Likert scale type responses) can be conveniently converted to unified statistical analysis.

Significant variables

In both studies, significant variables can be studied as the perceived customer value, perceived value of the goods, and knowledge on the environmentally friendly consumption. The hypotheses are built to understand what positively supports and what variables negatively supports the suggested hypotheses.

But because the study 2 comprises of multi variables and structures, the emphasis can be found on the supporting variable, for example, the significant relationships between customer value and value dimensions, purchase costs. The level of significance is indicated at 0.05 and 0.001.

Although the data analysis techniques are different to each other, the significance can be supported by the hypotheses of both studies. The resulting conclusion can be collectively determined as the environmentally knowledgeable consumers still are concerned by the involvement with the brand while price and cost related decisions.

Exploratory factor analysis and confirmatory factor analysis

The study 1 occupies exploratory factor analysis (EFA) and confirmatory factor analysis(CFA) to interpret the data. EFA and CFA are given as techniques partly combine both analysis techniques and partly relying on theory and partly relying on the analysis as explained by Hurley et al (1997). From early research to now, the changes of both techniques include the facilitation in IBM SPSS to conduct the factor analysis (Fabrigar and Wegener, 2012, p108).

EFA is used for the pilot-test while CFA is used for the main measurement model in the study 1. Employing EFA, the pilot test was able to contribute to the research by refining a 23 scale research instrument to a 19 scale research instrument. Then using a 5 factor model, the CFA is used to accumulate the results that were interpreted as the favourable outcome to environmental knowledge.

The guidance by IBM (2018) indicate the use of SPSS to determine the factor analysis and the contributions to factor loading and Cronbach alpha values. The significance of those values can be given as the coefficients between variables indicating the relationships (UCLA, 2020) and internal consistency (UCLA, 2020).

Analysing the results in the study 1, it can be confirmed that factor loadings disclose the minimum criteria while, Cronbach Alpha is questionable in the rest of the factors except the internal influence and green purchasing behaviour stating the values of .789 for both. However, the researchers have taken 0.6 as the value of correspondence and made the confirmation that Cronbach Alpha values are related.

Structural modelling

The study 2 occupies structural modelling to interpret the data. Structural Equation Modelling is defined as a multivariate statistical analysis technique that can analyse structural relationships. Using factor analysis and regression analysis as presented by Statistics Solutions (2020).

Using the two types of models below, the comprehensive solution to relationships between variables are explored.

“Measurement model: The measurement model represents the theory that specifies how measured variables come together to represent the theory.”

“Structural model: Represents the theory that shows how constructs are related to other constructs.”

Analysing the results of the study 2, and the use of structural model, the output can be interpreted as the positive and negative impact on the hypotheses. Misic and McIntosh et al (2015) also suggest the causal relationships created by formulating this model although in this example it doesn't have further causal indications or descriptions except for the hypotheses derived from previous research.

The contrasting elements of the structural model can be understood as the negative theories are taken into the main framework of customer value. But, since the supporting constructs create the theory, the customer value in this case, the eco-friendly detergent can be divided into several parts namely, economic value, hedonic value, and altruistic value. The several customer gains and losses can account for the impacts on the rest of the constructs, influencing the consumer loyalty, switching costs and the relationship with the brand.

Conclusions and recommendations

The report concludes the analysis on the research studies on a positive note of raising concerns for the managers and decision makers to include awareness of ethical consumption and to occupy more tailored strategies for the business performance. Furthermore, the research and the work covered in the journals have scope of improvement in the recommended areas below.

Alternative research methods

Analysing the appendix 1, the evidence suggests that, most cited research studies in the research area occupied qualitative research in contrast to quantitative research. Although it is a must to acknowledge the power of quantitative research as a methodology that can achieve faster outcomes with an adequate sample, qualitative research can offer an in-depth outlook to the research area.

Barnham (2015) describes the answer by qualitative research as “to establish how respondents divide up their experience of the world through their ‘perceptual judgments’”. But in the form of narrative accounts or cases, the contrast between finding the middle ground of the personal experience and a generalisable finding raise the need to establish methods of triangulation as Fusch et al (2018) point that triangulation adds more depth to the collected data.

Another research methodology to use is mixed method research. Creswell (2014, p266) defined the purpose of mixing or blending data require to conduct both qualitative and quantitative research and collect both forms of data to be analysed. Using the mixed method research be a rigorous yet methodical task according to Creswell’s definition of the process and evidently provide more angles than one to analyse one research problem.

However, justifying the alternative methods can depend on the alternative results that the researcher is after. Working towards building case studies or narrations of experiences connected with ethical consumption can be seen as a potentially attractive research output than conducting a survey given the novice nature of quantitative research knowledge of the author.

Common themes from research and prospective research

The common themes arose from both studies include the subjects interest on switching to ethical products and brands, particularly, the emotional and physical cost of switching. While these themes had been highlighted and supported by the previous research, the desire to explore the impact of price seem higher than other research interest,

For example, switching cost or switching barrier defined by Corporate Finance Institute (2020) qualify 3 variables: time costs, psychological cost, and effort-based costs. In contrast to the price and the impact of price, an alternative avenue of research can be suggested there.

Furthermore, the statistics support into putting the examples into practice can be suggested as an alternative output from the alternative research methods. For example, the suggestion of White et al (2019) of elusive green consumer highlights the intention-action gap while the concepts like corporate social responsibility and sustainable consumption aren't being investigated in a granular level. Hence, although both the studies consulted in the report were offering recommendations to decision makers, they were only a general guideline to tailor in the future. The potential of working the statistics into reality is evidently limited unless these academic interests are used to make public interests.

Demographic indicators

Both studies took the demographic indicators into considerations. The basic indicators like age, genders and specific indicators like level of education, monthly income were considered in both samples. The significance of taking the demographic data into account was being stated by French (2014) as the demographic data has a profound impact on the decisions made on the population. In this case, the demographic data provide the base for the backgrounds of the sample.

The justification of allowing the demographic data to be a significant part of both the research studies can be reflected back to the level of perception (study 1, H1 to H3) and the ultimate environmental knowledge achieved (study 2, H1 to H5). Also, as both the studies are considering the ability of the subjects to understand and make decisions on ethically produced product, only study 2 is considering the brands and product preferences, which can be recommended to study 1.

Pilot testing

Interestingly, pilot testing was only conducted in the research study by Uddin and Khan (2018) while the comparison of the higher rating journal didn't do the pilot testing but pre-testing to allow changes into wording. The significance of conducting pilot testing can be understood in both qualitative and quantitative research as a measure of testing the viability of the whole research design and methodology.

For example, Malmquist et al (2019) indicate that, the pilot testing in qualitative research can identify the weaknesses in the methodology and the corrections can be carried on the subsequent parts of the research study. Specifically, for quantitative research, pilot testing can minimise problems during research by pilot testing as given by Muijs (2004, pp51).

Comparatively, through journal ratings, although the research articles compete, the use of pilot testing would have maximised the value of results while contributing to the feasibility and financial support to the research techniques and the sample. Edwin and Hundley (2002) point out that although pilot studies don't guarantee the success of the research study, they increase the likelihood of the study being successful.

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Appendix

Appendix 1: Previous research with most citations in Google Scholar (1990-2020)

Author	Year	Number of citations in google scholar	Summary	Research method
Carrington M.J.	2010	1051	The study is conducted to understand 3 factors of the gap between exploring the ethical behaviour and exercising it; implementation intentions, actual behavioural control and situational context	Mixed method research combining pilot study and survey questionnaire
Carrigan M. and Attalla, A	2001	2308	The article examines the ethical consumer behaviour offering insights on if consumers care for being ethical in their consumption.	Focus groups-qualitative research
Shaw, D., <i>et al</i>	2005	391	The article explores the values of consumers that they consider when they	Questionnaire-qualitative research

			practice ethical consumption.	
Freestone, O.M., and McGoldrick, P.J.	2008	418	The article explores and develops 22 motive statements that can be used to communicate messages more effectively to consumers using decision balance scale.	ZMET and questionnaire-qualitative research
Thogerson, J.	1999	382	With reference to Danish consumers preference to packaging materials, the study investigates the response to two norms; environmental concern and absence of other characteristics of decision making	Telephone interview
Uusitalo, O. and Oksanen, R.	2004	497	This study explores a sample of Finnish respondents combining business ethics	Survey-quantitative research

			and exercising the ethical behaviour.	
Strong, C.	1996	452	This study is investigating the environmentally aware consumers evolution in relation to movements like Fairtrade in the UK.	Survey-quantitative research
Peattie, K. and Crane, A.	2005	969	This article investigates the evolution of green marketing as a part of marketing or as a branch of marketing that engages philosophy and ethics.	Systematic literature review
Polonsky, M.J.	1994	984	This is an account of introduction of green marketing as most consumers misunderstand it as promotion on environmentally friendly products. The legal,	Case studies

			competitive and societal implications are given as important considerations in understanding green marketing and using them in claims or promotions	
Cronin, J.J.	2011	598	This study investigates the various potential stakeholders within the company and externally are influenced by green marketing practices.	Systematic literature review

Appendix 2: Links to referred studies and references.

Link to study 1

Uddin, S.M.F., Khan, M.N, (2018). 'Young Consumer's Green Purchasing Behavior: Opportunities for Green Marketing'. *Journal of global marketing* [Online] 31(4), pp.270–281. DOI: 10.1080/08911762.2017.1407982 (Accessed: 01 December 2020).

Link to study 2

Papista, E. *et al.*, (2018). 'Types of value and cost in consumer–green brands relationship and loyalty behaviour'. *Journal of consumer behaviour* [Online] 17(1), pp.101–113. DOI: 10.1002/cb.1690 (Accessed: 01 December 2020).

