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The Impact of Marketing Strategies and Consumer Perceptions on Sustainability

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Abstract:

The majority of research on green consumer behavior, particularly as it relates to disposal and purchase, has focused on socio-demographics and demographics, producing a wide range of sometimes contradictory results. In order to further the discourse, we conducted a comprehensive study on 40 different sustainability activities involving 100 consumers. Each participant ranked these activities on a matrix based on their perceived level of effort and the perceived impact they have on the environment. The researcher has identified trends both among respondents and between certain activity combinations. This model helps us better understand how customers see sustainable practices. Marketers might use this knowledge to contemplate marketing tactics that effectively impact consumers' impressions of these activities.

Keywords: Consumer, Green marketing, Perceptions, Marketing strategies**,** Sustainability,

Introduction:

Management theory holds that the supposed green consumer behavior boom of the '80s and '90s never materialized and that "the mass consumer market" for environmentally friendly goods has not yet matured, bringing social issues like CSR and environmental protection back into the spotlight in academic circles.[1] In general, consumers have not met marketers' expectations in their response to green marketing efforts. Nevertheless, the current focus "on environmental issues such as global warming, health risks, the demand for organizations to be accountable for their environmental performance, the labeling of products with environmental claims, and the advancement of technology that enables consumers to investigate these matters independently, has revived interest in the concept of environmental marketing."[2] Within the field of "marketing, the green movement has been perceived as a chance to find and categorize new markets, although not completely effectively."[3] This paper examines prior studies on environmentally conscious purchase and disposal, explores the challenges faced by marketers, and proposes an alternate strategy for finding and promoting sustainable practices based on existing literature and our own research.

Transcending green segmentation:

One common theme seen in the majority of this field's marketing research is the attempt to identify the characteristics of customers who care about the environment in order to do segmentation.[4-8] This research has not consistently produced conclusive results, and findings from one study have been consistently refuted by another. The primary methods employed for segmentation are "demographics and/or socio-demographics, aiming to match consumers' attributes with their inclination to buy environmentally friendly products and services. Marketing scientists have identified that the green consumer can possess varying levels of education, age, and gender, or may not exhibit any discernible correlation with these criteria in relation to their environmentally conscious behavior." [9] Marketers have not been the only ones adopting this method to comprehend green behavior, and they have also been unsuccessful in identifying consistent connections with demographic factors. Researchers in waste management who are studying the later stages of the consuming process have had similar challenges in identifying individuals who engage in recycling.[10] Moreover, research conducted in both fields validates that while the majority of individuals express apprehension for the environment and express support for initiatives or goods aimed at its preservation or enhancement, this does not necessarily correspond to their actual purchase or disposal behaviors.

The level of compromise:

This might manifest in several ways, such as experiencing increased costs or having to drive longer distances in order to acquire an environmentally friendly product. Additionally, it could imply that acquiring a green alternative may require compromising the product's performance.

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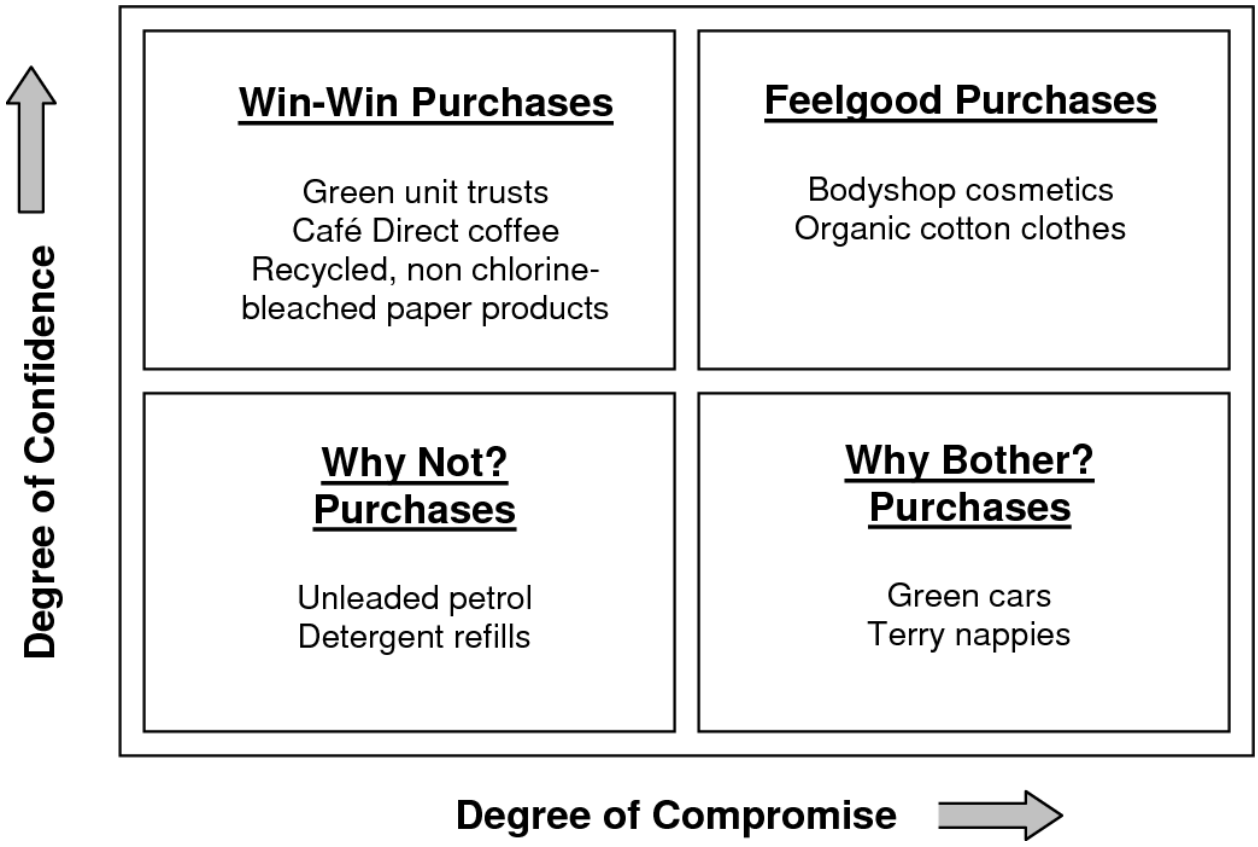
The level of confidence:

This indicates the level of confidence the consumer has in the product's ability to effectively treat a legitimate problem and provide an environmental advantage. The concept being discussed is fundamentally identical to "Straughan and Roberts' concept of perceived consumer effectiveness (PCE)."[11]

Peattie categorizes these characteristics as continuum, representing the range of possibilities for green purchases. Consequently, he develops "a green purchase perception matrix that provides a method for classifying specific green purchases, rather than the individuals who make them. Each category includes instances of purchases that represent one of the four potential combinations (Figure 1)."[12]

"Peattie's matrix" suggests a compelling idea of purchases that are enduring and fall into specific categories based on perceived trust and trade-offs.[13] The ability to detect purchases in this manner facilitates the development of precise marketing tactics, such as utilizing communications to highlight the product's positive impact on the environment or enhancing its effectiveness to minimize any perceived trade-offs.

Figure 1: "Green Purchase Perception Matrix"



Source: Adopted form Peattie (1999)[14]

The aim of this research is to determine the particular sustainability-related actions that consumers link to each of the four categories on the matrix. This will enable us to comprehend the ramifications for marketing tactics and sustainability policies. The importance of client opinions, as shown in the literature, strengthens our proposal to use these perceptions for the evaluation of sustainability and marketing. In the subsequent part, we will delineate the development of our sustainability matrix, followed by the findings and the marketing ramifications that ensue from them.

Techniques:

In order to transform Peattie's (1999)[15] matrix into a research instrument, we have included several modifications. The adjustments can be classified into two primary categories: those aimed at expanding the matrix and those intended to streamline its use during interviews.

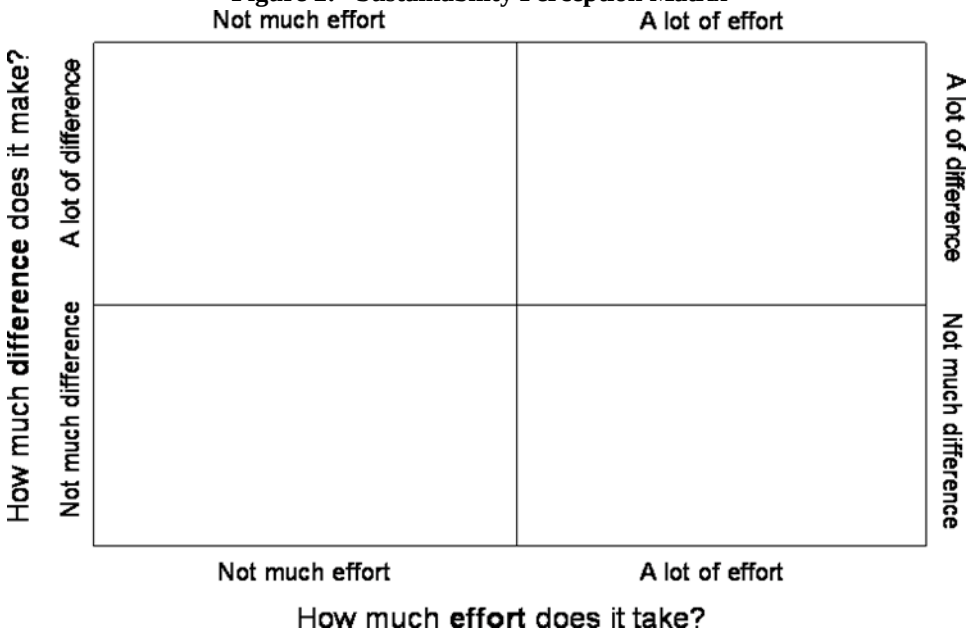
Expanding the matrix:

In order to ascertain the viewpoints of the interviewees regarding a similar set of activities, we compiled a roster of activities for their evaluation. Our process commenced by compiling a list of activities derived from both scholarly sources and conversations with peers. We want to encompass a broad spectrum of sustainability-related problems. From this list, we have established separate categories of activities that are associated with purchasing, disposing, using utilities, traveling, managing domestic tasks, working, and participating in community-related tasks. In order to get a thorough examination of challenges, we refined our initial inventory by removing comparable or repetitive subjects, using these seven classifications as a structural basis. The outcome of this technique produced a collection of 40 exercises that we may use with the participants. We made sure that the list included both widely practiced activities, such as 'Donating items to charitable stores,' and more niche ones that only very committed people may consider, such as 'Participating in a Local Exchange Trading System (LETS).' The to-do lists for each interview were chosen randomly in order to mitigate any possible biases associated with correlations. To get a thorough inventory of actions, it is advisable to reach out to the author.

Simplifying the matrix:

In order to enable participants to directly manipulate the matrix, we have created a version that is more intuitive and easy to use. We initiated the process by streamlining the terminology employed in the original matrix with the aim of enhancing its accessibility. Researcher has implemented Peattie's (1999)[16] "notions of 'degree of compromise' and 'degree of confidence' (Figure 1)" by utilizing the direct inquiries: 'how much work does it require?' and 'how much impact does it have?' respectively (Figure 2). By translating these notions into less academic language, we have preserved their original meaning while also making them more applicable for empirical research. The titles of "the four perception categories (e.g. 'Win-Win')" were intentionally omitted from the matrix presented to the interviewers in order to prevent any potential influence on their responses. The Sustainability Perception Matrix, which was utilized with participants, is displayed in "Figure 2."

Figure 2: "Sustainability Perception Matrix"



Source: Adopted from MacDonald, S., et.al. (2006)[17]

Interview process:
The interview was conducted using a tripartite methodology:

1. Each participant examined the list of activities and indicated the ones they usually participated in or had recently participated in.
2. After that, the researcher asked participants to consider the "effort" and "difference" that each action deserved, whether or not they had chosen it, and then mark it in the matrix appropriately.
3. Following the interview, the researcher had to complete an easy categorization form.

The efficacy of this research design was assessed through the administration of 10 pilot interviews, following which slight modifications were implemented to the research instruments. Every interview had a duration of around 30 minutes. Researcher conducted a total of 100 interviews. Considering our aim to use both qualitative and quantitative procedures in data analysis, it was crucial that our sample adhered to the quality requirements necessary for both approaches. Therefore, the categorization section of the questionnaire was used to ensure the incorporation of a wide variety of ages, genders, and jobs in our sample. The sample for our research was collected from the adult population of Hyderabad, a densely populated city in India, in the year 2023. Individuals were originally enlisted through personal connections and then through a snowballing method. The final sample consisted of 44% males and 56% women, in comparison to the gender distribution of the Hyderabad population, which comprises 48% men and 52% women.[18] The sample closely resembled the age distribution of the Hyderabad population, except for “the 30-39 age group, where we had a higher proportion of respondents compared to the whole Hyderabad population.” In addition, we employed a qualitative theoretical sampling methodology and conducted interviews until we achieved conceptual saturation level.

“**Data analysis:**”

The interview data has been examined using two separate approaches. The actions of each interviewee were recorded in a spreadsheet, which documented their progress and categorized them into certain quadrants based on perception. The frequency data underwent statistical analysis using Chi-squared tests to see if any of the activities could be categorized into a specific cell of the matrix.
The completed matrices were then analyzed in qualitative research with the objective of identifying patterns of perception both within and between people. This research investigated both the overall distribution of activities throughout the matrix and the individual's subjective assessments of activities they participated in and those they did not. A further qualitative analysis was performed to find combinations or sets of activities that regularly co-occur on the matrix, irrespective of their cells.

Findings:
At the start of our empirical research, we held the belief that, in line with Peattie's[19-21] suggestions we would discover a variety of activities that were generally considered to be into one of the categories on the matrix. Surprisingly, our interviewees saw just a limited number of activities in a comparable manner. For instance, ethical banking was perceived as having a significant impact with minimal effort by 23% of respondents, having a significant impact but requiring substantial effort by 28% of respondents, having little impact with minimal effort by 23% of respondents, and having little impact but requiring substantial effort by the remaining 26%.
There were only five activities that had consistent matrix placements, which were statistically significant at a 95% confidence level. These are shown in Figure 3. All consistent activities may be categorized as part of the high disparity/low exertion category. Moreover, all of them are directly linked to resources. The initial two are derived from our waste-related
operations, while the remaining ones are associated with utilities.

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Figure 3: "Activities which are stable in terms of **both** effort and difference"

	Not much effort	**A lot of effort**
A lot of difference	Kerbside recyclying (93%) Paper banks (84%) Switch off lights (75%) Don't fill the kettle (71%) Turn down the hating (66%)	
Not much difference		

Source: Field study

In terms of the magnitude of an impact various actions were seen to have, we did find a far better level of consistency. Put simply, certain activities exhibited a higher degree of consistency in their assignment to "the top, bottom, right, or left of the matrix rather than to specific cells. Figure 4 illustrates the activities that were linked to one of our axes (difference or effort) by over 75% of the participants." To ensure clarity, we have omitted the actions that are linked to both axes, as they have previously been explained in Figure 3.

The majority of the consensus in our data centers is on significant disparity and no exertion, with the notable anomaly of participating in a LETS scheme, which is often perceived as requiring substantial work.

"Figure 4: Activities which are stable in terms of **either** effort or difference"

	Not much effort	**A lot of effort**	
Lot of difference	Insurance (96%) Walk or cycle (97%) Recycle banks (94%) Use public transport (89%) Car sharing (88%) Donating to charity shop (87%) Support envitonment charities (83%) Reduce packing (79%) Reduce green fuels(80%) Buy low energy bulbs (79%) Green car decision (80% Refil containrs (79%)		
Not much difference		Low temp ashe (90%) Hand me don (88) Buy body shop(85%) Bottle in cistern(84%) Reuse items (79%)	LETS scheme (79%)

Source: Filed study

Figure 4's most salient finding is that, as opposed to being steady in regard to both axes, a greater number of activities consistently line with one of the axes. After removing the five activities previously linked to a single cell (shown in Figure 3), we find that eighteen more activities are associated with two cells, as reported by over 75% of the participants.

At the 5% level of significance, we have also found a group of activities that are equally associated with each of the four cells. Organic food and clothing purchases, corporate boycotts due to human rights or environmental concerns, ethical banking, composting, hankies instead of tissues, screen reading instead of printing out, and so on are all behaviors for which our respondents do not consistently exhibit a consistent perceptual profile. For marketers trying to get more people to do specific things, this finding represents a huge setback.

Before diving into the final analysis, researchers used a qualitative approach by comparing activities to see whether they were indeed assigned to the same section of the grid, even if different respondents could have assigned them to different quadrants. Since no discernible patterns emerged from this approach, we proceeded to compare the classification of each activity in turn. Table 1 displays the results.

"**Table 1: Activities which are placed together on the matrix by more than half of the respondents**"

	Paper banknote photocopier	Don' t fill the kettle every time you boil it	Switch off lights don' t leave on standby	Hand-me-downs	Use public transport rather than drive	Turn down heating/put on a jumper	Donate to charity shops	Refill containers
"Kerb side Recycling	79%	71%	70%			62%	60%	
Paper banks next to a photocopier		66%	71%	59%			59%	58%
Don't fill the kettle every time you boil it			65%	65%				59%
Switch off lights/don't leave on stand by						58%		
Walk orcycle rather than drive"					65%			

Source: Field Study

"**Discussion:**"

Our research has wider marketing implications than only helping with the development of a sustainability matrix. We had originally thought the matrix would show regularities in certain types of actions. Stable activities are significant because they may be marketed based on perceived effort and uniqueness. For example, if a customer thinks an activity is going to take a lot of work, you may sell it to them by showing them how easy it is or by stressing the big difference it makes, even if it does take a lot of effort. Another approach could be to minimize the level of exertion required, such as by expanding distribution or enhancing performance.

Our most significant and intriguing discovery has been the limited number of activities on our list that participants consistently assigned to the same categories on the matrix. This could elucidate the prior academic studies and marketing campaigns' lack of effectiveness in identifying and targeting environmental consumers, respectively. The subjective nature of individuals' perceptions makes it challenging to devise a universal marketing approach to promote these activities. This dilemma poses a significant challenge for “marketers.”

There are some exceptions to this rule. For example, there are kerb side recycling initiatives and paper banks conveniently placed near photocopiers. Additionally, people can make a difference by practicing energy-saving habits such as turning off lights, reducing heating, and boiling only the necessary amount of water. These exceptions tend to fall under the high impact/low effort category consistently. Given the consensus in our findings that these activities are perceived as requiring minimal effort but yielding significant impact, it is possible to promote these activities based on their effortless and potentially habitual characteristics.

Researchers also found that although relatively few activities are consistently located inside a single cell, many may be associated with a combination of two cells. This is another noteworthy finding from our practical research with the matrix. According to the research findings, effort and difference play important roles in understanding the perception of these activities. However, it is worth noting that they are not necessarily linked to each other. Our data provides us with insights on how to effectively sell activities based on either the level of effort or the degree of differentiation. Figure 4 demonstrates that although our respondents had differing opinions on the level of work required to use recycling banks, 92% of them believe that it has a significant impact. Thus, to address the public's uncertainty towards the usability of recycling banks, it would be beneficial to promote them using consumer testimonials that highlight how seamlessly they can be integrated into shopping habits, as our findings have indicated.

Our findings align with prior research in emphasizing the significance of difference or confidence in shaping perceptions of sustainability. Nevertheless, researching this topic is not easily comprehensible. The interviewees encountered difficulty in assessing the degree of variation, unlike the concept of effort which was perceived as comparatively uncomplicated (although effort does involve other potential components such as performance, distribution, and cost). The waste management literature extensively investigates the significance of perceived effort (or compromise), and we propose that it holds equal importance for overall sustainability.

Researcher has also discovered activities that are inherently paired or clustered, meaning that regardless of the category they belong to, they are always found together. Similar to the stable activities, a significant number of activity pairings revolve around the category of high difference and low effort. Revealing such connections enables the evaluation of marketing efforts. For instance, the success of one of these activities may also yield advantages for the other. Moreover, these alliances provide marketers with the opportunity to leverage existing promotional techniques for enhanced impact. This could imply collaborative efforts for related endeavors. It could also imply the advancement of one within the framework of the other, such as initiatives focused on promoting walking or cycling to work that revolve around busses or tram shelters.

Our data exhibits a bias towards responses that are predominantly 'positive'. Figures 3 and 4 demonstrate that we have discovered more robust and frequent connections between the cells labeled as 'low effort' and 'high difference' compared to those labeled as “'high effort' or 'low difference'. These findings align with the results of numerous other researches on environmental matters, which have consistently shown that the public views green actions, such as recycling, quite favorably.” Regrettably, this enthusiastic support does not always result in actual environmental initiatives, leading some to infer that individuals are providing environmental researchers with responses they believe will be perceived as correct. Hence, considering sustainability-related activities in a positive light is a constraint that applies to all studies in this domain.

Conclusion:

This study seeks to further explore and analyze "Peattie's (1999) matrix of green purchasing perception" through empirical research. We have thoroughly examined the data from various perspectives through a comprehensive analysis of both quantitative and qualitative studies. Extensive research has confirmed Peattie's (1999) assertion that both

compromise and confidence are key factors in influencing how the public perceives activities. Our research provides valuable insights into various aspects of the consumption process, including areas that the marketing and waste management industries have traditionally explored.

Moreover, the data shown in Figure 4 indicates a substantial consensus about activities that require less effort but have a significant impact. Both sets of results demonstrate the significance of effort and differentiation as crucial principles that can offer marketers useful “insights for the future of sustainability marketing.”

Researcher recommend that these matters require additional scrutiny. In order to accomplish this, scholars may be required to transcend the conventional confines of their areas of expertise and amalgamate the information from other expansive domains of study. To comprehend the underlying causes behind the connections we have discovered among various activities, it will be necessary to do qualitative study. In order to effectively implement the insights presented here into marketing techniques, further study is required to thoroughly examine the public's views of effort and distinction.

After confirming that effort and difference are significant factors in comprehending consumer perceptions of various activities, we recommend further investigation to determine if these are the sole relevant continua for understanding consumer perceptions of sustainability. We may have missed some more ideas that might have an impact on people's decision to engage in more sustainable purchase habits. If we want to find out what else may affect the consumption cycle in a similar way, we need to perform research that take a grounded approach to studying how people see sustainability efforts.

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