Research Article

Consumer Perception and Buying Behaviour Regarding Eco-Friendly Products

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Abstract

The shift towards eco-friendly products has gained significant attention in recent years due to growing environmental concerns globally. This study investigates the attitudes of consumers towards eco-friendly products and their impact on purchase behaviour. Through a comprehensive literature review and empirical research, the study explores various factors influencing consumer attitudes including environmental consciousness, perceived product benefits, and demographic variables. Additionally, it examines the extent to which these attitudes translate into actual purchase decisions. Data was collected through surveys distributed among a diverse sample of consumers, and analysed using statistical methods to draw meaningful insights. The findings suggest a positive correlation between favourable attitudes towards eco-friendly products and increased purchase intent. However, the study also identifies barriers and challenges that hinder widespread adoption, such as price sensitivity and a lack of awareness. The implications of these findings for marketers and policymakers are discussed, emphasizing the need for targeted strategies to enhance consumer awareness and address barriers to adoption. Overall, this research contributes to understanding consumer behavior in the context of sustainability and provides valuable insights for promoting eco-friendly products in the marketplace.

Keywords: Eco-friendly products. Consumer attitudes. Purchase behaviour. Environmental awareness. Sustainable consumption.

1 Introduction

Consumers are now more aware of environmental concerns than they were a decade ago. State governments are primarily concerned with global environmental challenges, such as air and water

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pollution, depletion of the ozone layer, global warming, and others, in addition to raising public awareness of these issues.

Environment deterioration was a major issue during the 1970s but was only limited to the purview of state governments. The population at large was not aware of or did not exhibit care towards the issues at hand (Akehurst, Afonso, & Gonçalves, 2012). A series of environmental catastrophes in the late 1980s made people reevaluate their lives and become conscious of environmental concerns (Titterington, Davies, & Cochrane, 1996). The 1990s were dubbed the "Earth decade" or the "decade of the environment." It was during this time that environmental and social concerns gained traction in the economy and people began to gather more information concerning the environment (Prothero, 1996). It was the time period in which consumers became more conscious about the environment. People began to take individual and group action as a result of growing environmental consciousness and sensitivity. Nevertheless, consumers have also been held accountable for their unmanageable consumption of commodities, careless handling of the environment (Banerjee, 2002; Menon & Menon, 1997), and ecological imbalance.

The existing literature, however, is not entirely in agreement on what really motivates consumers to act in a way that is environmentally friendly. More precisely, the link between conduct and attitude was shown to be different due to sociocultural, psychological, and demographic aspects (Diamantopoulos et al., 2003; Okr glicka, Mittal, & Navickas, 2023) . It is not well understood what factors influence consumers' desire to purchase environmentally friendly products (WTB-EFP) and their attitude towards the environment. Several writers contend that although many customers claim to be environmentally conscious, their purchasing decisions do not necessarily back up these claims (Gardyn, 2003; Kalafatis et al., 1999).

Therefore, the purpose of this study is to investigate how consumers perceive eco-friendly products and offer insights into the variables influencing their purchase decisions. By means of an extensive examination of extant literature, the present study seeks to elucidate customer attitudes and behaviours toward environmentally friendly products. Additionally, the study intends to offer suggestions for businesses seeking to efficiently advertise and sell their eco-friendly merchandise.

2 Review of Literature

Interest in sustainable consumption practices and environmentally friendly products among consumers has increased significantly over the last ten years. Consumers who care about the environment are more inclined to buy eco-friendly items (Polonsky, Carlson, & Fry, 2011). The survey did, however, also show that many customers are reluctant to pay a premium for eco-friendly items since they are more expensive. According to a Bougherara, Grolleau, and Mzoughi's (2014) study, customers are more inclined to buy environmentally friendly items if they are properly labelled and include information on the product's advantages for the environment. Likewise, Tukker et al.'s (2006) findings revealed that product labelling can serve as a useful instrument for encouraging sustainable consumption practices.

The opinions of consumers towards eco-friendly items can also be influenced by brand reputation. Janssen and Hamm's (2012) discovered that customers are more inclined to believe in and buy environmentally friendly products from companies that are known for being ecologically conscious. The study indicates that these initiatives are crucial in raising customer knowledge about and willingness to pay for environmentally friendly goods. Accessibility is yet another important element that might affect how consumers see environmentally friendly goods. According to a Jolly, Kastuar, and Villarreal's (2016) study, customers are more inclined to buy environmentally friendly goods if they can easily find them in stores. The study also discovered that significant determinants influencing consumers' willingness to pay for eco-friendly items include product price and perceived quality. In a similar vein, a study by Jones, Comfort, and Hillier's

([2019](#)) suggested that product availability plays a crucial role in encouraging people to adopt sustainable purchasing habits.

The price of eco-friendly goods is another significant element that may have an impact on how consumers see such goods. Tharanikaran, Sritharan, and Thusyanthy's ([2017](#)) discovered that consumers are willing to shell out more money for eco-friendly products if they perceive these products to be of superior quality and environmentally beneficial. Conversely, D'Souza and Taghian's ([2005](#)) found that consumers are reluctant to pay a premium for eco-friendly products if they believe these products are of lower quality compared to conventional ones. In summary, factors such as product labelling, brand reputation, accessibility, and price shape the perception of consumers towards eco-friendly products. Understanding these factors is vital for organizations aiming to proficiently endorse and sell eco-friendly merchandise.

3 Objectives of the Study

1. To examine the attitude and purchase behaviour of consumers towards eco-friendly products

2. To analyse the impact of socio-economic status on their buying behaviour.

3.1 Research Methodology

This study employs a quantitative approach to examine respondents' purchasing behaviours regarding eco-friendly products. Primary data were gathered through a structured questionnaire through Google Forms. Secondary data was sourced from articles, journals, books, and websites. Simple random sampling was utilized as it was challenging to access the entire population. Garrett's ranking technique was used to analyse respondents' buying behaviours. The survey included 250 consumers from various areas across Delhi.

The sampling technique used in this study was simple random sampling because it was difficult to reach the entire population. Graphic representation of different factors for different groups and further analysis through Garrett's classification technique are used to identify the purchasing behaviour of respondents. By converting ranks into scores, Garrett Ranking provides a nuanced view of respondents' preferences or priorities. The transformation to scores enables easy comparison of different items or factors. Garrett Rankings were used to identify the preference order of various criteria for different particulars, and the Garrett Score was used to test the level of significance among the different socio-economic group using ANOVA. ANOVA (Analysis of Variance) is a powerful statistical tool used to compare the means of different groups and determine if there are significant differences among them. In ANOVA, the primary outputs are the F-statistic and the p-value.

- F-statistic: This value compares the variance between the groups to the variance within the groups. A larger F-statistic suggests a more substantial difference between groups compared to the variability within groups.
- p-value: This indicates the probability that the observed differences are due to chance. A p-value less than the significance level (typically 0.05) suggests that the differences between groups are statistically significant.

4 Results and Analysis

Table [1](#) of the demographic data shows that more than 50% of the respondents are young people belonging to the middle-income group and are more aware of ecological products than middle- or old-aged people. In the 18-44 age group, nearly 50% of respondents buy environmentally friendly products at least once a week or more often. This demographic information plays a very

important role in deciding the adoption of environmentally friendly products and their life cycle approach.

Table 1. Demographic information of the respondents

Particular	Percent of Respondents
Gender	
Male	50.2
Female	49.8
Age	
11-17	24.2
18-24	29.7
25-34	5.5
35-44	13.3
45-54	15.8
55 and above	11.5
Level of Income	
Low Income	31
Middle Income	50
High Income	19
Purchase of Eco Friendly Product	
Once a week or more often	19
At Least once a month	49
Less than once a month	32

Source: Author's own compilation

Table 2 presents the Garrett average score and rank for the specified perception criteria among all respondents (columns 2 and 3, respectively). Columns 5 (Garrett Ranking of the Middle-Income Group) and 7 (Garrett Ranking of the High-Income Group) show no deviation, indicating that the preference order of different criteria is consistent across all groups. However, the ANOVA test (Table 3) conducted on columns 2, 4, and 6 reveals that the average scores differ significantly among the various socio-economic groups. This suggests that while the priority levels for different criteria may be the same, the adoption approach may vary due to financial constraints.

Figures 1 and 2 describe the purchasing behaviour of the middle-income and high-income groups, respectively. The pie charts show that the frequency of purchases of eco-friendly products does not significantly differ from one another. Consumers perceive ecological products to be more expensive compared to traditional and technology-based products, but we can conclude from the analysis that income is not an effective criterion for promoting ecological products.

However, these products are marketed in distinct sectors by the two respondent groups (Figures 3 and 4). High-income earners who purchase these items tend to fall into the health care and cosmetics category, indicating their focus on health and beauty. On the other hand, middle-income earners are more conscious of household necessities and frequently purchase products related to the home environment.

These findings align with the typical perceptions of high- and middle-income groups in our country, thereby validating the study's results. The consumer's perception to buy eco-friendly products was obtained through a Likert scale. The respondents were asked to rank the criteria

Figure 1. Pie chart drawn using Excel showing the buying behaviour of high-income group respondents (percentage of respondents)
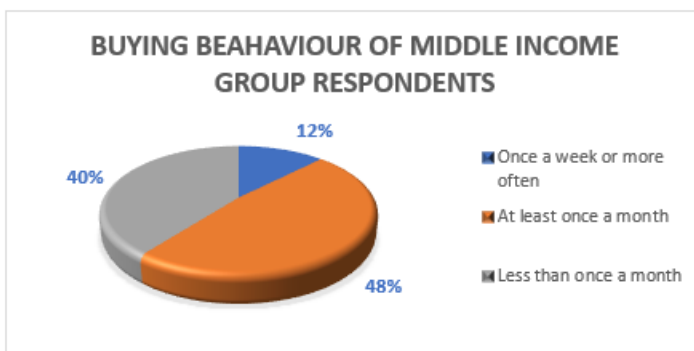Source: Developed by the authors, 2024

Figure 2. Pie chart drawn using Excel showing the buying behaviour of middle-income group respondents (percentage of respondents)
Source: Developed by the authors, 2024

that could describe their perception of "why to purchase eco-friendly products?" in the best way. The results obtained in the survey are depicted in Figure 5.

Figure 5 shows the percentage of buyers who agree or disagree with the given criteria on a scale from 1 to 5, where 5 represents "Strongly Disagree," 4 represents "Disagree," 3 represents "Undecided," 2 represents "Agree," and 1 represents "Strongly Agree." The bar chart reveals that high prices of these products could be the biggest obstacle (indicated by the orange bar for the third criterion). Meanwhile, majority of respondents strongly agree that these products are good for environment (as indicated by the blue bar for the seventh criterion).

Table 4 displays Garrett average score and ranks of the stated attitude measurement criteria (columns 2 and 3, respectively). Column 5 (Garrett Ranking of the Middle-Income Group) shows no deviation from the overall responses, while column 7 (Garrett Ranking of the High-Income Group) shows a deviation, indicating that the attitude of the high-income group is more influenced by advertisements. This suggests that the preference order for different criteria is not the same for all groups. Nonetheless, the ANOVA test (Table 5) conducted on columns 2, 4, and 6 indicates that the average scores differ significantly among the various socio-economic groups. This implies that while the priority levels of different criteria may be similar, the attitude inclinations may vary due to situational and environmental constraints.

Similarly, consumer intentions to purchase eco-friendly products were assessed using the specified criteria. Figure 7 presents the collected data on respondents' intentions. The figure shows the percentage of buyers who agree or disagree with various buying intentions on a scale of 1 to 5. The bar chart indicates that respondents are not mindful of how their buying behaviour is

Table 2. Garrett Avg. Score and Ranking of Consumer's Perception Measuring Criteria

| Perception Measure	Mean Score	Rank	Middle Income	Rank	High Income	Rank
Are Good for Environment	60.8	I	91.72	I	83.07	II
Are Healthy	58.2	II	90.22	II	83.15	I
Have a good quality/performance than conventional products	57.2	III	88.31	III	79.15	III
Have a good taste and/or good smell	54.9	IV	87.23	IV	78.81	IV
Have reasonable price	48.5	VII	84.91	VII	76.07	VII
Are well promoted	49.9	VI	86.25	V	77.74	V
Are accessible/available in the supermarket	53.7	V	86.23	VI	77.63	VI

Source: Author's compilation
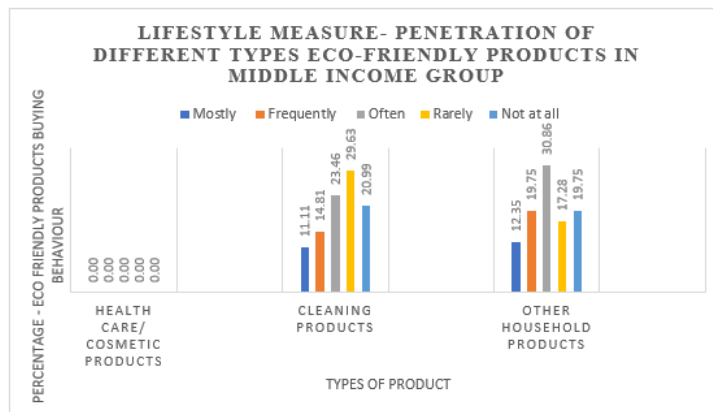
Figure 3. Lifestyle Measure among Middle Income Groups - Buying Behaviour of Different Categories of Products
Source: Developed by the authors, 2024

perceived by others. However, they are enthusiastic about preserving the Earth.

Figure 6 illustrates the percentage of buyers who agree or disagree with the attitude measurement criteria on a scale of 1 to 5. The bar chart indicates that the biggest obstacle for consumers is the difficulty in finding eco-friendly products in supermarkets. Despite this, consumers are quite eager to spread awareness about the importance of eco-friendly products among their relatives and friends.

Table 6 displays Garrett average score and rank for consumer intentions to buy eco-friendly products (columns 2 and 3, respectively). Columns 5 (Garrett Ranking of the Middle-Income Group) and 7 (Garrett Ranking of the High-Income Group) show minimal deviation from the overall responses, suggesting that the preference order of different criteria remains consistent across all groups. However, the ANOVA test (Table 7) conducted on columns 2, 4, and 6 indicates that the average scores differ significantly among the various socio-economic groups. This suggests that while the priority levels of different criteria may be similar, the intention to purchase may vary due to situational and environmental constraints.
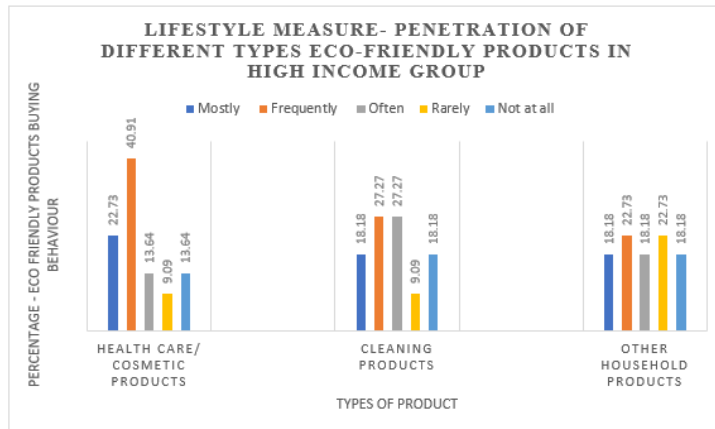
Figure 4. Lifestyle Measure among High Income Groups - Buying Behaviour of Different Categories of Products
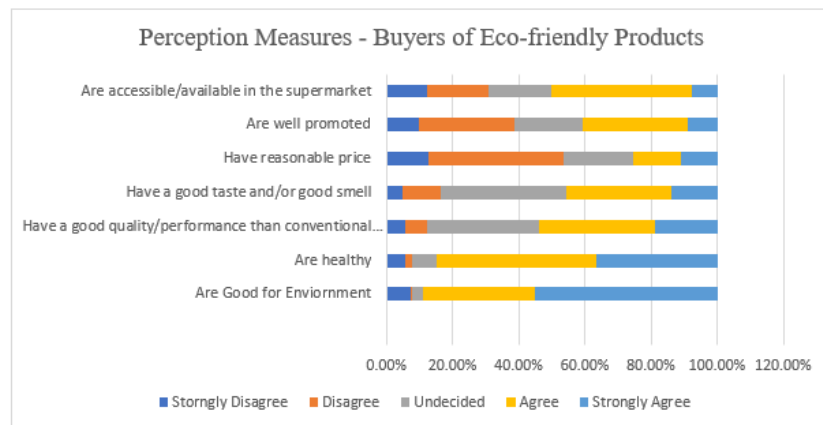Source: Developed by the authors, 2024

Figure 5. Perception Measures of Buyers Towards the Purchase of Eco-friendly Products
Source: Developed by the authors, 2024

Table 3. ANOVA Report for Different Perception Measures Attributes

Groups	Count	Sum	Average	Variance		
60.8	6	322.4	53.73333	15.08267		
91.71605	6	523.1605	87.19342	3.486399		
83.07407	6	472.5556	78.75926	5.788066		
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3634.018	2	1817.009	223.7959	6.79E-12	3.68232
Within Groups	121.7857	15	8.119044			
Total	3755.804	17				

Source: Author's compilation

Table 4. Garrett Avg. Score and Ranking of Consumer's Attitude Measuring Criteria

Perception Measure	Mean Score	Rank	Middle Income	Rank	High Income	Rank
I understand the information on eco-friendly packaging	62.8	I	89.73	I	80.89	VI
I believe in the information on eco-friendly packaging	57.3	VI	88.47	VI	80.70	VII
I am willing to pay a premium price for an eco-friendly product	57.2	VII	87.64	VII	81.11	V
I pay attention to eco-friendly advertising	60.5	III	89.20	III	82.59	I
I believe in the eco-friendly advertising	57.6	V	88.84	V	82.26	II
I know where the eco-friendly displays are located in my supermarket	56.3	VIII	87	VIII	79.81	VIII
I easily find eco-friendly products in a supermarket	56.2	IX	86	IX	77.89	IX
I hear and I pay attention to my friends/family opinion concerning eco-friendly products	57.8	IV	89.08	IV	81.59	IV
I recommend eco-friendly products to my friends/family	61.1	II	89.57	II	82.04	III

Source: Author's compilation

Table 5. ANOVA Report for Different Attitude Measures Attributes

Groups	Count	Sum	Average	Variance		
62.80	8	464	58	3.33		
89.73	8	705.8	88.2	1.53		
80.89	8	648	81	2.39		
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3986.06	2	1993.03	824.34	1.11E-20	3.44
Within Groups	50.77	21	2.42			
Total	4036.84	23				

Source: Author's compilation

Table 6. Garrett Avg. Score and Ranking of Consumer's Purchase Intention

Perception Measure	Mean Score	Rank	Middle Income	Rank	High Income	Rank
They give a good image of me	58.13	III	85.29	IV	76.33	V
I want to preserve the earth	64.43	I	90.28	I	82.74	I
I just like eco-friendly products	59.92	II	87.48	II	80.85	II
I feel trendy/fashionable when I purchase eco-friendly products	52.44	VI	84.40	VI	75.78	VI
If I do NOT purchase, people could judge me	48.32	VII	82.67	VII	74.63	VII
I purchase eco-friendly products on unplanned decision in a supermarket	57.21	IV	85.12	V	78.11	III
I was satisfied with most of the eco-friendly products I bought	52.87	V	86.93	III	76.44	IV

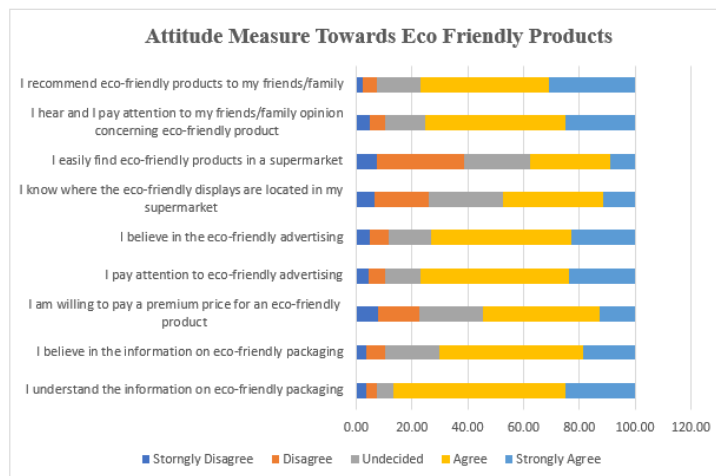Source: Author's compilation

Figure 6. Attitude Measures of Buyers Towards the Purchase of Eco-friendly Products
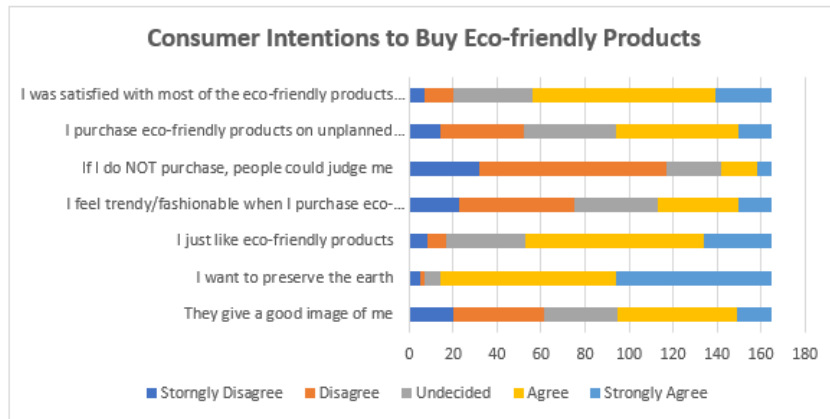Source: Developed by the authors, 2024

Figure 7. Consumers Intention to Buy Eco-friendly Products
Source: Developed by the authors, 2024

Table 7. ANOVA Report for Different Attitude Measures Attributes

Groups	Count	Sum	Average	Variance		
58.13	6	58.13	55.86	33.84		
85.29	6	516.87	86.14	7.12		
76.33	6	468.55	78.09	9.86		
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2951.22	2	1475.60	87.10	5.54E-09	3.68
Within Groups	254.12	15	16.94			
Total	32025.34	17				

Source: Author's compilation

5 Conclusion

The importance of eco-friendly products in safeguarding our planet cannot be overstated. As global awareness of environmental issues grows, more people are recognizing the critical role that sustainable practices (Kurz et al., 2005) play in preserving the Earth for future generations. Eco-friendly products, which minimize harm to the environment through their lifecycle—from production to disposal—are pivotal in this endeavour. The collective consciousness around the benefits of using green products is rising. Many individuals now understand that choosing eco-friendly options can significantly reduce their carbon footprint, conserve natural resources, and decrease pollution. This shift in awareness is a testament to the increasing acceptance of sustainability as a core value in modern society. However, despite the growing understanding of their importance, financial constraints often pose a barrier to the widespread adoption of eco-friendly products (Kurz et al., 2005). Sustainable items frequently come with higher price tags, which can be prohibitive for many consumers. The upfront costs can be daunting, especially when compared to conventional alternatives that are often cheaper due to economies of scale and less stringent production standards.

To overcome this challenge, it is crucial for policymakers, businesses, and consumers to collaborate in fostering an environment where eco-friendly products are accessible and affordable for all. Governments can incentivize green production and consumption through subsidies and tax breaks. Businesses can innovate to reduce costs and enhance the appeal of their sustainable offerings. Meanwhile, consumers can support these initiatives by prioritizing eco-friendly purchases whenever possible and advocating for more affordable options.

In conclusion, while the journey towards a more sustainable future is fraught with financial hurdles, the imperative to embrace eco-friendly products remains vital. It is through collective effort and innovation that we can make these products more accessible, ensuring that economic barriers do not stand in the way of a healthier planet. By continuing to educate and inspire change, we can create a world where eco-friendly choices are not just a luxury but a standard accessible to all.

6 Limitations

The limitations of the study arise from the sampling method, which may not fully represent the total population of Delhi. Over time, shifts in socio-demographic factors could alter consumer attitudes towards eco-friendly products, potentially diverging from the study's findings. Additionally, the study's factors influencing environmental attitudes are not exhaustive. Future research could explore cultural, political, and ethical dimensions. Furthermore, the relationship between individuals' mindsets and their intent to purchase eco-friendly products may be influenced by various factors. Attitude inclinations can be moderated by variables such as perceived product necessity, product engagement, and price perceptions.

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