## Demarketing and its Impact on Consumer Awareness of Rationalizing Electricity

## An Analytical Study of the Views of a Sample of Beneficiaries in Mosul

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#### **Abstract**

This research aims to demonstrate the importance of Demarketing tools and their impact on consumers' awareness that are benefiting from private electric energy services. This service has severely underserved Iraq's environment, and there is a weak awareness among many citizens who do not care about the rationalization of electricity consumption. Thus, the electricity distribution company is unable to cover the local needs despite the physical possibilities it possesses. Hence, the research highlights the role of Demarketing means, i.e., price increase, counteradvertising, and reduction of processing hours. Thus, the price increase policy and the culture of the beneficiary consumer are both examined as they contribute noticeably to raising awareness of rationalizing electricity consumption. In a few words, a sample of beneficiaries in Mosul was asked about Demarketing methods and consumer awareness indicators. In light of their views and answers, an analytical study about Demarketing and its impact on consumer awareness of rationalizing electricity is presented throughout this research.

<u>Keywords</u>: Demarketing methods- consumer awareness indicators- rationalizing electricity

## **Introduction**

The problem of increasing demand is essential for organizations, which may lead to some difficulties in their work in achieving the objectives of organizations. In addition, the impact of this problem is not limited to the organizations only but may reflect on society as a whole. Therefore, the top management of these organizations should look for appropriate solutions such as reverse marketing. Furthermore,

Demarketing has become one of the most important methods organizations rely on to reduce their customers' demand and confront the shortages they suffer from. This research starts with its methodology, problem, and hypotheses. After that, a discussion of the theoretical part of the research is included. Then, the empirical part of testing the hypotheses mentioned above is examined, and finally, the conclusions and recommendations are noted. The recommendations can be considered to change the situation of consuming electrical energy in the city where the investigation is being conducted.

#### Literature Review & Hypotheses Development

• Literature Review

#### First: The research problem:

Demarketing seeks to maintain the rational consumption of natural resources, and it has received considerable attention from organizations, especially those providing services. However, increasing demand for their services constitutes a difficult impediment to the performance of these organizations, especially when this demand becomes excessive due to their misconduct in the planning processes in the delivery of the service as well as the poor perception by the beneficiaries of this service. Thus, organizations must use means to influence their clients' attitudes to change or modify them. The problem can be raised by posing the following questions:

- **1-** Do beneficiaries consider Demarketing a type of intellectual luxury or a strategy to address service organizations' shortages?
- **2-** What is the correlation between Demarketing methods and consumer (beneficiary) awareness indicators?
- **3-** Do Demarketing methods contribute to influencing consumer (beneficiary) awareness?

#### **Second: The importance of research**

Demarketing has great significance since it enables service organizations to meet the increasing demand for their services by focusing on reducing demand to match the organization's capabilities and energies, allowing it to continue performing its work appropriately as the lack of research on Demarketing and linking it to the awareness of beneficiary consumers in Iraq's environment.

### Third: Research objectives:

**a-** Identifying the extent of the beneficiaries' awareness of rationalizing energy consumption.

- **b-** Understanding the nature of the relationship between Demarketing methods at the macro level and indicators of awareness of beneficiary consumers.
- **c-** Identify the nature of the moral impact of Demarketing methods and what these effects produce on the beneficiaries' awareness.

## • Hypotheses Development

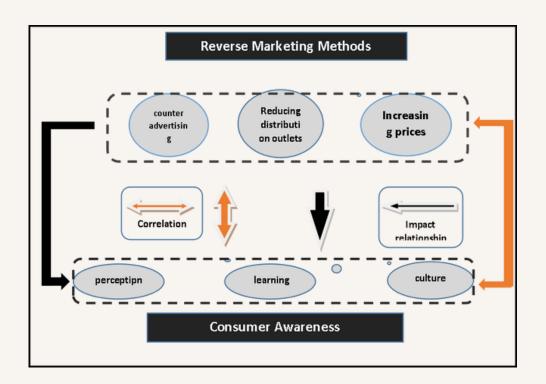
The following hypotheses were imposed to achieve the research objectives:

The first hypothesis is that the opinions of consumers (respondents) vary regarding Demarketing methods and indicators of consumer awareness.

The second hypothesis is that there is a significant correlation between Demarketing methods and consumer awareness indicators.

The third hypothesis is that Demarketing methods significantly affect consumer awareness indicators at the aggregate level.

#### **Research Model**



#### **Research Methods & Data Collection**

#### • Research Methods

1- Frequencies, percentages, arithmetic means, and standard deviations to describe and diagnose the research variables.

**2-** The simple correlation coefficient measures the correlation between the research variables.

## Data collection

### A- The theoretical aspect:

To cover the theoretical aspect of the research, researchers relied on scientific references from books, university theses, and practical research related to the research variables.

### **B-** The field aspect:

Completing the field aspect of the research, the researchers relied on the following:

- 1- Interviews with members of the governing bodies of the Nineveh Directorate of Electricity, in which a range of questions related to Demarketing were raised.
- **2-** The initial exploratory interview with some beneficiaries was conducted to determine the extent of their awareness concerning rationalizing energy consumption.

C-The Questionnaire was a main source for collecting data, as simplicity and clarity were considered to diagnose and measure Demarketing methods and their relationship to beneficiaries' awareness. The questionnaire was divided into three parts. The first part was devoted to collecting general information about the respondents (gender, age group, educational attainment), while the second part was specific to Demarketing methods (raising prices, reducing distribution outlets, counter-advertising), and the third part included the dimensions to measure the beneficiary's awareness, which is (culture, learning, perception). Additionally, a five-point Likert scale was chosen, which is (strongly agree, agree, neutral, disagree, strongly disagree), and a score was assigned to each option, which was respectively (5-4-3-2-1), with a response range of (1-5) and a hypothetical arithmetic mean of (3).

#### Measures

Simple linear regression measures the relationship between the moral influence of the independent variable (Demarketing methods) and the dependent variable (beneficiary consumer awareness).

## Data Analysis & Results Demarketing

## First: The concept of Demarketing:

It is essential to limit the use of some products that harm public health and society as a whole, as organizations resort to Demarketing when they cannot respond to the excessive demand for their products in a certain period, and these organizations have the desire to retain only their loyal customers (Salem, M. & Ertz. M., 2023). Some definitions must be reviewed to give a more comprehensive understanding of Demarketing. Additionally, Table (1) demonstrates the opinions of some researchers about the concept of Demarketing.

Researcher's name	Demarketing concept			
Saleh, et al., 2019, p. 5	A set of activities adopted by the organization to reduce a particular behavior.			
Al-Sayyid, et al, 2020, p. 123	An integrated part of general marketing that rationalizes demand for products such as fuel, water, and electricity due to their scarcity and importance.			
Sherif & Muhammad, 2022, p. 315	It is part of marketing activities, which include strategies that work to discourage demand for specific products by utilizing a set of tools.			

Table (1) illustrates the concept of Demarketing from the point of view of some researchers

Therefore, Demarketing is a set of strategies pursued by organizations in public, private, and joint sectors, and aims to prevent or reduce demand when these organizations cannot cover it, such as electric power, water, and oil resources, or when it comes to treating a social and health scourge such as drug and cigarette addiction and excessive medication use.

## Second: Demarketing importance

Demarketing helps organizations maintain the quality of their products and customer satisfaction by confronting and reducing demand situations. In other words, producing in small quantities with high quality is better than equating supply with demand and neglecting quality. On the other hand, it works to confront the fluctuating demand and the possibility of its occurring (Yoon, H.J., Lee, Y.-J., Sun, S., Joo, J., 2023). Additionally, Demarketing contributes to the long-term strategic planning of the organization by developing future solutions to the problems of scarcity that organizations suffer from, as well as preventing any activity that may contribute to creating excessive demand (Yaqub, M.Z., Yaqub, R.M.S., Riaz, T Alamri, H.A. 2023). In contrast, Demarketing is a means of reducing what is known as (social evil), which means addiction to cigarettes, alcoholic beverages, and drugs. (N.udupa, 2007, p. 2).

## Third: Demarketing objectives

Demarketing aims to achieve the following goals: (Faisaly & Hawawsa, 2016, pp. 8-9) (Al-Kahlot, 2018, p. 4) (Daho et al., 2019, p. 5).

- 1- Gaining customer satisfaction and changing their attitudes towards rationalization.
- **2-** Fair distribution of important products to customers.
- **3-** Urging customers to rationalize the consumption of harmful products such as tobacco, drugs, and alcoholic beverages.
- **4-** Developing marketing strategies for organizations with scarcity problems in their primary resources to conserve these natural and industrial resources.

However, achieving the objectives of Demarketing requires the following points (Groff, 1998, p. 135):

- **1-** Measurability of its results.
- **2-** Harmony with the future environment.
- **3-** Setting periods to achieve goals.
- **4-** Focusing attention on target markets.
- 5- Exploiting the organization's strengths and addressing its weaknesses.
- **6-** Investing in external opportunities and avoiding threats.

#### Fourth: Demarketing tools

Organizations are inclined to adopt a set of Demarketing tools according to the targeted field as well as the nature of the goals to be achieved, which are as follows (Al-Hadidi, 2012, p. 49) (Hassan & Saleh, 2012, p. 131) (Samydai, 2015, p. 974) (Seeletse, 2016, p. 231), (Faisaly & Hawawsa, 2016, p. 14) (Al-Kahlot, 2018, 17) (Al-Sayyed, 2020, pp.128-129) (Sharif & Muhammad, 2022, p. 316):

#### 1- Increasing prices:

It is a set of measures that organizations take in pricing their products that aim to reduce demand (Sharif, Muhammad, 2022, p.316). Hence, organizations can rely on price increases if they face an energy shortage or the inability to meet customer demands (Hanna, et.al, 1975, p. 65). Besides, this increase helps to correct the imbalance between supply and demand.

### 2- Reducing distribution outlets:

Limiting the distribution of products makes them unavailable to customers in sufficient quantities, which can rationalize their consumption (Sadiq, et al, 2014, p. 154).

#### **3- Counter-advertising:**

Counter-advertising is used to reduce or rationalize the consumption of a product, especially products that are harmful to the environment or society (Abboud & Ayez, 2019, p. 181).

Accordingly, the counter-advertisement aims to achieve several benefits: (N.Udupa, 2007, p. 3) (Al-Hadidi, 2012, p. 54)

- A- Reducing excessive demand for products, especially harmful ones.
- **B-** Directing the organization's budget for advertising to generate demand for its new products.
- C- Redirecting advertising by informing customers about how to use the products more economically.

#### Consumer awareness

#### Introduction

It has become one of the organizations' tasks to develop awareness for consumers by informing them about the features of products and how to use them, relying on various visual and non-visual media, websites, and social media.

#### First: The concept of consumer awareness

Consumer awareness is the individual's ability to properly use and exploit various resources related to all available services and to rationalize their consumption. Yet, to give a broader concept of consumer awareness, a set of definitions must be reviewed from some researchers' perspectives.

Researcher	Concept			
Gong, M., et al., 2019, p. 9	It is the key enabler for an organization to improve its sustainability capacity.			
Muca, et al, 2021, p. 4	The consumer's awareness and knowledge of the products he buys or uses.			
The two researchers	It is the level of information available to the consumer about the products, how they are used or consumed, and how to make the most of them and minimize waste from them as much as possible.			

Table (2)
Illustrates different definitions of consumer awareness

#### **Second: The importance of consumer awareness**

Consumer awareness is one of the main factors that affect consumers' behavior when making their purchasing decisions. Moreover, consumer awareness helps improve quality and safety in production and service provision, as consumers who have high awareness about products can work to encourage improvements to them and promote ethical practices (Nasser & Rahimi, 2023, p. 402). Furthermore, consumer awareness is characterized by its ability to raise consumers' purchasing intentions and significantly impact sales volume, as well as add additional value to the product and brand (Tchelidze & Obrenovic, 2023, p. 9). Ultimately, consumer awareness achieves several benefits, including protecting the consumer from exploitation by producers and sellers, helping to achieve consumer satisfaction in choosing products that meet his needs and desires and rationalizing consumption by identifying basic needs. Finally, consumer awareness helps protect the environment by rationalizing the consumption of unnecessary products and conscious consumption of products that can be recycled (Kutama, 2022, p. 25).

### Third: Dimensions of consumer awareness

#### 1- Consumer culture

Consumer culture is a set of experiences, meanings, symbols, and images that accompany the consumption process, giving this process its meaning (Al-Yasari & Al-Janabi, 2023, p. 593).

Recently, consumption has been used by individuals who seek to enhance their statuses and social standings, trying to differentiate themselves by purchasing and using certain consumer products (Dakhil & Nafi, 2022, p. 428).

#### 2- Perception

Perception is the main gateway for humans to the world of knowledge and information. It is the process through which an individual's mental impressions are formed when he selects, receives, organizes, and interprets information, to form an image linked to the factors surrounding him (Ziani, 2023, p. 34).

#### 3- Learning

The individual acquires knowledge of the types of goods, their quality level, prices, and brands based on his experience, ideas, opinions, and beliefs obtained by family, friends, institutes, and society in general, including media outlets such as print, television, and radio. Hence, to achieve the learning process, a set of basic principles must be available, as follows (Shatwan, 2017, p. 36):

- Motivation: It plays the role of alarm clock, as knowledge of consumer motivation is one of the priorities of marketing men who must determine the basic motivation of individuals towards specific products.
- Suggestions: They direct motivations by matching expectations; marketing men must design a marketing mix that suits the motivations of consumers.
- Response: The change that occurs in an individual's behavior and his adoption of behavior other than his usual behavior occurs through response to an influence.
- **Desire:** The learning process depends on the individual's desire to achieve results.
- Clarity: The speed of the learning process depends on the clarity of situations.
- Energy: The difference in the ability of each individual to learn.
- Interconnection: The individual's experiences are interconnected with his concepts and attitudes.

## First: Description and diagnosis of Demarketing methods

The data in Table (3) indicate a high percentage of total agreement on Demarketing methods (76.40%) and neutral answers (7.64%), while the total disagreement was very weak (16.05%). This was confirmed by the value of the arithmetic mean (4.09), which was greater than the value of the hypothetical arithmetic mean of (3), which is supported by the value of the standard deviation of (0.77), in addition to both the response rate, which was (81.87%), and the percentage of the coefficient of variation (homogeneity) was (18.82).

Besides, the policy of increasing prices had the highest percentage of agreement (82.91%), arithmetic mean (4.17), standard deviation (0.68), response rate (83.51), and coefficient of variation (16.43), while the counter-advertising policy had the lowest percentage of agreement (68.82%), with an arithmetic mean (3.86), standard deviation (0.85), and response rate (77.23). It is considered the lowest response rate in addition to what was achieved by the coefficient of variation (22.17).

This explains the significant interest of consumers benefiting from rationalizing electricity consumption and shows their absolute belief in the importance of Demarketing, which enables the company to supply electrical energy to cover local demand.

Dimension	Disagree - Strongly Disagree	Neutral	Agree- Strongly Agree	Arithmetic Mean	Standard Deviation	Response Percentag e	Variation Coefficient	Sequence
Reducing distribution port	12.28	10.01	77.72	4.04	0.74	80.80	18.44	2
Counter- advertisement	23.32	7.82	68.82	3.86	0.85	77.23	22.17	3
Price increase	12.56	4.55	82.91	4.17	0.68	83.51	16.43	1
Demarketing methods	16.05	7.64	76.40	4.09	0.77	81.78	18.82	

Table (3)
Description and diagnosis of Demarketing methods

#### Second: Description of consumer awareness indicators

According to Table (4), we notice a high percentage of total agreement (84.30%); the percentage of neutral answers was (6.17%), while total disagreement was (9.30%). These results are supported by the arithmetic mean (4.16), which was greater than the hypothesized arithmetic mean value of (3), and this is supported by the standard deviation value of (0.72), as well as the response rate of (83.33%), and the coefficient of variation (homogeneity) of (17.18). Therefore, the positivity of consumer awareness strengthened the culture index, as it came with the highest percentage of agreement (91.0.8%), an arithmetic mean of (4.43), and a standard deviation of (0.7), in addition to a response rate of (88.79), and a coefficient of variation of (15.91). As for the indicator that had the lowest percentage of agreement, it was learning,

as it came with the lowest percentage of agreement (80.1%), with an arithmetic mean of (4.04), in addition to a standard deviation of (0.74), as well as the response rate of (80.47), which is the lowest response rate in addition to the percentage achieved by the coefficient of variation (homogeneity) of (18.52). This indicates the interest of the surveyed consumers that their culture and awareness contribute to raising awareness to guide the use of electricity and working to benefit from electrical energy permanently.

Dimension	Disagree - Strongly Disagree	Neutral	Agree- Strongly Agree	Arithmetic Mean	Standard Deviation	Response Percentage	Variation Coefficient	Sequence
Learning	14.35	4.88	80.1	4.13	0.74	82.64	18.08	3
Perception	10.87	7.42	81.71	4.05	0.71	81.08	17.95	2
Culture	2.68	6.28	91.08	4.43	0.7	88.79	15.91	1
Consumer awareness indicators	9.30	6,17	84,30	4.16	0.72	83.33	17.18	

Table (4)
Description and diagnosis of consumer awareness indicators

According to the results in Tables (3) and (4), the first hypothesis can be accepted, which states that the respondents' opinions differ regarding Demarketing methods and indicators of beneficiaries' awareness.

# Third: 1- Analyzing the correlations between Demarketing methods and beneficiaries' awareness indicators

Based on the data mentioned in Table (5), there is a positive significant correlation between Demarketing and consumer awareness (beneficiaries), as the value of the total correlation coefficient reached (842.0) at a significance level of (0.05), which states that there is a significant correlation between Demarketing and the awareness of beneficiary consumers, as the value of the correlation coefficient indicates that the independent dimension has a good ability to predict the dependent dimension.

IndependentAdopted	Consumer awareness indicators		
Demarketing methods	0,842		

<sup>\*</sup>Significant at the level (.050) n=150

Table (5)
The correlation coefficient between Demarketing and consumer awareness

#### 2- Analysis of influence relationships

Demarketing methods		Std.	Т			F		
	В	Error	Tabula r	Calculat ed	R <sup>2</sup>	Tabular	calcul ated	Sig.
Beneficiary awareness indicators	0.866	0.046	19.01	1.645	0.71	361.59	3.07	0.000

Table (6)
The effect of Demarketing methods on beneficiaries' awareness indicators

The results of the regression analysis, Table (6), indicate that the coefficient of determination (R2) indicates that the proportion of the explained difference in the beneficiaries' attitudes due to the impact of Demarketing is (71.0%). The calculated (F) value is (361.59), which is greater than the value of tabular (F) (3.07) with two degrees of freedom (148.1) and a significance level (0.01). The remaining percentage (29%) represents the contribution of variables that are not included in the influence relationship and that cannot be controlled. This indicates that the regression curve explains the relationship between Demarketing and beneficiaries' awareness. In addition to the above, the value of (T) is embodied from monitoring the coefficients of  $(\beta)$ , as the calculated value of (T) was (19.01), which is greater than its tabulated value of (1.64). This result reflects the nature of the answers of the individuals surveyed about their ability to explain their attitudes and awareness through Demarketing methods. Thus, the third hypothesis can be accepted: (There is a significant relationship between the influence of Demarketing methods on beneficiaries' awareness indicators at the aggregate level)

#### Discussion

According to the aforementioned results of the research, it is essential to pointed out that the reverse marketing strategy is considered one of the strategic marketing priorities adopted by the Electricity Distribution Company in order to maintain the level of demand for electricity, aiming to meet the needs of consumers in the city of Mosul, in addition to maintaining the quality of this service as well as the responses of its beneficiaries, enhancing their awareness towards rationalizing consumption. Consequently, this strategy was able to influence the beneficiaries' lives, culture and perception.

#### **Conclusions and recommendations**

#### Conclusions

The statistical analysis results showed the following:

- 1- The sample members' responses were significantly positive about Demarketing methods and consumer awareness indicators, which contribute significantly to enhancing awareness of rationalizing electricity consumption.
- 2- The price increase policy came with the highest agreement ratio as the most important means of Demarketing, increasing awareness among beneficiaries to rationalize electricity consumption.
- 3- The culture of the beneficiary consumer had the highest percentage of agreement, which explains that their culture and awareness contribute greatly to raising awareness to guide the consumption of electrical energy.
- **4-** Demarketing methods and beneficiary consumer awareness indicators have a significant impact and correlation. This indicates that Demarketing can influence the lives and culture of consumers.

#### Recommendations

Some recommendations and proposals can be presented as follows:

- 1- There is a need to use warning and awareness leaflets that demonstrate to the beneficiaries the disadvantages of excessive use of electric power, which results in the company's inability to provide the beneficiaries satisfactorily and appropriately.
- **2-** Intensify advertising efforts to raise the cultural awareness of beneficiaries of the need to cooperate with electricity companies and follow their instructions and guidelines on how to rationalize consumption to address the shortage so that these companies do not have to use the means of Demarketing.

3- The research company should follow the Demarketing strategy to compensate for the shortage and distribute this vital energy equally.

- **4-** Intensive cooperation with civil society organizations is needed to work on guiding and educating beneficiaries and encouraging them to make optimal use of electrical energy.
- 5- Replacing the old electrical system by establishing new projects to distribute electrical energy.

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