

An Acceptance Study on Vehicle Scrappage Policy - 2021 pertaining to Personal Car Owners of rural and urban area of Banaskantha District

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Abstract

Along with Rapid economic development in the world and increasing standard of living in our country, has led to a continuous increase in Indian residents' purchasing power and so the increasing sales in automobile industries has seen a significant growth in the last decade. And this has resulted in increasing air pollution in developing countries like India. Many countries are taking various measures to combat this pollution based on new policies. Air pollution is a serious issue in democratic countries. According to the 2019 report, out of all the countries in the world, 30 cities with the highest pollution levels are found, and 21 of them are in India alone. In light of this, the Indian government announced the Vehicle Scrap Policy 2021 in the budget of February 2021, with the main objective of removing old and polluting vehicles from the roads. The main purpose of this study is to raise public awareness about this new policy and determine to what extent people are willing to accept and benefit from it. Therefore, the Banaskantha district of Gujarat has been chosen for the pilot study to gather primary information through a questionnaire among the public. After analysis of gathered data occupation of public not depends on vehicle scrap policy. Hence, it is justified to raise awareness and promote Vehicle Scrappage Programs, highlighting their economic and environmental advantages for the nation.

Keywords – Vehicle Scrappage Program and Public knowledge, Pollution, Scrapping.

Introduction

The term "environment" originates from the French word "Environer," which translates to "neighborhood." It refers to the surroundings, including the location, individuals, objects, and natural elements that encompass any living being. The environment serves as our fundamental life sustenance system, offering the air we respire, the water we consume, the food we ingest, and the land we inhabit. It comprises a blend of naturally occurring occurrences and human-created elements. The environment is polluted due to various factors, and pollution is a significant component. Pollution can take many forms, such as water pollution, air pollution, food pollution, soil pollution, noise pollution, and more. However, the focus of this practice is particularly on air pollution, which is a prevalent issue in many urban areas. The world's population now lives in a world filled with technological advancements. Vehicles have become a vital necessity and the production of vehicles by company's increases day by day. This industry has made detrimental choices for the Earth's environment. Many countries around the world are actively working to mitigate the damage caused by vehicle emissions and other harmful practices. In February 2021, the Indian government introduced the vehicle scrapping policy to address environmental pollution caused by old vehicles. On that day, Minister Smt. Nirmala Sitharaman discussed the vehicle scrapping policy in her statement, aiming to reduce the pollution caused by old vehicles on the roads and the environment significantly. It is better to scrap the vehicle, as it reduces the pollution. Moreover, the Vehicle Owner obtains repayment from the authorized scrappers along with concession in road tax on buying new vehicles in parallel (MoRTH, 2022). To counter the adverse effects on the environment, environmental advocates had three potential strategies at their disposal. These included the introduction of electric vehicles as an alternative, the implementation of stringent emission regulations through the adoption of engines conforming to the Bharat Stage 6 (BS6) standards, and the establishment of a vehicle scrappage policy that promotes circular production practices. These measures aimed to mitigate the environmental impact caused by transportation and pave the way for a more sustainable future.

Objective

The Indian government has initiated a Vehicle Scrappage policy, which is a program designed to replace aging vehicles. The primary goal of this policy is to gradually eliminate old vehicles from circulation, thereby improving air quality by reducing vehicle-related pollution. Additionally, the program aims to stimulate job growth and enhance demand in the automobile sales sector.

1. To carry out survey on public knowledge on Vehicle Scrappage Policy.
2. To raise public awareness regarding the advantages and simple process of the scrappage policy.
3. To assess the consumer perspective following the dissemination of information about the policy.

Literature Review

(Jayaram, 2022), During the era of globalization, the pollution caused by old vehicles is escalating rapidly. This situation necessitates either vehicle replacement or measures to control vehicle pollution, which can ultimately lead to the scrapping of old vehicles. In order to support and supplement the Vehicle Scrappage Policy implemented by the Government of India in FY2021, a pilot study was conducted to assess public awareness of the policy. The successful implementation of an effective vehicle scrappage policy requires significant public support and endorsement of government intervention. This paper aims to investigate public understanding and acceptance of the Vehicle Scrappage Policy in Bengaluru, India, following the dissemination of awareness. The study employed a pilot survey conducted in the market, statistical analysis, and relevant literature review as the adopted methods. The survey revealed that people are aware of the policy but remain uncertain about the additional benefits they can derive from the government. Therefore, there is a need for increased awareness and advertising of the Vehicle Scrappage Programs, emphasizing both the economic and environmental benefits to the country.

Zhang et al. (2020) conducted a study focusing on the competition between the illicit and authorized recycling sectors of end-of-life vehicles (ELVs). They developed an evolutionary game model to examine how different government policies impact the revenue generated from recycling ELVs. Through numerical simulations, the authors assessed and validated the influence of government policies in the evolutionary games model. The findings indicated that achieving a higher evolutionary stable state becomes highly challenging when the government only imposes penalties on ELV recycling.

Sharma and Pandey (2020) emphasized the importance of resource recovery from end-of-life passenger vehicles. They proposed a conceptual framework that outlines the process flow and interrelationships among various stakeholders in the informal sector. This framework aimed to evaluate the feasibility of reusing and recovering usable materials from ELVs processed within the informal sector of their country. In summary, Zhang et al.'s study focused on the impact of government policies on ELV recycling revenue using an evolutionary game model, while Sharma and Pandey's work highlighted the need for resource recovery from end-of-life passenger vehicles and presented a conceptual framework to evaluate material reuse and recovery in the informal sector.

(Kumar, 2022), The author conducted research on the subject of "Scrappage Policy and Impounding of Motor Vehicles in India." The study begins with an introduction to end-of-life vehicles (ELVs) and highlights the Indian government's plan to establish 450-500 fitness centers nationwide. To support this research, the author reviewed an article by Mrs. Ruchira Dhattrak and Prof. T. Z. Quazi (2019), which provided a descriptive analysis. The study involved collecting primary and secondary data. The policy aims to enhance fuel efficiency and reduce harmful emissions by removing unfit vehicles from the roads.

Research Methodology

The objective of this research is to determine the level of public support for the Vehicle Scrappage Policy -2021. In order to assess public understanding, participants are provided with information about the policy through focused group discussions or pilot studies. The results are then quantified and categorized for analysis using the Chi-Square test, which helps identify any relationships or interdependencies between the variables.

➤ Study

Research Area: Banaskantha district

Sample size: 140 Respondent.

Sampling method: Simple random sampling

Technique: Convenient Random Sampling.

➤ Tools for Analysis

Chi-Square test is used analysis the collected data. This particular method is employed for analysis when the desired results are separate or distinct in nature. To examine the relationship among two categorical variables this test is used. Using Excel, frequencies of first and second nominal variable are compared by performing the chi-square test.

➤ Data Collection

The Questionnaire is design by Google doc form in two sections. The prime segment manages demographic factors and subsequent part recognized with 100 respondents of awareness and acceptance. The information for the present study was gathered for the purpose pilot study.

Table 1.Consolidated Information of Public on Comprehension

Response		Frequency	Percentage
Do you have Vehicle	Yes	96	80
	No	24	20
How old is your vehicle	0-5	24	25
	6-15	56	58.33
	More than 15	16	16.70
Do you know about Vehicle Scrap Policy-2021	Yes	61	63.50
	No	35	36.50
If yes, than what is your view about Vehicle Scrap Policy-2021	It is good	58	60.40
	Not good	38	39.60
Are you ready to scrap your vehicle	Yes	24	25.30
	No	71	74.70

In data gathered, 120 responses were collected and out of them 96 person have vehicle. So, 96 responses are considered for analysis to identify about acceptance of this policy. For the better understanding of respondent the occupation are classified into different categories like student, professional, self-employed, salaries and other. Moreover along with this vehicle age is also categories like (0-5) years, (6-15) years and more than 15 years.

Findings

From pilot study findings are summarized as follows:

- Among the 96 respondents who own a 4-wheeler, approximately 36.50% had no prior awareness of the policy before our market survey. However, the majority of the individuals were indeed aware of it.
- After knowing about the policy, 60.40 % are giving positive view about the vehicle scrap policy.
- Due to the policy being in its early stages, 74.70% respondents are not ready to scrap it their vehicle. This may be due to less information about vehicle scrap policy.

Numerical Results

Here, an effort to make examination the association among Occupation and Awareness is conducted. For the gathered data set is to determine classified respondents are aware about the policy. 2 variables are performed by Chi-square test.

The participants' occupation was considered as a separate category and categorized into various groups including students, professionals, self-employed individuals, salaried workers, and others. The level of awareness among the respondents was determined based on their responses, categorized as either Yes or No.

H0: There is no association between occupation and awareness of policy

H1: There is an association between occupation and awareness of policy

Table 2.

Observed (fo)	Other	Professional	Salaried	Self Employed	Student	Grand Total
No	5	7	7	9	7	35
Yes	7	12	22	13	7	61
Grand Total	12	19	29	22	14	96

Table 3

Expected (fe)	Other	Professional	Salaried	Self Employed	Student	Grand Total
No	4.38	6.93	10.57	8.02	5.10	35
Yes	7.63	12.07	18.43	13.98	8.90	61
Grand Total	12	19	29	22	14	96

Table 4

Chi-square	Other	Professional	Salaried	Self Employed	Student	Grand Total

No	0.09	0.00	1.21	0.12	0.70	2.12
Yes	0.05	0.00	0.69	0.07	0.40	1.22
Grand Total						3.34

Table 5

Variable	Chi-square Value	α -Value	P-value	Df
Occupation	3.34	0.05	0.5	4

The data for the relationship between occupation and awareness was analyzed using Excel, and the results are presented in Table 5. For 95% confidence alpha value is 0.05, with degree of freedom value is 4, the Chi-Square value from the standard Chi-Square table is 9.49. Here the calculated Chi-Square value is 3.34, which is less than the standard critical Chi-Square value 5.991. Hence, the Null hypothesis is accepted. Thus, there is no relationship between occupation and awareness of policy. It concludes that awareness of Vehicle Scrappage Policy doesn't depend on occupation of the respondents.

Graphical Result

The following chart explain cases whether people have vehicle or not.

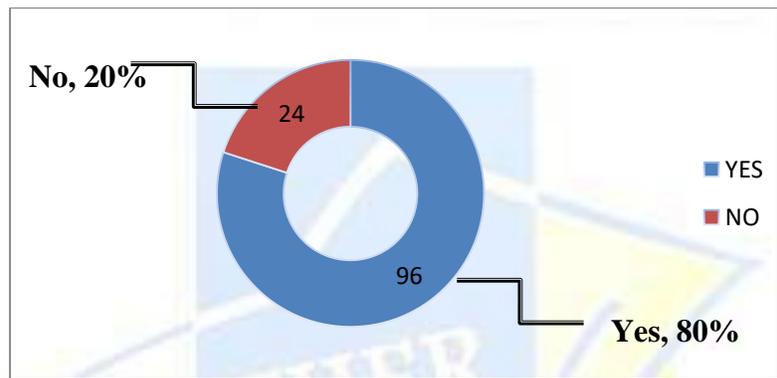


Figure1. Vehicle ration by public

From figure 1, it can be accomplished that out of 120 responses 96 (80%) respondents have vehicle and for further research this assist to us to check whether people are willing to scrap their vehicle or not.

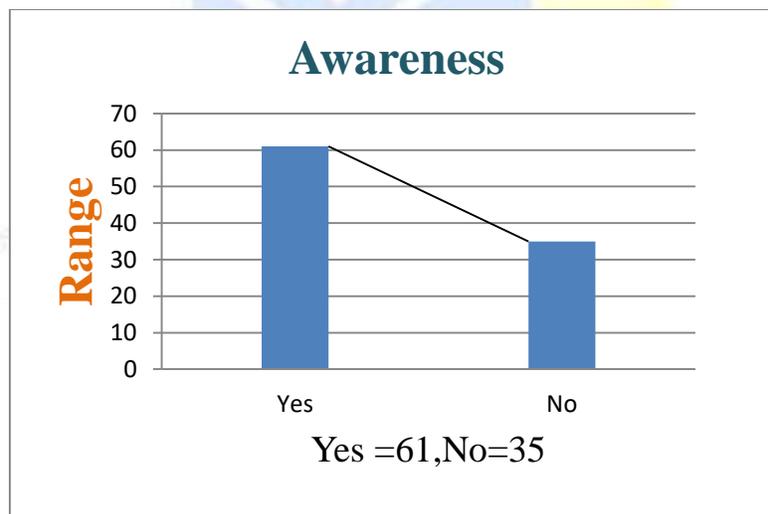


Figure 2. Knowledge of Vehicle Scrap Policy

From figure 2, this figure gives idea about knowledge of vehicle scrap policy. 63.50% public is aware about scrap policy and only 36.50% are not aware. So, it conclude that Banaskantha district majority public are but still government have make program to increase the knowledge about scrap policy.

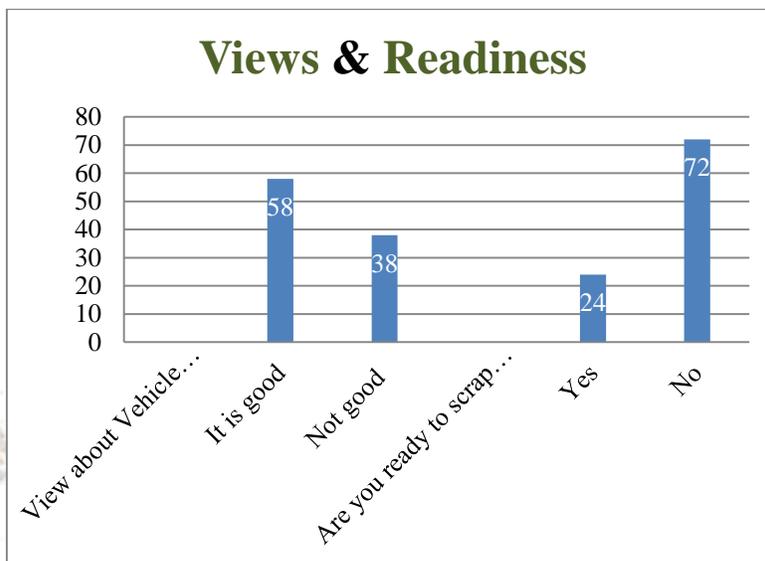


Figure 3: Views and Ready to scrap vehicle

Figure 3; indicate respondent s views and readiness about vehicle scrap policy. Out of 96 respondents 58 are positive and 38 are negatives views but the graph shows that readiness to scrap vehicle respondents are 24 respondent are ready and 72 are not ready, which is lightly high than views of respondent.

Conclusion and Recommendations

After the market survey made people to get insight about the awareness and readiness. The data clearly indicates that, out of 120 responses only 80% respondents have vehicle. Majority of respondents were having knowledge about the Vehicle Scrap Policy. As a result, after having knowledge 25.30 % accepted that scrapping old vehicles But 74.70 % are not ready to scrap their vehicle.

The study reveals that while the policy has been generally well-received by the public, there is still some uncertainty among respondents due to its novelty and perceived lack of sufficient benefits announced by the Government. Respondents are eager to see how the policy is accepted in the near future, and until then, many are inclined to continue using their current vehicles. This highlights the need for the Government to focus on creating awareness, advertising, and emphasizing the advantages of vehicle scrappage programs to fully capitalize on the policy's environmental benefits.

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