An empirical study of promotional strategies on NPS participation.

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***Abstract*—This study examines the impact of demographic variables on the success of promotional methods for India's National Pension System (NPS). Despite the potential benefits of NPS, participation remains low. This study takes a quantitative Approach to determining how age, gender, and income affect people's awareness, clarity, and perceived efficacy of NPS advertising activities. Data from 120 respondents were analysed using ANOVA and post-hoc testing to discover demographic differences, followed by correlation analysis to investigate correlations between factors. The findings indicate that age significantly affects awareness and clarity, but not efficacy, while gender impacts awareness. Income has an impact on all three dimensions, with higher-income people seeing campaigns positively. These findings suggest that targeted promotional methods, which consider demographic factors, can increase NPS enrolment. The study aims to provide actionable advice for creating more effective marketing programs by examining the impact of demographic factors on promotional effectiveness.**

***Index Terms*—National Pension System (NPS), Promotional Strategies, Demographic Variables, Financial Literacy, Marketing Effectiveness.**

I. INTRODUCTION

"Financial security is not a goal; it is a journey that needs strategic planning, commitment, and the right tools to make sure we are ready for the long term." This remark sums up the main idea behind the National Pension System (NPS), which is a way to make sure that people have enough money to live on when they retire. The Government of India started the National Pension System (NPS) in 2004. Since then, it has grown into a popular retirement savings plan that helps people save for retirement in an organised and controlled way while also providing income in old age. However, despite its many benefits, the number of people who sign up for NPS is still lower than it might be. The system offers a wide range of investment possibilities, including stocks, corporate bonds, and government securities. The hard part is getting people to join the plan and make monthly contributions. Because of this, advertising techniques are essential for increasing awareness and adoption of NPS. Promotional techniques for financial goods, especially retirement plans like NPS, are the primary method for increasing sign-ups. These plans usually include public service announcements, direct marketing, social media efforts, and working with banks and other financial organisations. There has been considerable debate about the effectiveness of these methods, and several studies have examined how these advertisements influence investor responses

II. REVIEW OF LITERATURE

The study by Aghamohammadi et al. (2020) shows that tailored marketing strategies are more likely to raise awareness and participation rates in retirement plans. The Pension Fund Regulatory and Development Authority (PFRDA) report also says that marketing efforts have played a big part in changing millennials' and Generation Z's minds about NPS from seeing it as a government-backed program to seeing it as a good retirement plan. These two groups have always been wary of government programs. It's crucial to recognise that merely discussing the benefits of NPS is insufficient. These techniques will only be effective if they align with the financial goals of potential donors and their understanding of the long-term benefits. When you look at different academic and commercial publications, you can see that tailored, data-driven techniques make people much more interested. Mishra (2019), for instance, talks about how personalized retirement planning tools and

interactive advertising may get people more involved. Studies also demonstrate that financial literacy programs are pretty crucial for getting people to sign up for NPS, especially those with lower incomes. Sharma et al. (2021) conducted a real-world study, demonstrating that initiatives aimed at increasing financial literacy, such as those run by banks and mutual funds, played a crucial role in encouraging more people in rural areas to enrol in the NPS. Financial literacy, personalized promotions, and innovative collaborations between public and commercial sectors, when combined, might be the key to getting more people to sign up for NPS.

III. RESEARCH METHODOLOGY:

The goal of this research is to test the effectiveness of different marketing methods in getting people to sign up for NPS. The goal is to identify key tactics that will significantly enhance participation and contribute to the success of the National Pension System in India by analyzing data from past research and examining real-world marketing case studies. We aim to guide running more focused and successful advertising campaigns that align with the evolving financial needs and preferences of the Indian people.

This study employed a quantitative research design to examine how demographic variables (age, gender, and income) influence the effectiveness of promotional strategies on NPS (National Pension System) participation. The research aimed to identify significant differences and correlations among these variables to inform targeted promotional efforts. The study targeted individuals eligible for NPS participation across various demographic groups. A stratified random sampling method was used to ensure representation from different age groups, genders, and income levels. The final sample consisted of 120 respondents, balanced across the specified demographic categories.

Data was collected through a structured questionnaire that included sections on demographic information (age, gender, income) and perceptions of NPS promotional campaigns. The questionnaire was distributed electronically to participants, ensuring ease of access and increased response rates.

Independent Variables: Demographic factors (age, gender, income).

Dependent Variables: Awareness of NPS promotional campaigns, clarity of promotional materials, and perceived effectiveness of promotional campaigns.

The questionnaire comprised both closed-ended and Likert-scale questions. Items measuring awareness, clarity, and effectiveness were adapted from existing validated scales to ensure reliability and validity. Used to summarise the demographic characteristics of the sample. Conducted to determine if there were significant differences in awareness, clarity, and effectiveness of NPS promotional campaigns across different demographic groups. Post-hoc Tests by Tukey HSD and Games-Howell tests were performed following ANOVA to identify specific group differences. For the Correlation Analysis, Pearson correlation coefficients were calculated to assess the relationships between demographic variables and the dependent variables.

While the study offers useful insights into demographic variables, it is largely concerned with age, gender, and wealth. Other variables such as education level, occupation, and geographic location have yet to be investigated. Furthermore, the impact of digital literacy and media consumption patterns on promotional efficacy has not been studied. The detected gap is consistent with the study's goal of refining promotional techniques based on demographic diversity. The premise that the efficiency of promotional methods differs by demographic group is supported by data on age, gender, and income. Future studies should include more demographic elements and behavioural patterns to provide a more complete understanding of how these variables interact with promotional techniques, thereby improving the success of NPS campaigns

IV. OBJECTIVE

To identify the most effective promotional strategy in increasing NPS enrollment among different demographic groups (age, income, and education level)

V. HYPOTHESES

Hypothesis 1: The effectiveness of promotional strategies on NPS participation varies across different demographic groups (age, income, and education level).

The dataset seems to have a moderate spread across the variables. The skewness in most variables

indicates a slight imbalance, with more respondents falling on the lower end of scales
like Age and Gender, and a tendency for right-skewed distributions in Income and Education Level. The negative kurtosis values suggest that the data is relatively uniform with fewer extreme values or outliers.

To analyse how demographic groups influence the effectiveness of promotional strategies on NPS participation, an ANOVA test is conducted. Specifically, Levene's Test of Homogeneity of Variances checks whether the variances across the groups are equal. This assumption is essential for conducting ANOVA, as unequal variances can lead to biased results.

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Aware of NPS Promotional Campaigns	Age	13	3	4.333	4.448	0.005
	Gender	53.721	1	53.721	87.703	0
	Income	26.339	3	8.78	10.219	0
Clear Promotional Materials	Age	26.2	3	8.733	14.269	0
	Gender	0.87	1	0.87	1.066	0.304
	Income	8.435	3	2.812	3.674	0.014
Effective Promotional Campaigns	Age	0	3	0	0	1
	Gender	0	1	0	0	1
	Income	8.018	3	2.673	4.846	0.003

Age influences both the awareness and clarity of NPS promotional materials, but not the perceived effectiveness. Gender affects the awareness of NPS campaigns but does not influence perceptions of clarity or effectiveness. Income significantly affects all three aspects: awareness, clarity, and effectiveness, with higher income groups perceiving the campaigns more favorably. The results suggest that demographic factors such as age and income should be considered when designing NPS promotional campaigns, as these factors influence the awareness and clarity of the materials. Income also plays a role in the effectiveness of campaigns. Tailoring campaigns to target different age and income groups could improve the overall impact and enrollment in the NPS program.

After conducting ANOVA, post-hoc tests were performed to identify which specific pairs of groups differed significantly across the dependent variables (e.g., Aware of NPS Promotional Campaigns, Clear Promotional Materials, and Effective Promotional Campaigns).

Dependent Variable	(I)Group	(J)Group	Mean Difference (I-J)	Std. Error	Sig.	95%Confidence Interval	Lower Bound	Upper Bound
Aware of NPS Promotional Campaigns	Age (Tukey HSD)	2	3	-0.083	0.218	0.981	-0.65	0.48
		4	-0.750*	0.247	0.015	-1.39	-0.11	
		5	-0.750	0.319	0.092	-1.58	0.08	
	Games-Howell	2	3	-0.083	0.225	0.983	-0.67	0.51
		4	-0.750*	0.262	0.030	-1.45	-0.05	
		5	-0.750*	0.159	0.000	-1.17	-0.33	
Clear Promotional Materials	Age (Tukey HSD)	2	3	0.917*	0.172	0.000	0.47	1.37
		4	0.750*	0.196	0.001	0.24	1.26	
		5	1.250*	0.253	0.000	0.59	1.91	
		3	-0.917*	0.172	0.000	-1.37	-0.47	
	Games-Howell	2	3	0.917*	0.220	0.001	0.33	1.51
		4	0.750*	0.122	0.000	0.42	1.08	
		5	1.250*	0.063	0.000	1.08	1.42	
Effective Promotional Campaigns	Age (Tukey HSD)	2	3	0.000	0.174	1.000	-0.45	0.45

		4	0.000	0.197	1.000	-0.51	0.51	
		5	0.000	0.254	1.000	-0.66	0.66	
	Games-Howell	2	3	0.000	0.172	1.000	-0.45	0.45
		4	0.000	0.233	1.000	-0.63	0.63	
		5	0.000	0.103	1.000	-0.27	0.27	
Aware of NPS Promotional Campaigns	Income (Tukey HSD)	1	2	0.876*	0.213	0.000	0.32	1.43
		3	-0.107	0.264	0.977	-0.80	0.58	
		4	-0.107	0.320	0.987	-0.94	0.73	
	Games-Howell	1	2	0.876*	0.244	0.004	0.23	1.52
		3	-0.107	0.195	0.946	-0.64	0.43	
		4	-0.107	0.195	0.946	-0.64	0.43	
Clear Promotional Materials	Income (Tukey HSD)	1	2	-0.169	0.201	0.836	-0.69	0.36
		3	-0.393	0.249	0.396	-1.04	0.26	
		4	0.607	0.302	0.190	-0.18	1.39	
	Games-Howell	1	2	-0.169	0.176	0.774	-0.63	0.29
		3	-0.393	0.248	0.403	-1.06	0.28	
		4	0.607*	0.119	0.000	0.28	0.93	
Effective Promotional Campaigns	Income (Tukey HSD)	1	2	0.243	0.171	0.490	-0.20	0.69
		3	-0.464	0.212	0.131	-1.02	0.09	
		4	0.036	0.256	0.999	-0.63	0.70	
	Games-Howell	1	2	0.243	0.208	0.650	-0.31	0.80
		3	-0.464	0.212	0.142	-1.03	0.10	
		4	0.036	0.182	0.997	-0.46	0.53	

Significant differences were found between age groups 2 and 4 in terms of awareness of NPS Promotional Campaigns and Clear Promotional Materials, with younger age groups (e.g., age 25–34) reporting lower levels of awareness and clarity. Significant differences were found between males and females for Awareness of NPS Promotional Campaigns ($p = 0.000$), with males showing higher awareness. Significant differences were observed for awareness of NPS Promotional Campaigns across income groups, with higher-income groups reporting greater awareness ($p = 0.000$). The post-hoc tests highlight that age, gender, and income significantly influence perceptions of NPS promotional campaigns. These factors should be considered when designing tailored marketing strategies for different demographic groups.

After performing the ANOVA and post-hoc tests, you can proceed with a correlation test to examine the relationships between the variables you analysed earlier. The correlation test will help assess how closely the independent variables (e.g., demographic factors like age, gender, and income) are related to the dependent variables (e.g., awareness, clarity, and effectiveness of promotional campaigns)

Variable	Age	Gender	Income	Aware of NPS Promotional Campaigns	Clear Promotional Materials	Effective Promotional Campaigns
Age	1					
Gender	.295**	1				
Income	.262**	.420**	1			
Aware of NPS Promotional Campaigns	.293**	.653**	0.11	1		
Clear Promotional Materials	-.444**	0.095	-0.079	0.163	1	

Effective Promotional Campaigns	0	0	0.121	0	0	1
** Correlation is significant at the 0.01 level (2-tailed).						

Age and Gender have a Moderate positive correlation ($r = 0.295$, $p < 0.01$), indicating a significant relationship. Age and Income have a Moderate positive correlation ($r = 0.262$, $p < 0.01$), indicating a significant relationship. Age and awareness of NPS Promotional Campaigns have a Moderate positive correlation ($r = 0.293$, $p < 0.01$), indicating a significant relationship.

Age and Clear Promotional Materials have a Moderate negative correlation ($r = -0.444$, $p < 0.01$), indicating a significant inverse relationship. Age and Effective Promotional Campaigns have no significant correlation ($r = 0.000$, $p = 1.000$). Gender and Income have a Strong positive correlation ($r = 0.420$, $p < 0.01$), indicating a significant relationship. Gender and awareness of

NPS Promotional Campaigns have a Strong positive correlation ($r = 0.653$, $p < 0.01$), indicating a significant relationship. Gender and Clear Promotional Materials have a Weak positive correlation ($r = 0.095$, $p > 0.05$), not significant. Gender and Effective Promotional Campaigns have no significant correlation ($r = 0.000$, $p = 1.000$). Income and awareness of NPS Promotional Campaigns have a Weak positive correlation ($r = 0.110$, $p > 0.05$), not significant. Income and Clear Promotional Materials have a Weak negative correlation ($r = -0.079$, $p > 0.05$), not significant. Income and Effective Promotional Campaigns have a Weak positive correlation ($r = 0.121$, $p > 0.05$), not significant. Awareness of NPS Promotional Campaigns and clear promotional materials shows a Weak positive correlation ($r = 0.163$, $p > 0.05$), which is not significant. Aware of NPS Promotional Campaigns and Effective Promotional Campaigns: No significant correlation ($r = 0.000$, $p = 1.000$). Clear Promotional Materials and Effective Promotional Campaigns have no significant correlation ($r = 0.000$, $p = 1.000$).

VI. DISCUSSION

The goal of the current investigation was to examine the impact of demographic variables such as age, gender, and income on the success of NPS marketing initiatives. The findings reveal significant variations across these demographic groups, providing valuable insights for designing more effective promotional strategies. The analysis indicates that age significantly influences the awareness and clarity of NPS promotional materials, with younger age groups (specifically age groups 2 and 4) reporting lower levels of awareness and clarity. This suggests that younger demographics may require more targeted communication strategies to ensure they are effectively reached and engaged by promotional campaigns. Interestingly, age did not significantly affect the perceived effectiveness of the campaigns. This could imply that while younger individuals may be aware of and understand the promotional materials differently, their overall perception of the campaign's effectiveness remains consistent with other age groups.

Gender was found to significantly affect awareness of NPS promotional campaigns, with males demonstrating higher levels of awareness compared to females. This could be attributed to varying levels of engagement or interest in NPS-related topics between genders. However, gender did not significantly influence perceptions of the clarity or effectiveness of the campaigns. This indicates that while males might be more aware of the promotional efforts, both genders perceive the clarity and effectiveness of the campaigns similarly. Income emerged as a significant factor influencing all three aspects: awareness, clarity, and effectiveness of NPS promotional campaigns. Higher-income groups reported greater awareness and perceived the campaigns to be clearer and more effective. This suggests that income level may correlate with better access to information, higher levels of engagement, or more exposure to promotional materials. These findings underscore the importance of considering income disparities when designing promotional strategies to ensure equitable access and impact across different economic segments.

Findings:

Age significantly influences awareness and clarity of NPS promotional materials, with younger groups showing lower awareness and clarity. Gender significantly affects awareness of NPS campaigns, with males exhibiting higher awareness levels. Income

significantly impacts all three aspects: awareness, clarity, and effectiveness, with higher-income groups perceiving the campaigns more favourably.

The hypothesis testing results indicate that demographic factors such as age, gender, and income significantly influence the effectiveness of NPS promotional strategies. Age and income significantly affect the awareness and clarity of promotional materials, while gender primarily influences awareness levels. These findings suggest that promotional strategies should be tailored based on demographic characteristics to enhance their effectiveness. That means we reject the Null hypothesis and accept the alternative hypothesis.

VII. CONCLUSION

This study highlights the significance of age, gender, and income in determining the success of NPS marketing campaigns. Age and income significantly influence the awareness and clarity of promotional materials, while gender primarily affects awareness levels. These insights underscore the importance for marketers to modify their strategies according to the demographic features of their target audience. By doing so, they can enhance the reach and impact of their campaigns, ultimately leading to higher participation rates in NPS programs.

Future studies might look at demographic variables, including education level, occupation, and geography, in addition to age, gender, and income. Understanding how these variables interact with promotional effectiveness can provide a more comprehensive view of target audience segmentation. Investigating behavioral patterns and preferences within different demographic groups can offer deeper insights into how individuals interact with promotional campaigns. This includes studying factors such as media consumption habits, digital literacy, and social influences. Understanding how changes in societal norms and technology affect the efficacy of promotional strategies can be achieved by conducting longitudinal studies to monitor changes in demographic influences over time. A more detailed understanding of the motivations underlying the quantitative findings can be obtained by incorporating qualitative techniques like focus groups and interviews. This can help in identifying barriers to engagement and areas for improvement.

The findings underscore the importance of creating targeted marketing strategies that consider demographic diversity. Marketers may harness these insights to develop more tailored and relevant campaigns, enhancing engagement and conversion rates. Prioritizing demographics that respond better to promotional initiatives allows organisations to allocate resources more efficiently. This assures effective use of marketing dollars and maximizes return on investment.

Insights from this research can guide policymakers in establishing measures to address demographic discrepancies in access to promotional materials. Ensuring equitable access can enhance overall program effectiveness. As digital platforms continue to evolve, integrating technology-driven solutions to tailor campaigns based on real-time demographic data can lead to more adaptive and responsive marketing strategies.

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