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Subject: Improving Targeting and Efficiency in Marketing Campaigns

Executive Summary

The current telemarketing campaign employed by the bank for deposit subscriptions has low conversion rates (around 8%) and high customer outreach costs. Given the $2 per call cost and a limit of 14 calls per agent per hour, it is critical to adjust the campaign to better target potential customers and increase deposit subscriptions—without increasing costs. With the use of analytics, we have identified factors that are influential in determining the campaign's success. We believe that by targeting these factors, we will be able to optimize the campaign and achieve more success in deposit subscriptions.

Marketing Challenges & Alternative Approaches

The current marketing strategy is broad and lacks focus, resulting in low efficiency and high costs. Instead of telemarketing, the bank could alternatively try these campaigns:

1. *Mass marketing via TV/radio ads*: This will reach a large audience simultaneously which will cut down on the costs of having the agents call customers individually. However, this method would require a large budget to make it an impactful ad. It could also result in low response rates and would be difficult to track the impact of these ads the way we are able to currently track the success of the phone calls.
2. *Referral-Based Incentives*: Encouraging current customers to refer their friends and family—offering them discounts or incentives—could be another way to expand the campaign's reach. This method would allow new customers to come in with trust as their friend is already a customer as well as increase engagement from the existing customer. However, this will be limited by the network of the customer and whether they are willing to participate in such a program. This method would also be difficult to track in terms of success rate.

Why use a Data-Driven Approach

Instead of the broad, unfocused approach that we are currently employing, we can use the data we have collected from the campaigns thus far to help in identifying and prioritizing high-potential customers. By targeting the customers that are most likely to subscribe, as our models predict, we can reduce costs on unnecessary calls and utilize our resources more efficiently.

Model Findings: Key Predictors of Success

Through logistic regression and decision tree analysis, we identified the following key insights:

1. *Call Duration is the Most Important Factor*: Customers engaged in calls lasting 9 minutes or longer have a 46% conversion rate, while shorter calls see only an 8% success rate.

2. *Previous Campaign Success Matters*: Customers who previously subscribed are much more likely to subscribe again.

3. *Timing is Crucial*: March, October, and September have the highest success rates.

4. *Contact Frequency Should Be Reduced*: The more frequently a customer is called, the less likely they are to subscribe.

Recommendations & Implementation Strategy

Using the data from the findings, the way to campaign more effectively would be to segment customers by their likelihoods to subscribe and segment them by their common characteristics.

1. *Customers Most Likely to Subscribe*: Customers that have responded positively in previous marketing campaigns are more likely to subscribe. Contacting them during the peak months of March, October and September will also help in achieving a higher success rate. It was also found that customers with higher bank balances and those without a housing loan subscribe more.
2. *Increase Call Duration for High-Potential Customers*: Call center agents should be encouraged to engage with customers for at least 9 minutes on call. This will help in fostering

good relationships with the potential customers as well as understand how to best position the deposit subscriptions in their best interest. While this increases the time spent, focusing on the high-value customers will help balance the efficiency. The agents will have to undergo training and be given scripts that will help them in these efforts.

3. *Reduce Unnecessary Calls to Avoid Wasting Resources*: The data shows that if customers are contacted frequently, they are less likely to subscribe. Therefore, we should be limiting follow-up attempts for uninterested customers. The optimal strategy would be to balance engagement without over-contacting.

To maximize resource allocation and ensure we are being cost and time effective, there are some factors that are not at all important in these efforts. Some of them include marital status and their job.

Cost & Profitability Considerations

Each call costs $2 and a representative can make 14 calls per hour. The bank earns 2% profit ($20 per deposit). By optimizing our marketing strategy, we can achieve a 46% success rate, meaning 1,000 calls would result in 460 deposits. The total cost of making the calls would be $2,000 and the revenue from the deposits will be $9,200 (assuming $1,000 deposit from each customer and $20 revenue per deposit). This leads to a profit of $7,200.

Conclusion

By implementing a data-driven marketing strategy, the bank will be able to significantly improve efficacy while reducing costs and increasing deposit subscriptions. The biggest takeaway from this strategy is to prioritize the quality of the calls over the quantity. We should prioritize high-potential customers, increase call duration, and align campaigns with the most successful months of the year. This will turn the current loss-making strategy into a highly profitable one.

We recommend immediate implementation of these insights in the next campaign cycle to maximize results.

Nivedha Gautham Raj

Appendix

rn	Estimate	Std. Error	z value	Pr(>|z|)	meandata	sddata
prob.lr	NA	NA	NA	NA	NA	NA
prob.tree	NA	NA	NA	NA	NA	NA
duration	0.004220386	8.36E-05	50.49310151	0	258.1630798	257.5278123
day	0.010315935	0.003217306	3.206388719	0.001344123	15.80641879	8.322476153
campaign	-0.101930674	0.013511998	-7.543715704	4.57E-14	2.763840658	3.098020883
educationsecondary	0.198368833	0.083925963	2.363616987	0.018097512	0.513193692	0.499831424
housingyes	-0.583413733	0.055808148	-10.45391681	1.41E-25	0.555838181	0.49687781
maritalmarried	-0.272621843	0.075712529	-3.600749399	0.000317301	0.601933158	0.489504782
monthmay	-0.477526448	0.093549861	-5.104512641	3.32E-07	0.304483422	0.460193385
educationtertiary	0.429325931	0.097283749	4.413131005	1.02E-05	0.294198315	0.45568658
contactunknown	-1.540721804	0.094705068	-16.26863094	1.65E-59	0.287983013	0.452828149
maritalsingle	0.066214333	0.081026115	0.817197424	0.413815614	0.282895755	0.450411183
jobblue-collar	-0.23709415	0.093631465	-2.532205923	0.01133474	0.215257349	0.411005303
jobmanagement	-0.150270851	0.095018	-1.581498772	0.11376404	0.209196877	0.406739724
poutcomeunknown	-0.116384515	0.07479737	-1.555997424	0.119708705	0.817478047	0.386278384
jobtechnician	-0.176153839	0.089824002	-1.961099863	0.049867375	0.168034328	0.373900902
loanyes	-0.416502836	0.077243381	-5.392084504	6.96E-08	0.160226494	0.366820038
monthjul	-0.790844874	0.099865697	-7.919084319	2.39E-15	0.152507133	0.359515739
monthaug	-0.610637349	0.101065982	-6.041967222	1.52E-09	0.138174338	0.345086691
monthjun	0.473204159	0.120880346	3.914649267	9.05E-05	0.118134967	0.322771438
jobservices	-0.184323854	0.107737774	-1.710856347	0.087107635	0.091880295	0.28886009
monthnov	-0.857012093	0.108545481	-7.895419343	2.89E-15	0.087810489	0.283022222
contacttelephone	-0.188565259	0.097337079	-1.937239757	0.052716042	0.064276393	0.245247362
monthfeb	-0.072813356	0.114678199	-0.634936341	0.525469934	0.058591936	0.234861961
jobretired	0.246952524	0.115255922	2.142644998	0.032141615	0.050076309	0.218104847
educationunknown	0.233663241	0.135491226	1.724563636	0.084606142	0.041074075	0.198463766
poutcomeother	0.287405892	0.114193303	2.516836672	0.011841371	0.04069806	0.197591983
jobself-employed	-0.368194874	0.146801543	-2.508113107	0.012137781	0.034925129	0.183592238
poutcomesuccess	2.279572034	0.102241992	22.29584912	4.05E-110	0.03342107	0.179735407
jobentrepreneur	-0.340294977	0.162752745	-2.090870885	0.03653964	0.032890226	0.178351233
monthjan	-1.166027064	0.153032774	-7.619459764	2.55E-14	0.031032271	0.173406846
jobunemployed	-0.087925024	0.142529724	-0.616889035	0.537307919	0.02882042	0.167303384
jobhousemaid	-0.439703786	0.17900917	-2.456319893	0.014036814	0.027426954	0.163325766
jobstudent	0.501859954	0.136646539	3.672686891	0.000240013	0.020747163	0.142538303
monthoct	0.896229037	0.140386754	6.383999978	1.73E-10	0.016323461	0.126717642
monthsep	0.867504271	0.155473659	5.579750781	2.41E-08	0.012806618	0.112440598
monthmar	1.536627796	0.159564222	9.630152525	5.96E-22	0.01055053	0.102173612
jobunknown	-0.252588622	0.309152189	-0.8170365	0.41390757	0.006370131	0.079559365
monthdec	0.706663515	0.23041316	3.066940768	0.002162617	0.004733361	0.068637168
(Intercept)	-2.550133256	0.16816405	-15.16455658	6.07E-52	1	0

Figure 1: Results from the stepwise regression

- The results from the stepwise regression model that depict the significance of the different variables
- The results have been ranked in order of significance

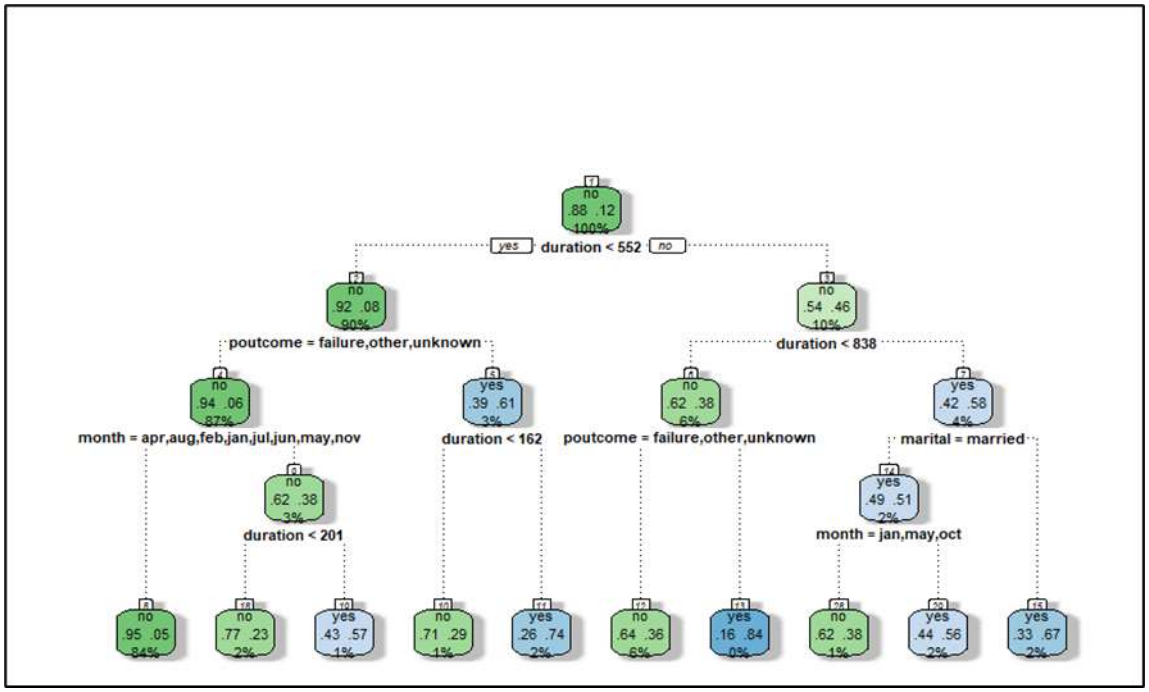

Figure 2: Decision tree

- The decision tree model showing the different factors and probabilities of customers subscribing.
- The blue nodes depict the customers that subscribe to the deposits.