

# MARKETING EFFECTIVENESS IMPROVEMENT ANALYSIS BASED ON SYSTEM DYNAMICS MODEL

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## Introduction

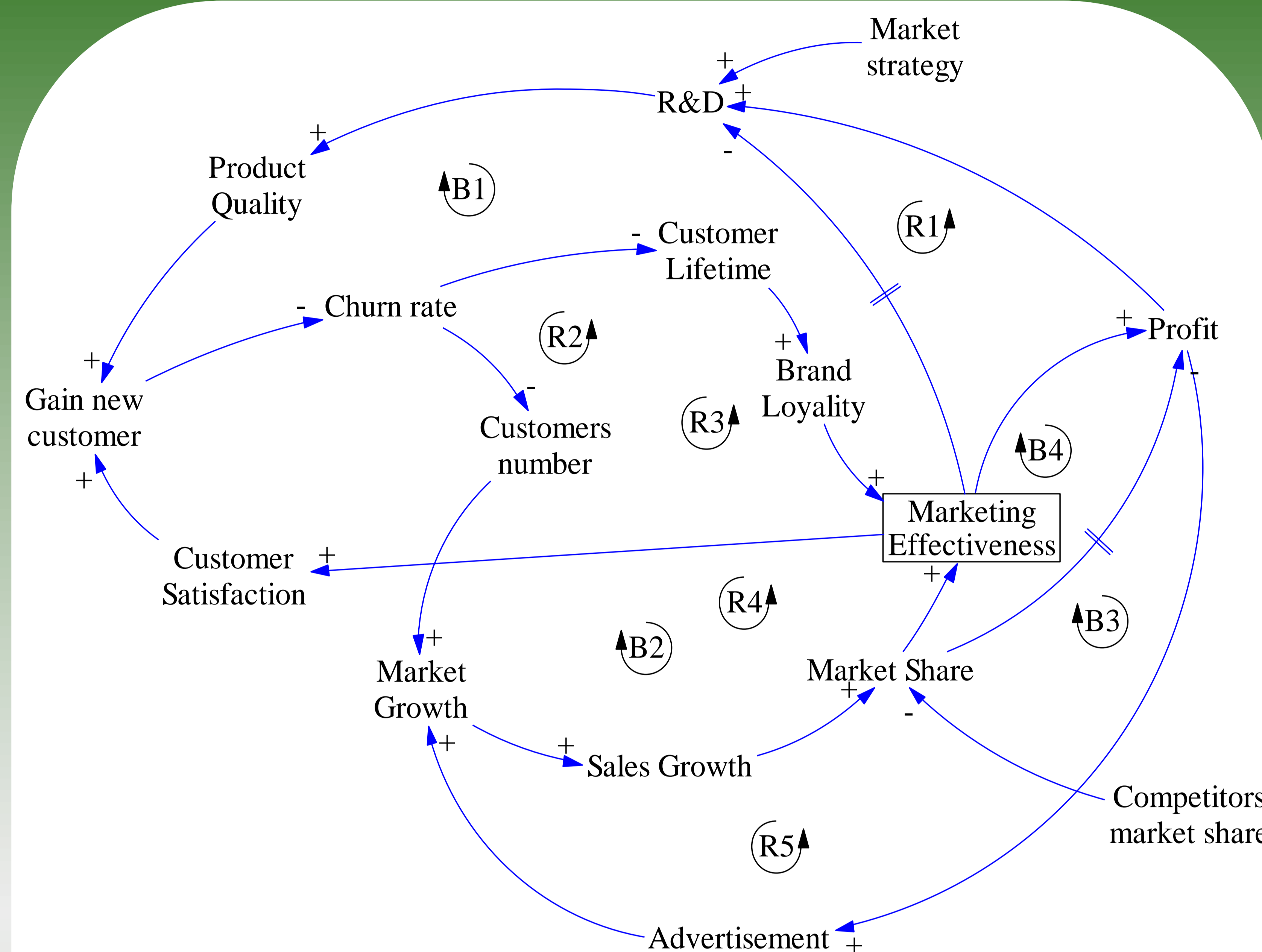
The purpose of marketing effectiveness is to optimize marketing spend for the short and long term in support of, and in alignment with, the brand strategy by building a market model using valid and objective marketing metrics and analytics. Unfortunately, there are not adequate researches on metrics used to evaluating marketing effectiveness. Regarding the constant and complex relationships between each of the measures which affected the marketing effectiveness; System Dynamics (SD) methodology, The best technique that had been presented up to now to cover these kinds of complexities, has been used. The research proposes six main measures and the weight of each measure by using Factor Analyze to evaluate marketing effectiveness and presenting the follow equation:

$$\text{Marketing Effectiveness} = 0.845 \times \text{Market Share} + 0.735 \times \text{Marketing Profitability} + 0.709 \times \text{Sale Growth} + 0.587 \times \text{Customer Number} + 0.558 \times \text{Customer Satisfaction} + 0.437 \times \text{Customer Loyalty}$$

Our purpose in this study is displaying relations between factors that affect Marketing Effectiveness with causal loop diagram and to present several scenarios to improve it by SD simulation.

## Modeling

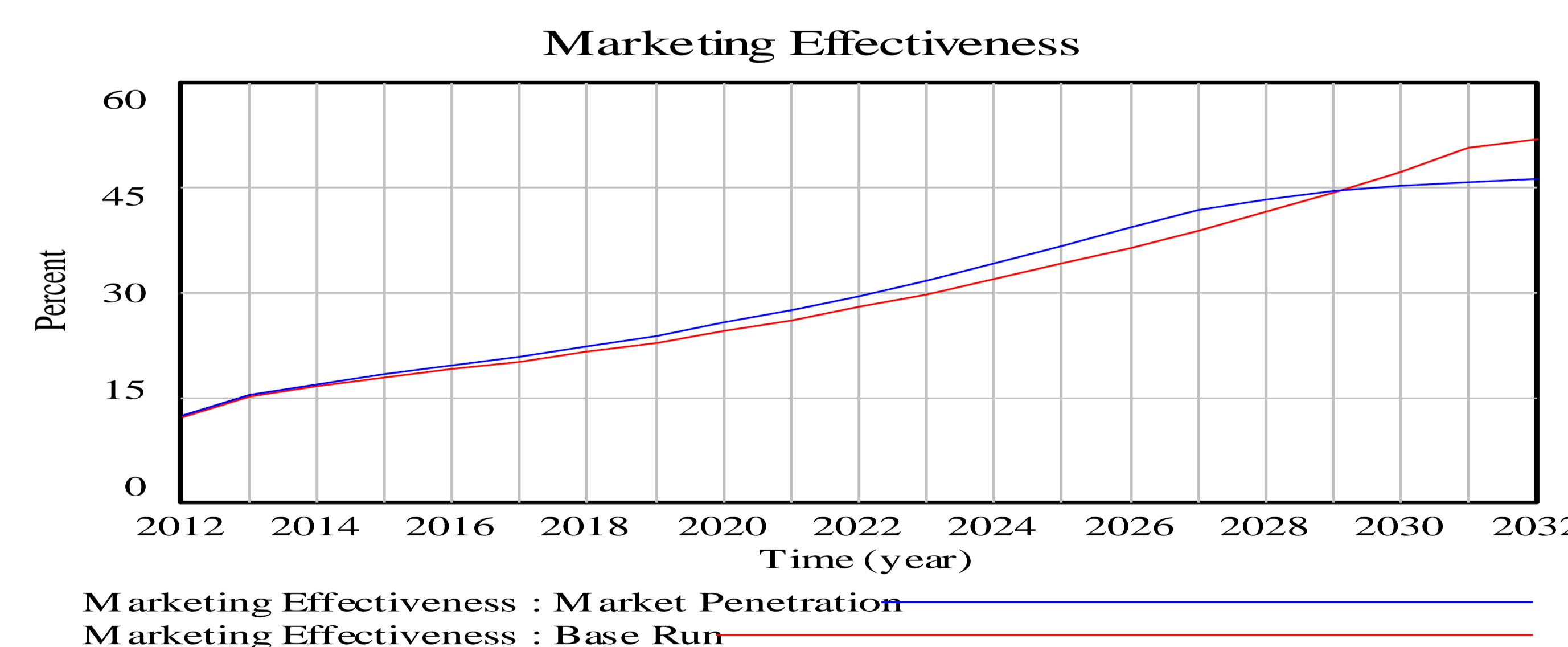
System dynamics (SD) explains and models the problem based on the casual structure of the feedback loops in the system dynamically. By considering Faridyahyaie's M.Sc. thesis, literature review, as well as expert panel's opinion, all factors which can contribute in the causal loop diagram have been identified.



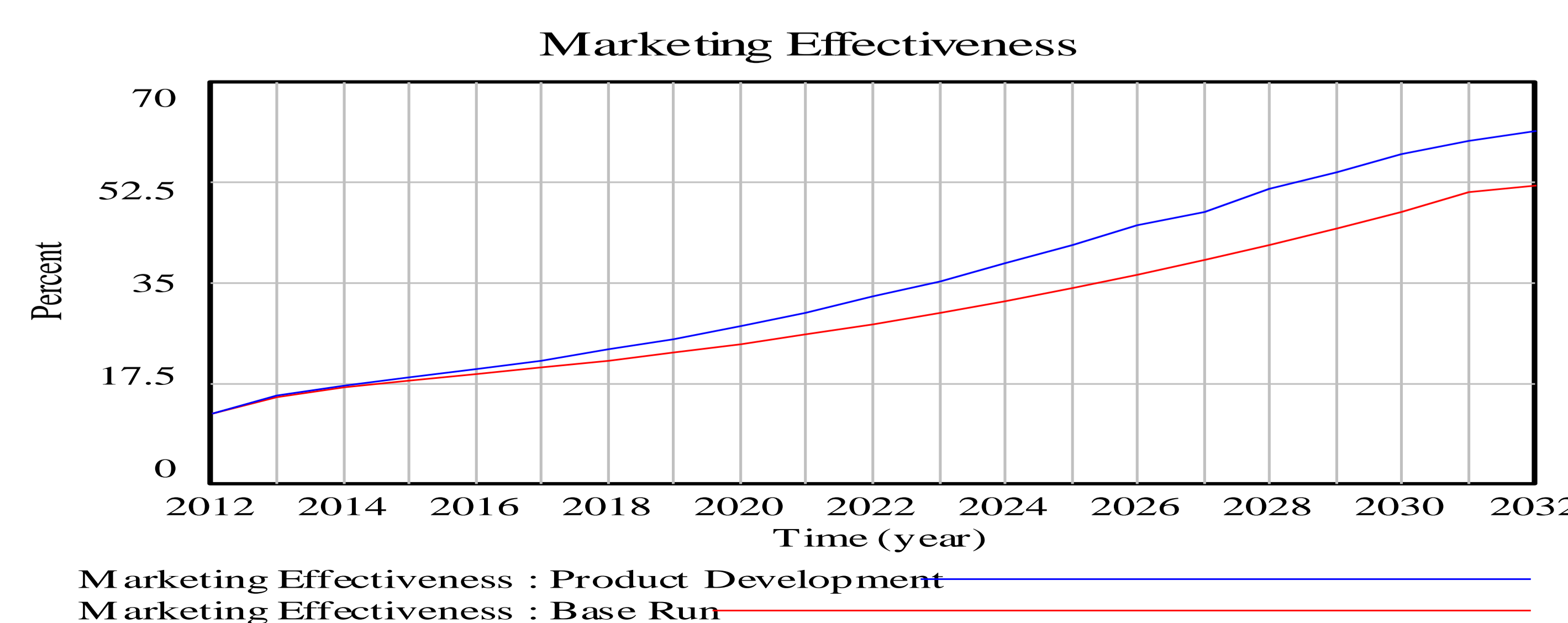
## Results

In this research after simulating of the SD model three scenarios are presented to analyze marketing effectiveness improvement.

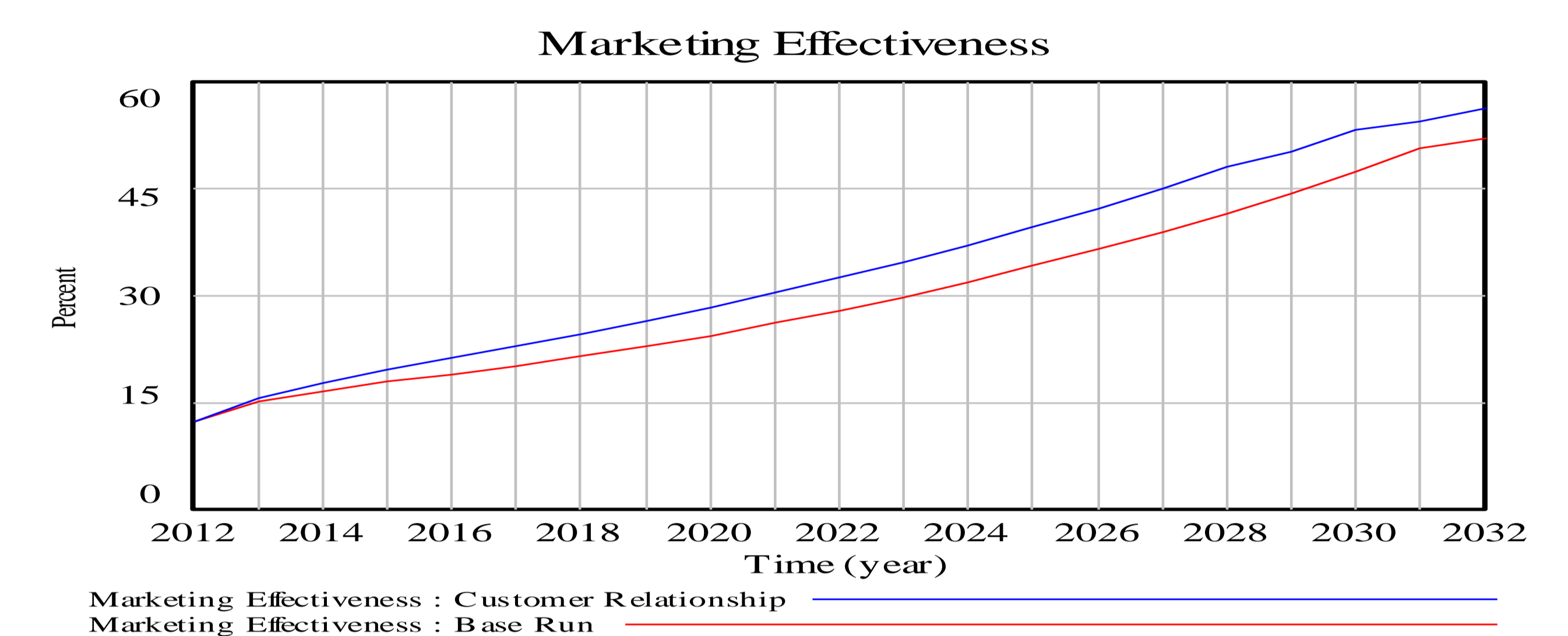
First scenario is increasing Market Penetration through enhancing of Market Share.



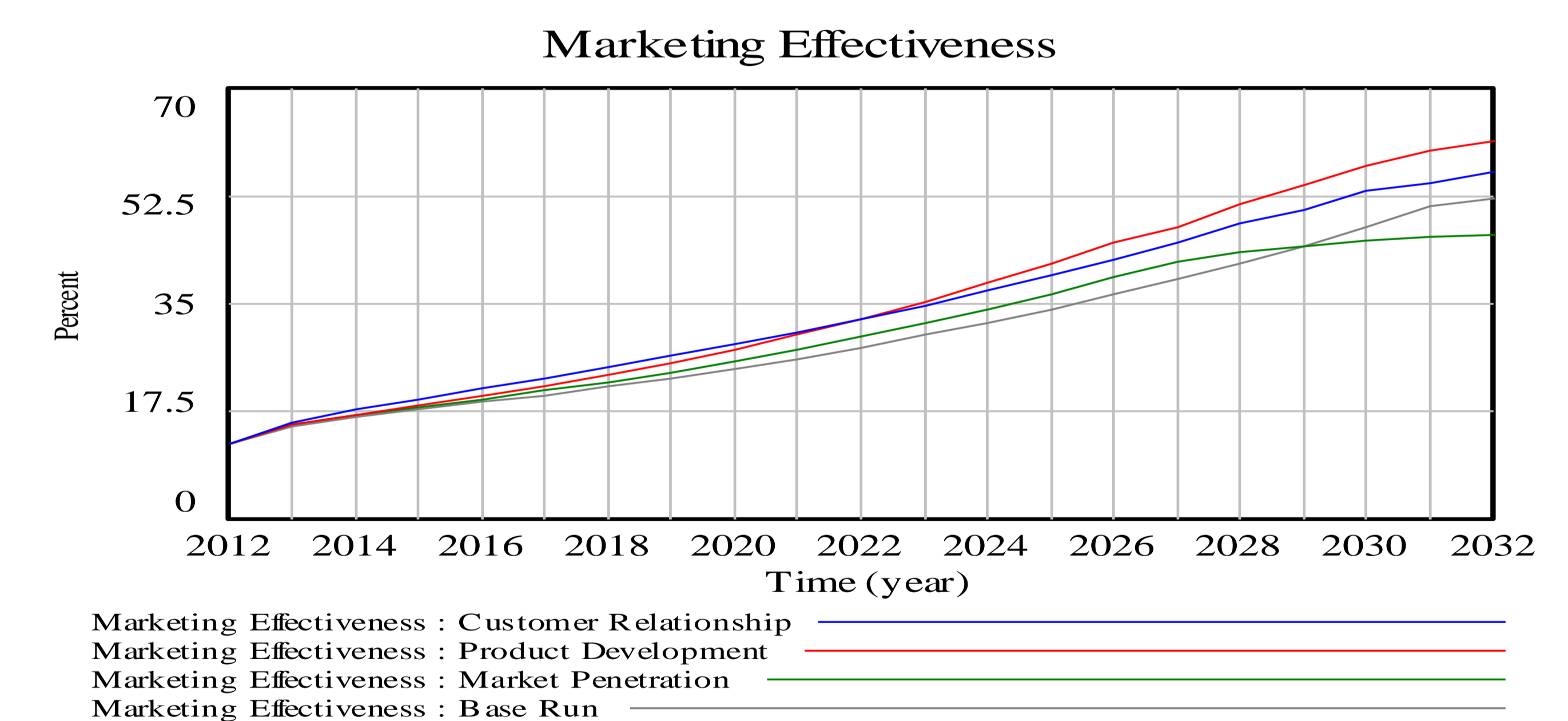
The second scenario is product development.



Third scenario is related to company's relationship with customers (CRM).



Finally, the paper will plots effects of these scenarios on marketing effectiveness system together to evaluate these scenarios.



## Conclusion

According to the results, the strategy of developing products has the most effect on marketing effectiveness by concentrating on the Research and Development (R&D) that leads to increase of customer satisfaction and subsequently marketing effectiveness. The second effective scenario is about the increasing customer satisfaction that leads to enhancing customer satisfaction and then marketing effectiveness. Finally, the last scenario is related to the applying market penetration by increasing the sales based on marketing activities that results in higher market share and improved marketing effectiveness.





