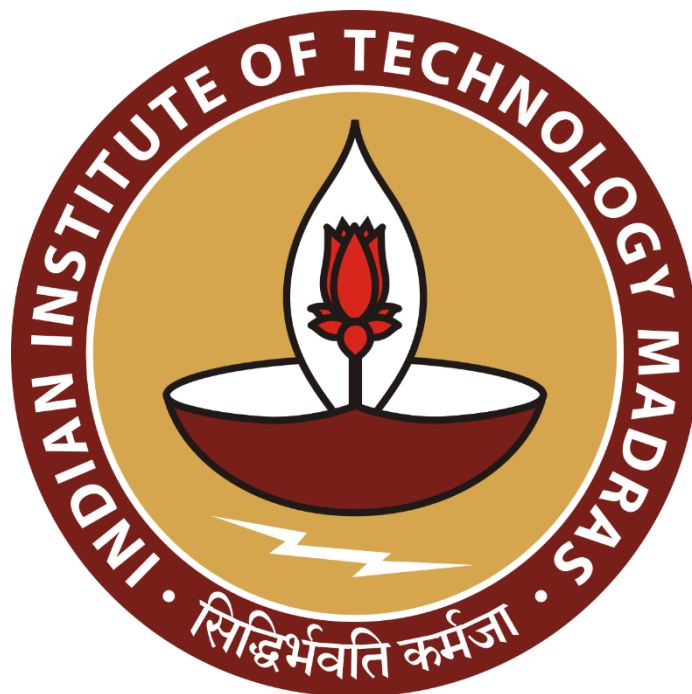# Impact of COVID-19 on Insurance Sales: A Data-Driven Investigation into the Business of a Senior LIC Agent

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project titled "**Impact of COVID-19 on Insurance Sales: A Data-Driven Investigation into the Business of a Senior LIC Agent**". I extend my appreciation to **Mr. K R Naveen Kumar**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate:

Name: Pavan Kumar K N

Date: 12 June 2025

1 Executive Summary

This project focuses on supporting Mr. K R Naveen Kumar, a senior LIC agent and Chairman's Club member, who has been associated with the Life Insurance Corporation of India (LIC) since 1991. He operates as an intermediary, selling policies and driving business indirectly for LIC.

Following the COVID-19 pandemic, there has been a noticeable and consistent decline in both the number of policies sold and the total sum assured. This sharp drop has significantly affected overall business growth, reduced customer engagement levels, and impacted income streams, creating an urgent and pressing need to thoroughly identify and understand the underlying causes.

To address the issue, the proposed solution is a data-driven analysis of historical sales records, customer profiles, and policy trends. Customer data from 2010 onwards is being used to conduct this analysis. By leveraging statistical tools and data visualization techniques, I will aim to identify key patterns, behavioral shifts, and policy preferences that have emerged over the years. These insights will help in redefining sales strategies, personalizing offerings based on customer segments, and adopting digital outreach methods. The ultimate goal is to revitalize policy sales, improve customer retention, and ensure sustainable business performance in the post-pandemic era.

2 Organization Background

Mr. K R Naveen Kumar is a seasoned LIC agent based in Hyderabad, with over three decades of experience in the life insurance industry. He joined the Life Insurance Corporation of India (LIC) as an agent in 1991 and has since established a strong reputation for trust, reliability, and customer service. As a member of LIC's prestigious Chairman's Club, he has consistently demonstrated high performance and deep customer engagement throughout his career.

Mr. Naveen's core responsibilities include explaining various LIC policy options to prospective clients, assisting them in selecting suitable financial protection plans, and providing after-sales service related to policy maintenance, claims, and renewals. His work is centered around building long-term relationships with clients, many of whom rely on his guidance for securing their family's financial future. Operating in a B2C model, he plays a vital role in connecting individual policyholders with LIC's extensive range of insurance products.

3   Problem Statement

3.1   There has been a consistent decline in policy sales and total sum assured for Mr. K R Naveen Kumar post-COVID, indicating a shift in customer behavior.

3.2   There is limited understanding of how demographic or behavioral changes in customers since 2010 have influenced sales trends.

3.3   The absence of data-driven strategies is preventing targeted outreach and informed decision-making to revive LIC policy performance.

4   Background of the Problem

Mr. K R Naveen Kumar, a long-serving LIC agent and esteemed member of the Chairman's Club since 1991, has recently faced a notable decline in policy sales and the overall sum assured following the COVID-19 pandemic. While he had consistently maintained strong performance for nearly three decades, the pandemic has disrupted traditional sales patterns and customer behavior. The problem began surfacing after 2020, when public uncertainty, economic instability, and restricted mobility impacted people's willingness to invest in long-term financial products like life insurance.

Several internal and external factors contribute to this decline. Internally, the agent's traditional sales methods primarily in-person interactions and word-of-mouth referrals have become less effective in a digitally driven market. There may also be gaps in customer follow-up, data tracking, and product customization.

Externally, factors such as changing customer demographics, evolving financial priorities, increased competition from private insurers, and a rise in digital-first insurance platforms have reshaped the market landscape. Additionally, post-pandemic financial insecurity has made customers more cautious, often deprioritizing life insurance investments.

The major cause of the problem lies in the shift in consumer behavior and market dynamics, combined with the lack of a data-driven strategy to adapt to these changes. Understanding these factors is crucial to reverse the downward trend and regain momentum.

5   Problem Solving Approach

Details about the Methods Used with Justification:

To address the decline in policy sales and sum assured for Mr. K R Naveen Kumar, a comprehensive data-driven approach will be used, combining graphical and statistical methods. This dual approach allows for both visual exploration and numeric summarization, enabling a more complete understanding of the data. Graphical methods will include time-series graphs to identify yearly, quarterly or monthly trends in policy sales and sum assured, particularly changes around the COVID-19 period. Bar charts and pie charts will illustrate the distribution of policyholders across different age groups and professions to detect shifts in customer engagement. Scatter plots will explore the relationship between age and sum assured, while box plots will show the variation and concentration of policy values. These methods are chosen for their clarity, interpretability, and ability to reveal patterns that may not be obvious through numbers alone.

Details about the Intended Data Collection with Justification:

The analysis will utilize historical customer data collected from 2010 onward, which includes attributes such as policy application date, sum assured, age at the time of application, and profession/sector of the policyholder. This data range is extensive enough to observe long-term trends and pre- and post-COVID changes, making it suitable for a comparative temporal analysis. These particular fields are selected because they reflect key customer attributes and product decisions. The policy date helps track sales over time, the sum assured reflects investment size, while age and profession provide demographic and economic context. This selection ensures the analysis remains focused, relevant, and aligned with the objective of identifying why sales performance has declined in recent years.

Details about the Analysis Tools with Justification:

The primary tools for this analysis will include Microsoft Excel for initial data cleaning and tabulation, and Python libraries like Matplotlib and Seaborn will be used for graphical representation. These tools are chosen for their accessibility, flexibility, and ability to handle large datasets while producing high-quality, interactive visuals. Basic statistical calculations such as mean, median, standard deviation, and correlation coefficients will also be performed to supplement the visuals with quantitative context. These tools are well-suited to deriving

insights from structured customer data and will enable actionable interpretations that Mr. K R Naveen Kumar can use to refine his sales strategies.
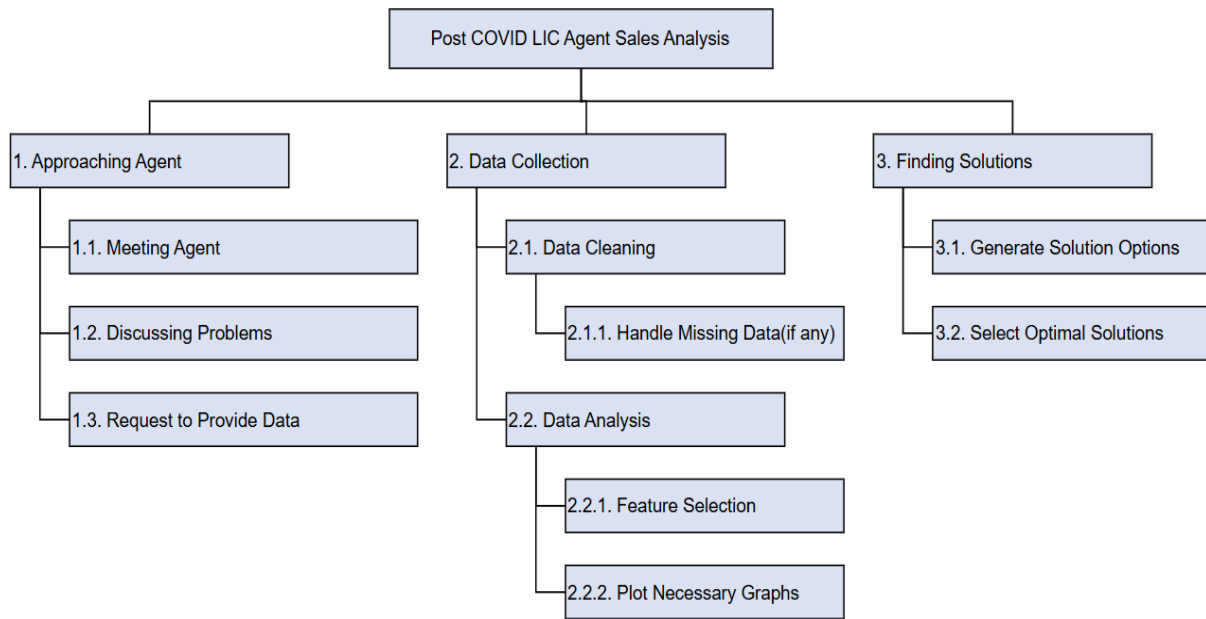
6 Expected Timeline

6.1 Work Breakdown Structure:

Figure 1: Work Breakdown Structure

6.2 Gantt Chart:

ID	TASK	START	END	JUNE				JULY				AUGUST		
				W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3
1	Data Collection	01-06-2025	01-06-2025	■										
2	Data Cleaning	02-06-2025	04-06-2025	■										
3	Finding Insights and Drafting Problem Statements	05-06-2025	10-06-2025		■									
4	Preparing Proposal Submission	11-06-2025	13-06-2025			■								
5	Finding more Insights while waiting for Proposal Approval	14-06-2025	20-06-2025			■								
6	Proposal Approved	20-06-2025	20-06-2025				■							
7	Data Analysis, Visualization and finding Patterns	21-06-2025	05-07-2025					■						
8	Preparing Mid Term Submission	06-07-2025	08-07-2025						■					
9	Finding more Insights while waiting for Mid Term Approval	09-07-2025	15-07-2025						■					
10	Mid Term Approved	15-07-2025	15-07-2025							■				
11	Finding Problem's solutions	16-07-2025	31-07-2025							■				
12	Preparing Final Submission	01-08-2025	03-08-2025									■		
13	Preparing Slides while waiting for Final Approval	04-08-2025	10-08-2025										■	
14	Final Approved	10-08-2025	10-08-2025											■

Figure 2: Gantt Chart

7 Expected Outcome

7.1   Identification of key factors behind the decline in policy sales and sum assured for Mr. K R Naveen Kumar in the post-COVID period.

7.2   Graphical and statistical insights into customer trends based on age, profession/sector, and sum assured from 2010 onwards.

7.3   Recognition of customer segments (by age or profession) with reduced engagement or shifting buying patterns.

7.4   Targeted marketing recommendations based on segment-wise engagement trends.

7.5   Identification of customer types who typically choose higher sum assured policies, aiding in lead prioritization.

7.6   Suggestions for modernizing outreach through digital tools and focusing on high-potential demographics.

7.7   Data-driven guidance to support post-COVID business recovery and long-term customer-centric growth.