**Modeling the Impact of Malaria on Labor Market Outcomes in Sub-Saharan Africa**

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**Abstract**

Malaria remains a critical challenge for labor markets in endemic regions, particularly in Sub-Saharan Africa, where its effects on workforce participation and productivity are substantial. This study develops a theoretical model to analyze the impact of malaria on labor market outcomes, focusing on both absenteeism and presenteeism. While absenteeism, measured by lost workdays has been widely examined, our findings reveal that presenteeism, characterized by reduced productivity while at work, represents an equally significant economic burden. This theorical model demonstrates that as the severity of malaria increases, workers experience declining efficiency before reaching a threshold where absence becomes inevitable, highlighting the nonlinear impact of the disease on labor supply. This non-linear relationship uncovers hidden costs of malaria, which are often underestimated in traditional labor market analyses, as the presence of an ill worker may obscure significant losses in output, affecting overall production. Additionally, the study shows that reduced working time due to malaria results in trade-offs between consumption and leisure, influencing workers' economic decisions.

By incorporating both absenteeism and presenteeism, this study provides a more comprehensive framework for assessing the true economic burden of malaria. The findings emphasize the necessity of holistic policy interventions integrating malaria prevention, treatment, and workplace health strategies to mitigate its adverse effects on labor market dynamics and economic resilience.

**Key-words:** Malaria, Labor Market Outcomes, Absenteeism, Presenteeism, Productivity Loss

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