Combined Analysis – Nigeria

The mediation analysis explored how total food losses relate to three key nutrition outcomes in Nigeria: adult obesity prevalence, average dietary energy supply adequacy, and prevalence of undernourishment.

The mediation analysis for Nigeria investigates how total food losses relate to adult obesity, considering both direct and indirect effects through different types of food supply. The direct effect of food losses on obesity is positive, statistically significant, and relatively strong. This suggests that increases in food losses are associated with higher adult obesity prevalence. In contrast, none of the tested indirect pathways, via fat supply or animal and plant based food availability, show statistically significant effects. For example, the indirect effect via fat supply is negative but not statistically significant, and the path via animal-based food supply also yields a non-significant negative effect. These findings imply that while changes in food supply composition might conceptually mediate the relationship between food losses and obesity, the evidence for such mediation is weak in this context. Overall, the results indicate a direct, statistically robust link between higher food losses and increased obesity in Nigeria, highlighting the need to understand broader socio-economic and behavioral mechanisms driving this association.

The direct effect of food losses on undernourishment was positive but statistically insignificant), indicating that food losses alone do not have a meaningful standalone impact on undernourishment. However, the analysis revealed a statistically significant negative indirect effect through increased total food supply. This suggests that higher food losses are linked to greater reported food availability, which in turn is associated with a lower prevalence of undernourishment. When combining both direct and indirect effects, the total effect of food losses on undernourishment remains statistically significant and negative. These findings imply that, while food losses themselves may not directly increase undernourishment, they appear to be part of a broader system where increased food availability correlates with improved population-level food security outcomes.

In contrast, the results for dietary energy supply adequacy followed a different pattern. The direct effect of food losses on energy supply adequacy was statistically significant and negative, indicating that greater food losses are associated with lower energy supply adequacy rates. By comparison, the indirect effects of food losses via increased availability of foods supply, were positive and also statistically significant. This suggests that higher availability of foods supply could logically contribute to higher energy supply adequacy.