

Trends in food supply, diet, and the risk of non-communicable diseases in three Small Island Developing States (SIDS): implications for policy and research

Introduction & Objectives

SIDS: Haiti, Saint Vincent and the Grenadines (SVG), Fiji
1980 ← → **2019**

Objective: To examine trends in food availability, food imports, local food production and risks of non-communicable diseases (NCDs) in three SIDS: Haiti, SVG and Fiji.

Methods



Availability & Intake

Availability: The availability of food of appropriate quality, supplied through domestic production or imports, **(Production + Imports - exports)** it does not assume consumption.

Intake: From the global dietary database



From NCD Risk Factor Collaboration (NCD-RisC), data on the prevalence of overweight, obesity, and diabetes for men and women was downloaded.

Data was graphed in R, no formal statistical analysis was undertaken, as the aim was to produce visual representations of changes over time in order to inform hypotheses to guide further work.

Import Dependency Ratio (IDR)

$$IDR = \frac{M}{P + M - X} 100\%$$

Self Sufficiency Ratio (SSR)

$$SSR = \frac{P}{P + M - X} 100\%$$

Modified Import Dependency Ratio (MIDR)

$$MIDR = \frac{M - Xm}{P + M - Xm - Xp} 100\%$$

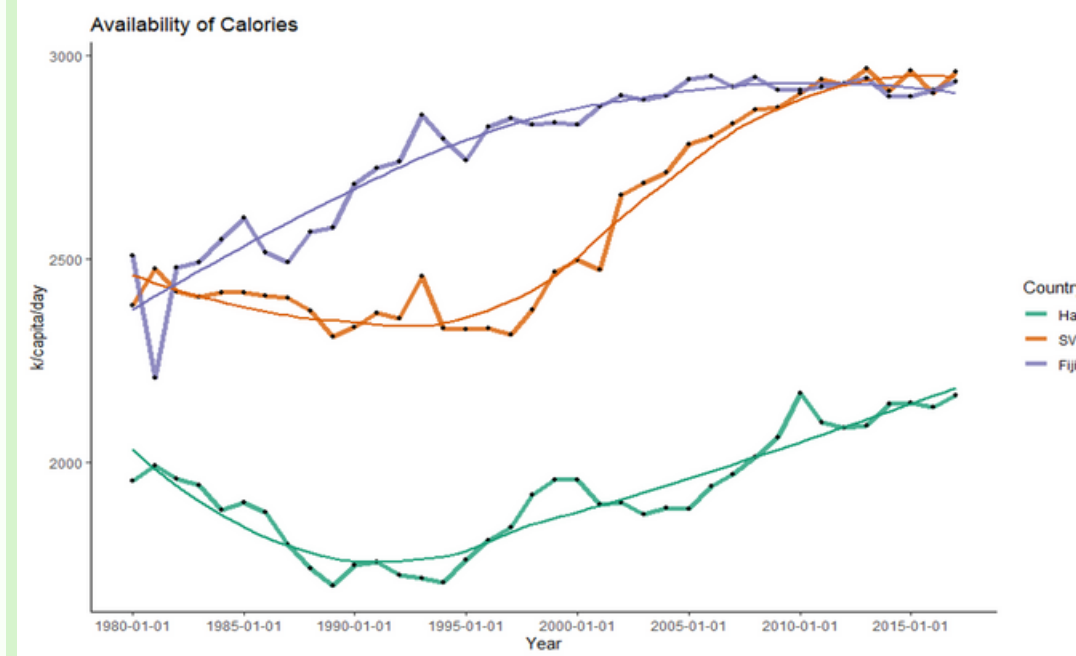
Localisation Ratio (LR)

$$LR = \frac{P - Xp}{P + M - Xm - Xp} 100\%$$

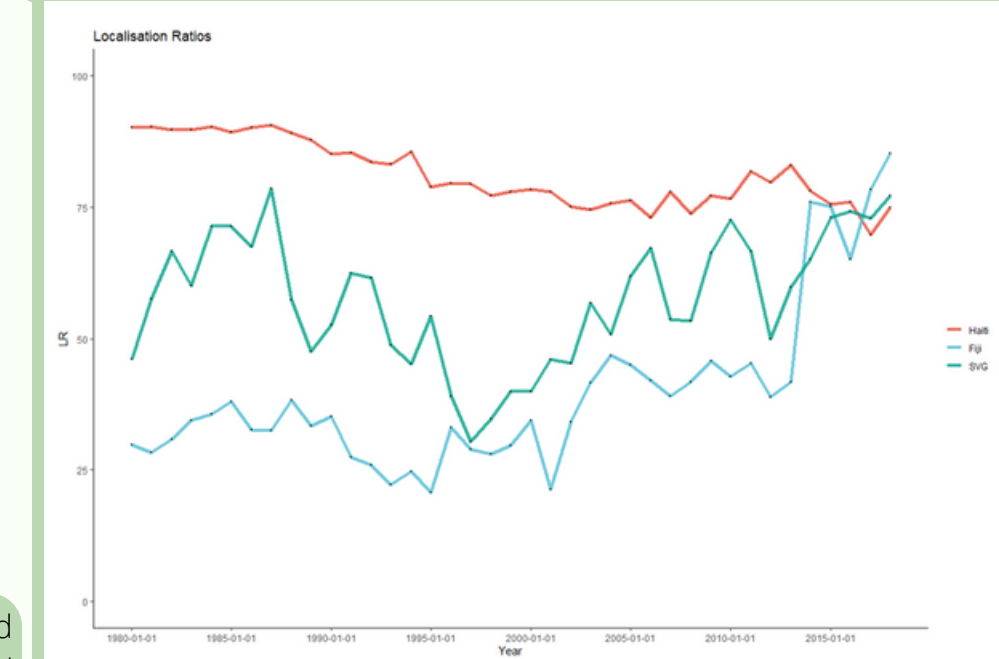
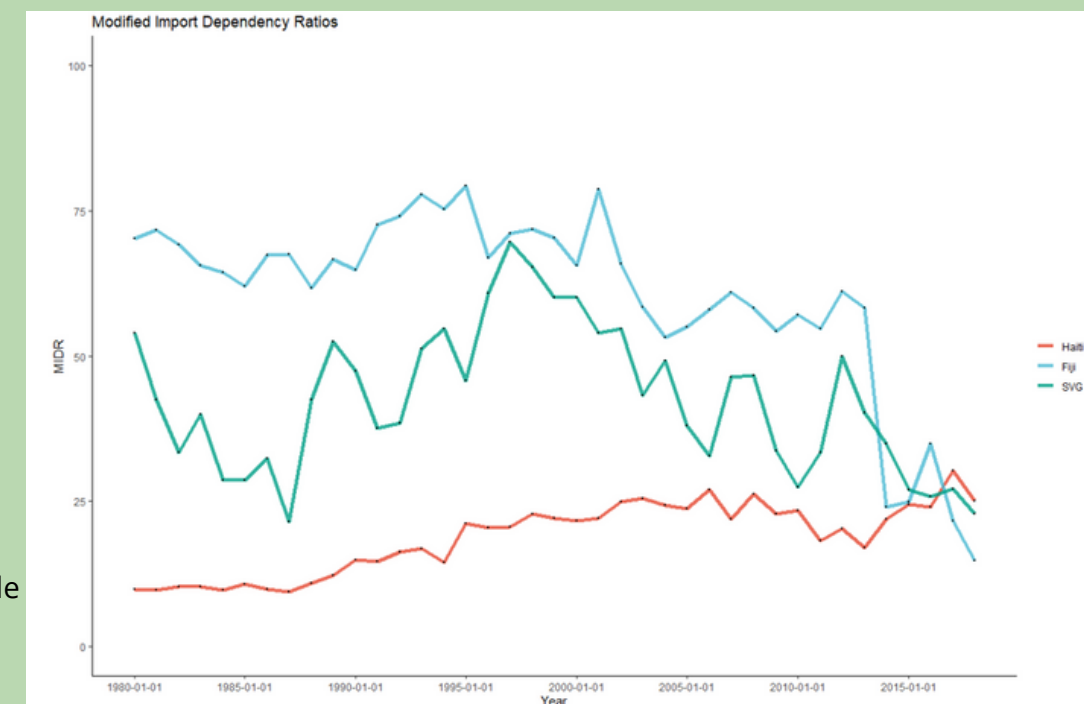
FAO data on imports, exports, and local food production were used to calculate IDRs, and where the data allowed, modified IDRs and localisation ratios,, which consider re-exports. (P=production, M=imports, X=Exports)

Key Findings

The total availability of calories has increased in all three settings since 1980. The proportion of calories available from fruits and vegetables has doubled since 1980 in Fiji and SVG and has decreased in Haiti. The percentage of calories available from sugar has stayed the same over time in Fiji and decreased in Haiti and SVG, and the percentage of calories available from red meat has increased by 50% and 100% in Haiti and SVG, respectively



After adjusting for this in those food categories with the available data, the modified import dependency ratios fluctuated between 10% and 65% in SVG, 35% and 80% in Fiji, and 5% to 30% in Haiti. Local production of fruit since 1980 has increased in all three SIDs between 41% and 119%, while local production of sugar increased in Fiji and SVG by 48% and 100%. Local production of vegetables has increased by 875% in Fiji and by 150% in SVG, but decreased by 46% in Haiti



The prevalence of obesity (BMI > 30 Kg/m2) has increased since 1980 in all three countries (by 126% to 800%), and in all 3, it is substantially higher in women than men. In the most recent data for Fiji, an estimated 35% of women are obese (24% men); in SVG, 30% women (15% men); and in Haiti, 26% women (15% men).

