

**PEMODELAN *GEOGRAPHICALLY WEIGHTED REGRESSION*
PADA KASUS PREVALENSI BALITA STUNTING DI PROVINSI
ACEH TAHUN 2022**

Nama Peneliti : Anggi Emeliani
NIM : 202400008
Dosen Pembimbing : Gangga Anuraga, S.Si., M.Si., Ph.D.

ABSTRAK

Indonesia merupakan negara berkembang yang memiliki berbagai macam masalah kesehatan salah satunya yaitu stunting. Angka prevalensi balita stunting negara Indonesia menempati urutan tertinggi ke-27 dari 154 negara yang memiliki data stunting dan menjadi urutan ke-5 diantara negara negara di Asia berdasarkan data dari UNICEF dan WHO tahun 2022. Prevalensi stunting negara Indonesia tahun 2022 sebesar 21,6% dan Provinsi Aceh menjadi angka stunting tertinggi ke-5 di Indonesia yaitu sebesar 31,2% berdasarkan data dari Studi Status Gizi Indonesia. Stunting merupakan masalah gizi kronis yang terjadi karena kekurangan asupan gizi dalam jangka waktu lama sehingga mengakibatkan terganggunya pertumbuhan pada balita. Penelitian ini menggunakan metode *Geographically Weighted Regression* (GWR) dengan fungsi pembobot *Fixed Kernel Gaussian* yang didapatkan dari perbandingan nilai AIC terkecil dan R^2 terbesar. Hasil penelitian menunjukkan bahwa variabel independen yang berpengaruh signifikan terhadap kasus prevalensi balita stunting di Provinsi Aceh menggunakan $\alpha = 10\%$ yaitu persentase bayi diberi vitamin A (X_1), persentase baduta yang pernah diberi asi (X_3), persentase perempuan pernah kawin usia 15-49 tahun yang sedang menggunakan alat KB (X_4), jumlah tenaga gizi (X_5) dan jumlah posyandu (X_6). Model GWR dapat memberikan hasil terbaik dengan nilai R^2 sebesar 79,30% dibandingkan dengan model OLS sebesar 51,38%.

Kata kunci : stunting, *Geographically Weighted Regression*, GWR, gizi kronis

**GEOGRAPHICALLY WEIGHTED REGRESSION MODELLING
ON THE PREVALENCE OF STUNTING AMONG CHILDREN
UNDER FIVE IN ACEH PROVINCE IN 2022**

Name : **Anggi Emeliani**
NIM : **202400008**
Supervisor : **Gangga Anuraga, S.Si., M.Si., Ph.D.**

ABSTRACT

Indonesia is a developing country that has various health problems, one of which is stunting. The prevalence rate of stunting in Indonesia ranks 27th highest out of 154 countries that have stunting data and is 5th among countries in Asia based on data from UNICEF and WHO in 2022. Indonesia's stunting prevalence in 2022 was 21.6% and Aceh Province had the 5th highest stunting rate in Indonesia at 31.2% based on data from the Indonesian Nutrition Status Study. Stunting is a chronic nutritional problem that occurs due to lack of nutritional intake over a long period of time resulting in disruption of growth in toddlers. This study uses the Geographically Weighted Regression (GWR) method with the Fixed Kernel Gaussian weighting function obtained from the comparison of the smallest AIC value and the largest R^2 . The results showed that the independent variables that had a significant effect on the prevalence cases of stunting toddlers in Aceh Province using $\alpha = 10\%$ were the percentage of infants given vitamin A ($X1$), the percentage of infants who had been breastfed ($X3$), the percentage of married women aged 15-49 years who were using family planning tools ($X4$), the number of nutrition workers ($X5$) and the number of posyandu ($X6$). The GWR model can provide the best results with an R^2 value of 79.30% compared to the OLS model of 51.38%.

Keywords: stunting, Geographically Weighted Regression, GWR, chronic nutrition