FACTORS THAT INFLUENCE OPEN UNEMPLOYMENT RATE OF WOMEN’S IN JAVA ISLAND USING REGRESSION NONPARAMETRIC SPLINE

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Abstract

Improved quality of life by the government and the private sector cannot be felt by the whole people of Indonesia. This occurs due to the large number of unemployed in Indonesia. Indirectly, this problem had an impact on women’s role in supporting the family economy. Therefore, in this study conducted a discussion of factors affecting the characteristics of unemployment and how to make spline modeling using nonparametric models. The purpose of this study was to determine the characteristics open unemployment rate of women in Java and its factors that affect it. The data used in this study are data Susenas and Sakernas in 2010 for the island of Java. The results showed that the best spline regression model is linear spline regression model with a combination of knot points, for $x_1$, $x_2$, $x_3$, and $x_4$ have three knots, while the $x_5$, $x_6$, and $x_7$ has a knot. Minimum GCV value is 11 431 and $R^2$ value is 77.70%. Testing parameters give result that the variable percentage of the growth of population, sex ratio, percentage of people educated above junior high, and labor force participation meaningful influence on the open unemployment rate of women on the island of Java.

Keywords: Unemployment of Women, Nonparametric Regression, Spline, Knot Optimum Point.