# Multiple linear regression analysis

Business, Human Resources

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Objective of the Paper

The research paper done by Syla has three specific objects. The first one is to identify impacts associated with active labor markets. The second one is to compare the distinct active programs that have been implemented in Macedonia. The last one is to determine how each and every program affects the job markets.

Techniques and Methods Used in the Computation

The multiple linear regression analysis method used in the research paper consists of several combined methods that are brought together for efficient analysis. The first method which is called the " first generation" works through assessment of the new policies. It is much based on the application of the econometric techniques on the latest data. The second part of the multiple regression analysis methods is known as the " second generation." It is used for the evaluation of the policies related to European research. Its features are advanced, and it is faster when it comes to methodology development. It gives data that is more accurate compared to other evaluation methods. The other method is the use of ALMPs technique that has accurate data in relation to the labor market measurements.

A Literature review is used majorly in the building of the regression model. Annual costs that come through implementation of active programs and inflation is identified. The dependent variable defined in the model is employment or exit of unemployment.

Equation 1: Employment = f (Inflation, cost per program)

The conceptual model presents the regression equations 2.

Equation 2 $Y = \beta0 + \beta1\ X1 + \beta2\ X2 + Ɛi$

Ho: $\beta1 = 0, \beta2 = 0$

Ha: At least one of the $\beta \neq 0\ \alpha = 0.\ 05$

The variable analysis is conducted using the GDP per worker or costs of the active programs vis-à-vis workforce or the unemployed in percentage form.

The formula employed in the analysis is as follows:

X= [(PATP/ P)/ (GDP/ N)] = [(PATP/GDP)/ (PF/ FP)] = patp %/ pf

Where;

x- Total expenditures for various active programs per annum (mil/ den)

P- Total unemployment per annum

GDP- Domestic product in its totality (mil/ den)

N- Country’s population

F- Workforce number

patp- Each program’s cost as a percentage of GDP

p- Unemployment: Labor force, and,

f- Rate of participation of the labor force.

Results and Conclusion

The multiple regression analysis method shows that the policy has contributed over 92% of the labor force, employment as per the expectation of the policy by the government. It concludes that the program is efficient, thus suggesting a continuation of such like policies for the unemployment rate reduction. The research findings show that all the coefficients are proportionally significant in the calculations and apart from inflation. This is because the statistics that are calculated are higher than the critical value

identified. The results show that the model variables are accurate since they explain over 98% of the independent body. It is recognized that the policy has improved the employment of the labor force to rise above 100% as per the government policy.

The research paper concludes that programs that support active employment have a great impact on the levels of employment. This is recognized through the comparison of each and every program’s impact on the employment level. The promotion program that deals with employment of the un- employed is identified to have greater influence on the employment levels. The primary activity that is defined to be of much impact on the promotion program is job training. Comparison of the minor programs within the promotional program shows that capacity building programs and subsidies have a greater employment impact. Omission of observation activities in long periods is identified to be one of the demerits of the models.

Reference

Syla, S. (2013). Application of Multiple Linear Regression Analysis of Employment through ALMP. International Journal of Academic Research in Business and Social Sciences, 3(12), 252- 258