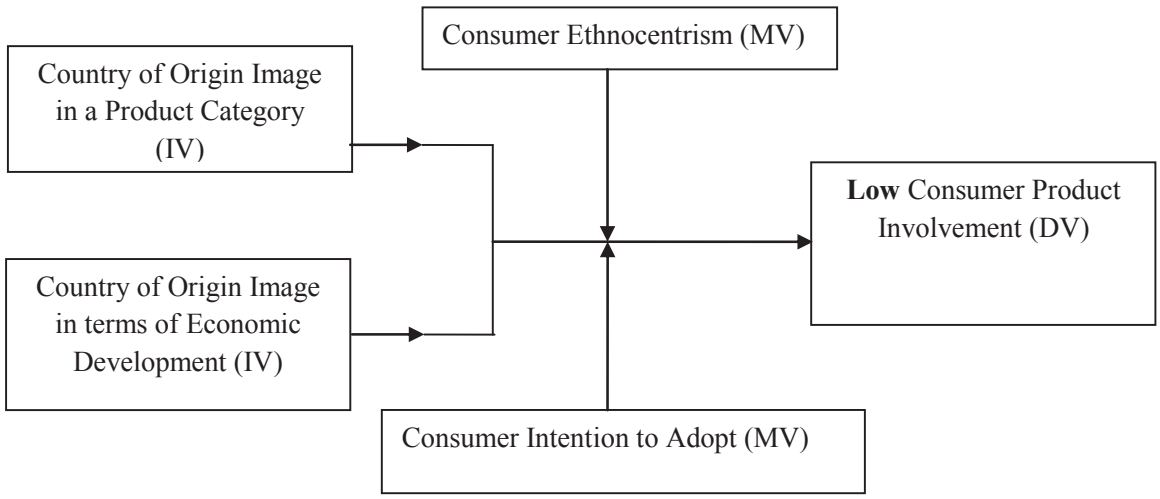
4.2.2. Multiple Regression

According to Wooldridge (2009) generally one variable is the main variable of interest. The variable to be explained or predicted is called response or dependent variable. The other variables are called explanatory or independent variables. Multiple regression analysis is concerned with statistical relationship between two or more numerical predictor (independent) variables and response (dependent) variables (Jackson, 2011). There are functional dependencies between the variables – which imply that with the increase/decrease in predictor or independent variables, there will be an increase/decrease in response variable (Humbert, 2007). Regression analysis in the current study is performed to assess contribution of the COOIPC and the COOIED in explaining the variation in the LCPI and the HCPI respectively. Two moderating variables are also included in the current study – the CE and the CIA. Thus, the two models of the current study proposed are as follows:

Figure 4.2: Model I for *Regression* Analysis (Low Involvement Products)



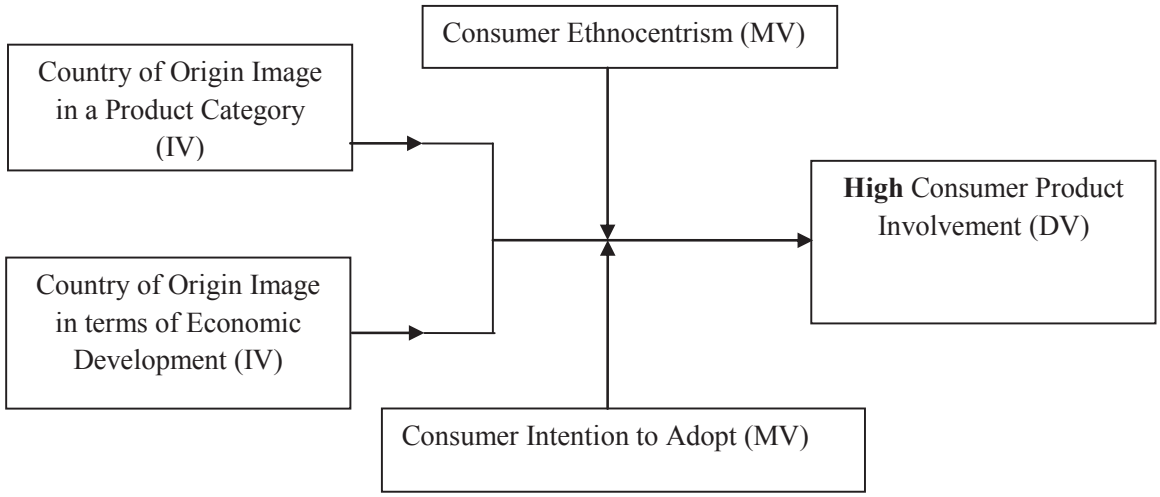
IV = Independent Variable

DV = Dependent Variable

MV = Moderating Variable

The model I for regression analysis is performed to assess contribution of COO-image in a product category, and COO-image in terms of economic development in explaining the variation in low consumer product involvement. Consumer ethnocentrism and consumer intention to adopt are included as moderating variables in this model.

Figure 4.3: Model II for *Regression* Analysis (High Involvement Products)



IV = Independent Variable

DV = Dependent Variable

MV = Moderating Variable

Model II (fig 4.3) of regression analysis is performed to assess the effect of independent variables – COO-image in a product category and COO-image in terms of economic development, on the dependent variable – high consumer product involvement. The two moderating variables are also included in the model – consumer ethnocentrism and consumer intention to adopt.

It is very important to note that when multiple regression is performed using the SPSS, it gives three outputs: Model Summary, ANOVA table and Regression table (Humbert, 2007):

Model Summary: The Model Summary gives the value of R^2. This is called the coefficient of determination, or the square of the multiple correlation coefficient. It is often multiplied by 100 and expressed as a percentage ($100R^2\%$). R^2 is a standard measure of goodness of fit of the model. Adjusted R^2 is slightly smaller than R^2 but more accurate in measuring the goodness of fit of the model as it adjusts the standard errors of the model.

ANOVA table: The Analysis of Variance table shows the F- ratio and P-value. The F-ratio is used to test the null hypothesis that all regression parameters except the constant are zero. The alternative hypothesis is that at least one of the variables has a non-zero coefficient. The P–value shows that at a certain level of confidence, what is the significance of value and provides the evidence for or against the null hypothesis. Such as P=.000 <.001 means highly significant and provide very strong evidence against null hypothesis.

Regression Table: The Regression tables contain the regression coefficients (Unstandardised and Standardised), their standard errors and the associated t-tests. A regression carried out on raw or original (unstandardised) variables produces unstandardised coefficients. SPSS show 'B' value for unstandardised coefficients that show the increase or decrease in independent or predictor variables. Before solving a multiple regression, the SPSS standardises each variable by subtracting its mean from each of its values and then dividing these new values by the standard deviation of the variable. This standardising in a multiple regression yields standardised regression coefficients that show the change in the dependent variable measured in standard deviations. The standard error is an estimate of that standard deviation computed from the sample of data being analysed. Each t-value tests whether or not the coefficient is zero – if the coefficient is not zero, it means the predictor has contribution in explaining the dependent variable.

4.2.2.1. Effect of Independent Variables – COOIPC and COOIED on Dependent Variable –LCPI

To address the objectives of the study and to see the cause and effect of the COO-image in a product category and the COO-image in terms of economic development, on low consumer product involvement, a regression test was performed (table 4.18).

The results of regression analysis show that the independent variables – COOIED and COOIPC account for 24.8% (Adjusted R^2=.248) variance in the dependent variable – LCPI. The ANOVA (analysis of variance) table provides strong evidence that the independent