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**APPLICATION OF THE PRINCIPAL COMPONENT REGRESSION  
MODEL TO INVESTIGATE ALL SHARE PRICE INDEX**

**A PROJECT REPORT PRESENTED**

**BY**

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### **Abstract**

The Colombo Stock Exchange (CSE) comprises of 16 sectors currently with the composition of 240 companies. Share price index is an important datum to know about the current situation of CSE. The measure of share price fluctuations is calculated daily and published with the name "Stock Market Daily".

There are two share price indices currently taken into consideration. One is All Share Price Index (ASPI), which calculates share price fluctuations of all companies in the stock market and the other is Milanka Price Index (Representing Sensitive Price Index (SPI)).

The main objective of this project is to develop a model to find ASPI, if the other 16 sectoral statistics are known. For this purpose data were collected from the CSE. It consisted of 99 day's information from 28/01/1999 to 30/06/1999. A sample of 90 day's data was used to analyze for developing the model. A hold-out sample consisting of 09 day's information was kept to check the validity of the regression model.

Since it was difficult to regress ASPI (Dependent variable) on 16 sector variables (16 independent variables), Principal component technique was used for data reduction and interpretation. Then, multiple regression technique was used to develop the model.