

Parameters driving consumer demand in Brazil

by

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ABSTRACT

What are the key store related parameters that drive sales for large retail chains? This question has become increasingly important to Lojas Americanas, the sponsor company. In the last few years, the company has expanded rapidly to cater to a larger group of consumers in a wide range of locations across Brazil. With this expansion, it wishes to determine the key parameters that drive sales for each department and modify its assortment policy accordingly for each store, so as to optimize total sales. This thesis investigates the sales impact of a wide range of store related parameters such as location, size, and socio-economic profile of the surrounding population. Stepwise regression analysis is used here. For this regression, AIC and the p-value threshold are used as the criteria to identify statistically significant store related parameters that influence sales. Furthermore, cross validation is performed to check the explanatory power of the model. The analysis performed yields useful results. A total of 36 different retail departments are analyzed and an adjusted R-squared value (for the validation set) of over 0.6 is obtained for a vast majority of them, indicating that the model performs well in determining the key parameters that drive sales. Furthermore, for each department, the statistically significant set of parameters is obtained and for the company's overall revenue a set of 11 key parameters is identified as highlighted in the Discussion section of the thesis. LA can use the results of this analysis to guide its product assortment policy.

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