

What is Market Basket Analysis?

Well, **Market Basket Analysis** is a modelling technique based upon the theory that if you buy a certain group of items, you are more (or less) likely to buy another group of items, to do it, we used some pre-processing techniques from Data Analytics and also algorithms that help us to make these predictions. That said, we analysed the relevant transactions of Electronidex in order to try to find some patterns that help the management of Blackwell Electronics to know which products would be more incorporate in our portfolio.

But before entering to discuss the main results, I would like to Underline that our recommendations are not merely based on the results of the algorithm but also these recommendations have into account some relevant figures regarding the Blackwell Electronic Business part. As an example, I would like to show you this chart which shows the percentage of sales of each category in both companies. As can be seen, there are some similarities between both companies regarding the category of the number of items sold.

That said, it's important to make a zoom in this chart to figure out what category of items provide more money to the Blackwell Income of Statement. As can be seen in this chart, a bit more than the 50% of the total income of Blackwell comes from selling Game Consoles and Displays (which includes Projectors, Monitors, screen, etc.)

Bearing all these details on mind, we found some cross-selling patterns that led us to make the next recommendations:

- Incorporate Laptops from Apple in Blackwell's portfolio, not only because this product could potentially boost the sales of Monitors from LG, but because the 30% of Blackwell Electronics' current income comes from selling products from the Display category, that said, Blackwell also should consider the introduction of more Dell Monitors as they have a bigger Margin of profit than our LG monitors and because it was also detected a pattern the tell us that these clients who buy Apple Laptop also tend to buy t is a product with a very attractive margin of profit for the company. **Dell Monitors margin of profit of 25% and LG margin of profit of 17%.**
- Given that the new Blackwell's partner is an Apple specialized store, it would be highly profitable for Blackwell to start offering Extended Warranties over the only Apple Smartphone currently offered in Blackwell's portfolio because it is known that around the 30% of those who purchase an Extended Warranty tend to buy an Apple Smartphone. This strategy could be boosted by incorporating a wider variety of Apple Smartphone to Blackwell's portfolio.
- It was also detected that those customers who buy Apple Tablets also tend to buy some accessories during the same transaction. According to the study made, this happens in a high proportion of the times when an Apple Tablet is bought, plus it must be taken into account that the acquisition of Apple Tablets to be offered to Blackwell's clients would boost the sales of a category that provides a high margin of profit but that only accounts by a 8% of the total income of Blackwell Electronics. With this in mind, it's also recommended the introduction of Apple Smartwatch to Blackwell's portfolio because of 3 reasons: it would be a newness for the company, it will boost the sell of accessories and it could be inferred that this is a highly profitable item.

Recommendations and conclusions.

- ✓ Increase the details in extended warranties and accessories creating subcategorie would help us to understand better the client's behaviour, therefore we would be able to give more precise recommendations related from Basket Market Analysis.
- ✓ It would be very beneficial to know the margin of profit of the Electrodinex products.
- ✓ It would be very helpful to be able to work over a bigger sample of products, as the recommendations we gave are only based on the 20% of the total transactions of Electrodinex.
- ✓ Great potential for this partnership and we are very enthusiastic after our analysis as we expect a great future for Blackwell Electronics with the Market.

