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## E-Commerce Analytics for CPG Firms (B): Optimizing Assortment for a New Retailer

The manager of the CPG company E-Commerce analytics group stared at the screen, as a new e-mail message came in. One of the retail account managers just reached out with a request to help select an assortment for a pilot project for a new online retailer. The analytics group manager easily found a list of 50 SKUs that fit that retailer's business model; however the pilot was limited to 20 SKUs on the retailer's digital shelf.<sup>1</sup> To help select the ideal assortment for the pilot, the manager examined one-time purchases and life time value forecasts for each of the 50 SKUs. Which criteria should be used to choose the optimal assortment? Which additional data should the manager request? How confident should the manager be in the selection of assortment?

### The data

The spreadsheet supplement for this exercise (HBS No. 521-713) contains several tabs. The "Instructions" tab provides detailed instructions and guiding questions to complete the exercise. The "Raw Data" tab contains the CPG firm's online revenue and margins for all 50 SKUs from comparable retailers. It also contains a "loyalty" variable indicating the average probability of customers to buy a particular SKU in a future purchase. Firms were typically able to buy such data from Nielsen or other market research firms that collected data about consumer transactions. The tabs "One-time Purchase", "One-time Purchase Leaders", "LTV", and "LTV leaders" can be used to calculate the value of each SKU in the shelf. The "Output" tab allows for a comparison of the different methodologies.

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<sup>1</sup> A digital shelf is a digital representation of the brand's product as it is displayed online or on mobile retailer sites.

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Professor Ayelet Israeli and Fedor (Ted) Lisitsyn (HBS MBA 2019) prepared this exercise as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. The exercise is not based on a single individual or company but is a composite based on the authors' general knowledge and experience. The citation review for this exercise has not yet been completed.

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