REVIEW OF RESEARCH JOURNAL

Business Intelligence (AMI23B)

DALARNA UNIVERSITY

Critical Review Paper: Retail business analytics: Customer visit segmentation using market basket data- Anastasia Grivaa , Cleopatra Bardaki, Katerina Pramatari, Dimitris Papakiriakopoulos

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SUMMARY:

Many firms are starting to focus on business analytics tools and techniques, as well as data-driven decision-making. Data-driven decision-making has long been acknowledged by retailers as a way to enhance decision quality. Because customer satisfaction influences profitability, which is the cornerstone of corporate success, merchants should adopt a more customer-centric strategy and create new ways to understand and delight their consumers. They use business analytics to seek trends in client buying behaviour in order to deliver tailored services that cater to the individual shopping demands and preferences of various customers.

Several studies seem to neglect the purchasing intent of a single customer visit because they either look at the whole client's buying history or focus on the link between multiple things purchased during a single visit. Similarly, authors coined the phrase "shopping mission" to define the purpose of a shopper's visit. Marketing researchers, on the other hand, discuss a variety of shopping trips. This research paper delves further into consumer purchasing behaviour and the purpose of each visit, allowing stores to provide satisfying services tailored to their unique demands. The study proposes a business analytics technique for identifying customer visit segments based on clustering algorithms. The authors examine retail data at the basket level and create customer visit groups based on the product categories that customers purchased during each visit to a physical or online store.

Their research was conducted in the following steps.

1. At the product-categories hierarchy tree, they changed the product taxonomy and selected the appropriate level of analysis.

2. Employed cluster sampling to reduce outliers in the data.

3. They made the necessary adjustments to the original input data to facilitate clustering and provide legitimate customer visit segments and, as a result, sensible client shopping intents per visit.

To balance the product taxonomy tree, which has a substantial influence on data mining outcomes, the authors developed a semi-supervised feature selection strategy that takes the product taxonomy as input and offers customized categories as output. They illustrated the applicability of their method by applying it to sales data from an FMCG retailer at the basket level.

According to the authors, the resulting mix of product categories that dominates each visit segment reflects the purchasing intents of the people who visited the establishments. In a nutshell, this study creates segments of consumer visits and then assigns the purchase intent of those visits to each section. The research findings provided several ideas for improving the business for many retailers by using the above-mentioned business analytical methods.

OBJECTIVES:

Using a business analytical technique, the major goal of this paper is to probe deeper into and grasp customer’s shopping behaviour and intentions per visit and allow businesses to give consumers services suited for them.

CONTRIBUTION:

This paper helps merchants enhance their business in the fast-paced modern business world by providing valuable insights. Most writers' strategy to identify customer visit segments can turn into a tool for generating novel marketing campaigns and bundling promotions for product categories that belong to the same shopping visit segment. In contrast to previous research, the uniqueness of this study can be attributed to its effort to focus emphasis on each individual customer visit rather than on consumer shopping behaviour as a whole. It offered shopping behaviour information every shopping visit and advised retailers to cater to customers' demands according to their visit.

STRENGTHS:

The writers reviewed several previous research publications and conducted an appropriate study for this issue in order to fill in the gaps. Another strength is that the Fig:2 illustrates the research gap and regions on which other authors' research focuses. Second, unlike earlier studies, the authors employed a retail data analytics technique to evaluate sales data at the basket level to describe and examine customer's buying behaviour per single visit. This provides retailers with detailed information about their clients' buying habits and visits, allowing them to enhance their business. Finally, they tested their methodology in FMCG stores and evaluated the outcomes. The writers evaluated their study gaps and limitations and offered readers new research ideas on this issue. This work is well-structured, and the illustrations are offered to make it simple for the reader to comprehend.

WEAKNESS:

Firstly, this research paper did not address us well. How that method can be. Utilized in different sectors over different demographic regions. Second, this report fails to identify techniques for using the research findings to assist them to achieve their financial goals. The conclusion section is very lengthy, and many phrases from the methodological sections are repeated. The correctness of the group of industry expert's assessment is uncertain. Finally, they indicated that the government will gather data on consumers who try on clothes in the fitting room using an RFID or BLE tool, but that this will be done in a future study, indicating that the document was written incorrectly.

CONCLUSION:

Overall, this article examines previous research on customer segmentation in the retail industry and develops a business analytical tool to determine each customer's buying behaviour and intention per visit. This paper addresses a gap in many studies by providing results that have practical implications. However, by focusing on post-deployment stages and how the model may be distributed, this approach has several limitations by overlooking the worldwide retail sector. Future studies on this issue in other retail sectors, both online and in-store purchasing, will be considered, and a marketing plan will be developed to boost the company worldwide. Many businesses, such as Walmart, H&M, Puma, and IKEA, would benefit greatly from this.