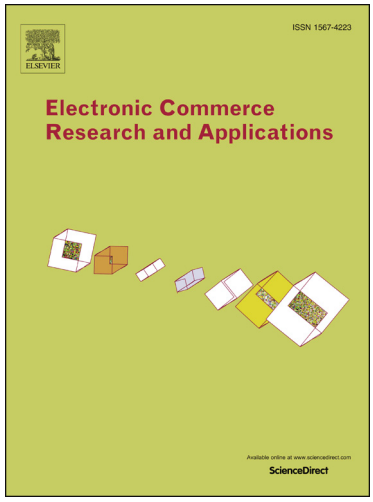

Analyzing Online Consumer Behavior in Mobile and PC Devices: A Novel Web Usage Mining Approach

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PII: S1567-4223(17)30063-7
DOI: http://dx.doi.org/10.1016/j.elerap.2017.09.003
Reference: ELERAP 726

To appear in: *Electronic Commerce Research and Applications*

Received Date: 28 September 2016
Revised Date: 23 August 2017
Accepted Date: 6 September 2017

Please cite this article as: O. Raphaeli, A. Goldstein, L. Fink, Analyzing Online Consumer Behavior in Mobile and PC Devices: A Novel Web Usage Mining Approach, *Electronic Commerce Research and Applications* (2017), doi: http://dx.doi.org/10.1016/j.elerap.2017.09.003

ANALYZING ONLINE CONSUMER BEHAVIOR IN MOBILE AND PC DEVICES: A NOVEL WEB USAGE MINING APPROACH

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ABSTRACT[2]

We investigate and compare online consumer behavior on an e-retailer website in mobile versus PC devices, through the application of a web usage mining approach on clickstream data recorded in server-side log files. Online consumer behavior is characterized through both engagement measures and the discovery of common sequences of navigation patterns, using an innovative approach that combines footstep graph visualization with sequential association rule mining. We find that sessions conducted through mobile devices are more likely to consist of task-oriented behavior whereas sessions conducted through PC devices are characterized by a more exploration-oriented browsing behavior. Moreover, we find that certain sequence rules are associated with an increased likelihood of purchase in both mobile and PC sessions. The results demonstrate the value of our approach in analyzing online browsing behavior, across platforms, in the context of electronic retailing.

Keywords: M-commerce, E-commerce, Online browsing behavior, Navigation patterns, Footstep graph, Web usage mining, Sequential association rule mining.

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[2] Funding: This work was supported by the European Community's Seventh Framework Programme under grant agreement no. FP7-284928 ComVantage.