Development and Assessment of Higher-Order Reflective-Formative Fitness Switching Costs Scale (FSCS)

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Method - Quantitative (Physical Activity)  
Poster  
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Scholars (e.g., Cheng et al., 2019) have recognized the critical role of switching costs in predicting consumer behavioral outcomes. Given a high consumer defection rate in U.S. fitness centers, switching costs might provide insights into consumer retention strategies (Kim et al., 2020) However, no empirical research has been conducted in fitness centers, a major part of which lies in the absence of a scale measuring fitness consumers’ switching costs (Kim et al., 2020). As such, the purpose of the study was to develop and validate a fitness switching costs scale (FSCS) by following the four-step guideline (MacKenzie et al., 2011), including conceptualization (Step 1), development of measures (Step 2), scale evaluation and refinement (Step 3), and validation (Step 4).

Kim and Byon (2020) provide a context-specific conceptualization of switching costs in fitness centers. As a guidance for the development of the FSCS, we adopted the Kim and Byon’s conceptual model in Step 1, consisting of a third-order formative construct with four second-order formative constructs with 11 first-order reflective constructs. Switching costs are defined as consumers’ perceptions of procedural, relationship, financial, and convenience costs when voluntarily considering switching to another fitness center.

In Step 2, a pool of 104 items was generated. The item set was content evaluated by two groups of expert judges: (1) a linguist and (2) two sport management professors and two sport management doctoral students. As a result, 54 items were retained.

In Step 3, an EFA was conducted to identify an underlying first-order factor structure using data (441 U.S. fitness consumers) collected via Amazon Mechanical Turk (MTurk). The results of the principal axis factoring with direct oblimin extracted 11 factors, accounting for 78.04% of the total variance. All items were loaded on respective factors with factor loadings above .32 (Tabachnick & Fidell, 2013). Parallel analysis and item communality also supported the 11 extracted factors.

Following EFA, the psychometric properties of the higher-order FSCS were evaluated using a new sample collected from MTurk (455 U.S. fitness consumers) in Step 4. The following results via PLS-SEM supported the first-order reflective measurement model: (1) reliability = coefficient alpha (> .80), item-to-total correlations (> .50), and CR (> .70), (2) convergent validity = indicator loadings (> .71) and AVE (> .50), (3) discriminant validity = correlations among constructs (< .71), the Fornell-Larcker criterion, and the HTMT (< .85), and (4) nomological validity = significant correlations (> .01) between the first-order constructs and renewal intention as the outcomes variable. The following results also lent credence to the second- and third-order formative measurement model: (1) convergent validity = redundancy analysis, (2) multicollinearity = VIF (< 5), (3) discriminant validity = correlations among constructs (< .71), the Fornell-Larcker criterion, and the HTMT (< .85), and (4) significance (< .05) and size of path weights between lower- and higher-order constructs. Overall, the results showed the satisfactory psychometric properties of the FSCS.

The present study contributes to the literature and practice by providing researchers and practitioners with a reliable and valid tool to assess fitness consumers’ switching costs. Furthermore, we provide a detailed discussion on statistical analyses and execution for examining the higher-order reflective-formative scale.