Assessment of behavioral maintenance for organizational change in the context of Ethiopian commercial banks

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ABSTRACT

Behavior change maintenance can guide the development and evaluation of interventions promoting sustained behaviors in organizational changes. This research aims to examine the factors that influence behavioral maintenance for organizational change in Ethiopian commercial banks. The study developed a comprehensive model to explain the mechanism of behavioral maintenance for organizational change by employees, using self-determination theory with two additional exogenous constructs, value congruence and excessive work demands. Applying mixed-analytical approaches, including SEM and fsQCA, advances the knowledge of how employees motivate to maintain their behavior regarding the organizational change. The target population consists of lower-level managers and 317 valid responses were retained for further analysis. In our findings, the SEM results reveal that perceived relatedness, perceived competency, perceived autonomy, and perceived enjoyment influence employees' behavioral maintenance for organizational change, while the fsQCA results indicated that value congruence must always be combined in these variables. The findings suggested an alternative path that might serve as the basis for sustaining organizational change.

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Introduction

There are two primary challenges for many organizations today. The first challenge is determining actions to take in response to emerging business needs. The second challenge, and perhaps the more difficult one, is to determine how to ensure that the change becomes part of the organization's fabric in the long term (Andrew Ronnie Mugenyi et al., 2022).

Despite the best efforts of those involved, many change efforts fail to persist in organizations (Raetzell et al., 2018). As per the researcher, the persistence of change is distressingly low in most organization development interventions. Most of the efforts either made some initial improvements but failed to sustain them or made no improvements. Thus, there is compelling evidence to suggest the continuing uncertainty of maintaining organizational change over time, despite the ongoing need for managers to implement change to remain productive and competitive.

Behavioral maintenance has emerged as an issue among researchers and managers (Ruggerio, 2021). Maintenance means that the change effort has received sufficient acceptance by individuals and groups to achieve the intended goals (Andrew Ronnie Mugenyi et al., 2022). Of concern here is whether the desired change becomes part of the organization's ongoing activities to replace what existed beforehand. Maintenance depends on individuals to model the change behaviors for others to observe and repeat (Raetzell et al., 2018; Owen et al., 2021, Andrew Ronnie Mugenyi et al., 2022).

Organizational change maintenance implies that new working methods and performance levels persist for a period appropriate to the setting. At the same time, behavioral maintenance is the continuous performance of behavior following an initial intentional change at a level that significantly differs from the baseline performance in the intended direction.

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This paper surveys the emerging literature on behavioral maintenance for organizational change. The aims are to advance theoretical understanding and to develop a provisional model that meets two criteria. First, it should articulate the attributes and complexities of the process. Second, it should inform further empirical research. Therefore, the primary audience for this survey is managers of Ethiopian commercial banks concerned with organizational change. However, a literature review shows that few studies have been conducted to understand behavioral maintenance for organizational change. If behavioral maintenance can ensure organizational change's success, and if few studies have been done to understand current practices that would help guide future practices, then more needs to be known about current behavioral maintenance practices.

In this study, the researcher drew from the processual approach to behavioral maintenance to develop the study’s conceptual framework. The processual approach helps examine behavioral maintenance because it emphasizes the “flow of events in a wider spatial, temporal, and political context” (Buchanan et al., 2005). As a result, the researcher will investigate how the intrinsic form of motivational factors (Deci & Ryan, 1985; 2008) and excessive work demands and value congruence (Dominika Kwasnicka et al., 2016) influence behavioral maintenance for organizational change. Hence, behavioral maintenance can involve deliberate steps to integrate organizational change outcomes into the organization’s operations, processes, and culture. Unfortunately, there has been little empirical research into factors affecting behavioral maintenance, which this study addresses. Therefore, this study addresses the following research question: "What factors influence behavioral maintenance for organizational change?"

The target population consists of lower-level managers and a mixed-method analytical approach, including PLS-SEM and fsQCA, was utilized together. The remaining portions of the study are structured as follows: Section 2 reviews earlier studies that are relevant to our investigation. Section 3 incorporates the research methodology. The outcomes of the data analysis are then displayed and explained in Section 4. The conclusion, limitations, implications, recommendations, and suggestions for future research are provided in Section 5.

**Literature Review**

There is considerable evidence that behavior can be effectively modified through behavior change interventions (Albarracin et al., 2005; Hobbs et al., 2013). However, evidence for the sustainability of behavior change in response to interventions is limited (Avenell et al., 2004; Carpenter et al., 2013; Dombrowski, Knittle, Avenell, Araújo-Soares, & Sniehotta, 2014; Fjeldsoe, Neuhaus, Winkler, & Dakin, 2011). This is partly because few studies evaluate long-term effects and partly because intervention effects diminish over time and relapse rates are high (Curium & Lourenco, 2005; Dombrowski, Avenell, & Sniehotta, 2010).

The theory of behavior change maintenance can guide the development and evaluation of interventions promoting sustained behaviors in organizational changes. Current evidence about the effectiveness of theory-based interventions in organizational change-related behaviors is inconsistent (Dominika Kwasnicka et al., 2016). The inconsistency may partly be due to the lack of theoretical elaboration on the maintenance process after the initial change.

Prior behavior may be the dominant response across times and contexts before behavior changes. After behavior change, newly adopted behavior may become the dominant response in many contexts. The new behavior will likely be maintained over time if it becomes the dominant response across contexts (Avenell, Araújo-Soares, & Sniehotta, 2014). Thus, a theoretical analysis of behavior change maintenance will need to consider various behavioral options and the probability of them being enacted over time and across contexts. It is currently unclear what conditions are required to maintain the new behavior and prevent relapse or to re-establish the new behavior after relapse.

**Perceived Enjoyment**

Behavior is more likely to be sustained if the reinforcement structure emphasizes immediate and affective outcomes rather than rational and long-term outcomes. Motivation to avoid negative consequences is hypothesized to be insufficient to maintain preventive behavior that requires maintained effort; therefore, positive maintenance motives are needed (Acharya and Jena, 2016; Weinstein & Sandman, 1992; Weinstein, 1988). Individuals engage more strongly in what they do if they feel right about it and if it fits with their decisions and prior engagement (Maier et al., 2016; Higgins, 2006). Their engagement may include the enjoyment of performing the behavior as such or the enjoyment of immediate outcomes of the behavior (Raetzell et al., 2018; Hall & Fong, 2007; Rothman, 2000; Rothman et al., 2004; Stevens, Bult, de Greef, Lemmink, & Rispens, 1999). After the initial adoption of new behaviors, individuals are theorized to evaluate the results of their efforts cognitively and emotionally. If the actual results reflect the desired results, the initial motivation is reinforced, and individuals are likely to make positive self-judgments and sustain their efforts (Shilpa, 2021; De Bruin, Hosters, Van Den Borne, Kok, & Prins, 2005). The nature and timing of anticipated and experienced outcomes impact behavior change maintenance. Thus, the following hypothesis is proposed:

H-1: **Perceived Enjoyment has a strong significant effect on behavioral maintenance for organizational change.**

**Perceived Competency**

It is an individual's self-perception of their capabilities and ability to control their environment and situation. It is how skilled and influential people perceive themselves in a particular situation (Frank Martela and Tapani J. J. Riekki, 2018). Individuals typically choose challenges suitable to their capabilities and need to gain mastery of tasks and learn different skills. When people feel they...
have the skills needed for success, they are more likely to take action to help them achieve their goals (Martela et al., 2017). An essential characteristic of perceived competence is the need to effect change in the environment and attain valued outcomes (Chen et al., 2015). This distinguishes tasks that will satisfy the need for competence from other mundane, trivial, or personally meaningless tasks, the performance and mastery of which would not be expected to satisfy the need. In this sense, competence is more than merely some ‘ability’ to perform a task and includes consideration of the personal importance of the task (Rodgers, W.M., Markland, D., Selzer, A.-M., Murray, T.C., & Wilson, P.M., 2014). Developing mastery or perceived competency can help maintain new behaviors. Thus, the following hypothesis is proposed:

**H-2: Perceived Competency has a strong significant effect on behavioral maintenance for organizational change.**

**Perceived Autonomy**

Autonomy refers to people's ability to choose how to carry out their responsibilities. Giving people autonomy at work is critical to individual and organizational success since autonomous employees are free to select how to execute their tasks and be more productive (Malinowska et al., 2018). Job autonomy is a suitable working setting that allows individuals to use their decision-making skills in carrying out job-related duties (Zhang et al., 2017). Employees’ perceptions of their job autonomy, according to Hackman and Oldham’s model, tend to influence their psychological states of “experienced meaningfulness of work” (i.e., how work makes a difference to others), “felt responsibility” (i.e., the degree of responsibility assumed for work), and “knowledge of results” (i.e., awareness of work quality) (Nwokusu, 2013; Lin & Ping, 2016). Furthermore, improving autonomy support in the workplace entails the management acknowledging an employee's point of view, providing an explanation, and presenting scenarios that allow workers to choose (Shao et al., 2017). Hackman and Oldham's model states autonomy is more important in determining motivating potential. The motivating potential score will be very low if someone’s job has no autonomy, regardless of variety, identity, or significance levels. A job with a high degree of autonomy instills in the employee a sense of responsibility and increases their involvement. When employees believe the organizational change could alleviate workplace problems, have the current working condition, or give job autonomy, they are more willing to integrate change outcomes into their daily operations and persist associated behaviors within the organization after the adaption phase. Thus, the following hypothesis is proposed:

**H-3: Perceived Autonomy has a strong significant effect on behavioral maintenance for organizational change.**

**Perceived Relatedness**

It involves experiencing a sense of purpose in what one does and how one relates to others. It indicates the amount of acceptance and support from others, involvement, sharing, good communication, and help when needed (M. Anthony Machin et al., 2009). While the motivation of employees is directly related to the types of interactions they get regularly, the current research considered perceived relatedness as a predictor of behavioral maintenance for organizational change (Kimberlee Leonard, 2018). Several scholars say positive interactions increase good feelings, morale, and work satisfaction. Understanding perceived relatedness will motivate people to mitigate uncertainties, which adversely affect work efficiency and behavioral maintenance for organizational change (Chambers et al., 2013). In light of a positive working climate, employees are more likely to maintain their behavioral support for organizational change. Thus, this study hypothesizes the following:

**H-4: Perceived Relatedness has a strong significant impact on behavioral maintenance for organizational change.**

**Value Congruence**

It is the extent to which personal identity and beliefs agree with the organization (Atkinson, Kaplan, Matsumura, & Young, 2012). In other words, it is deemed as the intent of organizational control (Malmi & Brown, 2008). Employees enjoy engaging in the behavior; if it is congruent with their values. Scholars have argued that individual and organizational values are inevitably at odds with one another (Yamoah, 2014, Ding Jingjing, 2017). Yamoah (2014) suggests value congruence is significant to attain an organization's strategic objectives and ensuring the coordination and motivation of all employees concerned. If value incongruence is not stopped in time, it will encourage organizational actors to pursue individual values at the expense of the official organizational objectives. Also, they may avoid the change from becoming part of the organization's fabric in the long term. There has been a research gap in the literature about how value congruence influences organizational changes’ sustainability. Thus, this study believes that behavioral maintenance for organizational change is determined by value congruence and hypothesizes that:

**H-5: Value Congruence significantly positively affects behavioral maintenance for organizational change.**

**Excessive Work Demand**

It reflects a negative perception of the workplace through the extent to which staff is overloaded with constant pressure to keep working, leaving no time to relax (Shilpa, 2021). Overwhelming workloads are beyond the limits and set unrealistic expectations. Research has shown that high work demands, such as long hours or the pressure to work very hard or fast, may result in cognitive and emotional exhaustion, such as difficulty concentrating, lack of motivation, or trouble staying on task (Ruggerio, 2021). According to Raetzell et al. (2018), the persistence of change is distressingly low in most organization development interventions. Most of the efforts either made some initial improvements but failed to sustain them or made no improvements. Thus, there is compelling evidence to suggest the continuing uncertainty of maintaining organizational change over time, which might be due to excessive
work demands resulting from change adaption. Consequently, excessive work demands have a significant detrimental impact on behavioral maintenance for organizational change. Thus, this study proposed the following hypothesis:

H-6: Excessive Work Demands significantly negatively affect behavioral maintenance for organizational change.

Research and Methodology

The target population consists of lower-level managers. Lower-level managers serve as a liaison between the organization’s leadership that sponsors a change initiative and the people impacted by the change. They help articulate reasons for the change, answer questions, and persuade others on the necessity of the initiative while bringing concerns voiced by the organization to the attention of leadership. Yamane's (1967) formula \( n = N/(1 + N(\text{e}^2)) \) was used to calculate the sample, which was adopted by (AlAmeri, 2017). They define the sample size as \( n \), the population size as \( N \), and the level of precision as \( e \) (95 percent or 0.05). It is also compared to Glenn’s (1992) published tables, which Singh, Ajay S; et al. (2014) suggested. Employees with the job titles “Branch Manager”, “Customer Service Manager,” and “Business Development Manager” represented corporates at the organization’s lower hierarchical level, with daily contact with internal and external customers. In the title mentioned above, 3813 employees work in Addis Ababa branches. Among them, a total number of 362 people were selected from Ethiopian commercial banks in Addis Ababa. The sample included only managers with a three-year or longer tenure in the organization and managers from Grade A branches (a branch that manages several employees and has excellent banking transactions).

However, data were collected using a non-probability convenient sampling technique (Iqbal & Iqbal, 2020). Nobody was asked for any identifying information, and confidentiality was thus ensured. The questionnaire was completely anonymous, and the data obtained was kept strictly confidential. The questionnaire began with an overview of the research objective and ensured oral consent to participate in the study.

A self-reported survey questionnaire, including demographic information, was distributed to target participants online (Telegram, Messenger). Direct data were collected from different branches of the commercial banks and human resource offices. Throughout the survey, a total of 334 responses were received. Initially, data were thoroughly reviewed for fraudulent content. Accordingly, 317 valid responses were retained for further analysis. The findings revealed that Cronbach’s alpha, which represents the reliability of a measurement, was above the recommended threshold of 0.70 (Hair et al., 2013).

Measurement Instruments

The survey questionnaire consisted of two sections. The first section included demographic information of the participants, while the second section investigated behavioral maintenance for organizational change. To further comprehend demographic information, the following questions: age, gender, education, positional tenure, position, frequency of organizational change, experience regarding organizational change, and frequency of follow-up as a manager was asked.

The construct and its corresponding items were taken from the relevant literature to confirm the content validity. The survey instruments were adopted with seven constructs. Among them, perceived relatedness (four items), perceived competency (four items), perceived autonomy (five items), and perceived enjoyment (three items) were adopted and modified from Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva (2001); Ilardi, Leone, Kasser, & Ryan (1993); Kasser, Davey, & Ryan (1992); Dominika Kwasnicka (2016). To scale of excessive work demands and values congruence were derived from Andrew Ronnie Mugenyi et al. (2022) and Becker et al. (1996), and Michael E. Brown et al. (2006), respectively. Additionally, to scale of behavioral maintenance for organizational change (six items) was derived from Trish Reay et al. (2013) and Andrew Ronnie Mugenyi et al. (2022). Details of the items are to be found in the supplementary document. The respondents were asked to rate their feelings by answering a 5-point Likert scale, with one (1) strongly disagreeing and five (5) strongly agreeing.

Findings and Discussions

Measurement Model

The researcher tested the model fitness of all constructs in this study to prevent model misspecification (Hu & Bentler, 1998; Arshad et al., 2018). Several studies suggested that the standard values for the various components of model fitness, such as standardized root mean square residual (SRMR), should be less than or equal to 0.08, and the values of NFI (normated fit index) should be greater than 0.90 for the model to be significant. The model’s results revealed the best fit: SRMR =0.073; and NFI =0. 923. The outer model validation is the first step in using the PLS-SEM method, followed by the inner model path calculation. Validating the outer model entails determining the constructs’ convergent and discriminant validity and their reliability (Wetzel’s et al., 2009). After validating the model, the inner model is fitted by calculating the path coefficients. This study took into account the Alpha Cronbach’s, Average Variance Extracted (AVE), and Composite Reliability (CR) to confirm convergent validity, and both Fornell-Larcker and Heterotrait-Monotrait Ratio were applied to justify discriminant validity (Hair, Howard, & Nitzl, 2020). Table 1 confirms Cronbach's alpha values higher than 0.50 have been used to measure the internal reliability of the constructs. The average variance extracted, which reflects the overall variance in the indicators accounted for by the latent construct, exceeded the recommended value of 0.5. In contrast, composite reliability values, which show how well the construct indicators indicate the latent construct, exceeded the recommended value of 0.7 (Hair et al., 2013). Moreover, the average shared variance of any construct and its indicators is greater
than any of the shared variances with other constructs, demonstrating discriminant validity (Fornell and Larcker, 1981). As shown in Table 2, the square root of AVE is greater than the inner correlation of the constructs, which portrays that this research satisfies the criteria for discriminant validity. Finally, Henseler et al. (2015) proposed an alternative approach to assessing discriminant validity: the heterotrait-monotrait correlation ratio (HTMT). This new method was used to test discriminant validity, and the results are shown in Table 3. If the HTMT value is greater than the HTMT value of 0.85 (Kline, 2011), then discriminant validity is a problem. However, as shown in Table 3, all values do not exceed HTMT, confirming the qualified discriminant validity.

Table 1: Analysis of Convergent Validity

<table>
<thead>
<tr>
<th></th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td>0.763</td>
<td>0.766</td>
<td>0.863</td>
<td>0.791</td>
</tr>
<tr>
<td>EWD</td>
<td>0.746</td>
<td>0.756</td>
<td>0.845</td>
<td>0.574</td>
</tr>
<tr>
<td>Paut</td>
<td>0.646</td>
<td>0.676</td>
<td>0.846</td>
<td>0.783</td>
</tr>
<tr>
<td>PCom</td>
<td>0.738</td>
<td>0.749</td>
<td>0.838</td>
<td>0.768</td>
</tr>
<tr>
<td>Penj</td>
<td>0.608</td>
<td>0.616</td>
<td>0.909</td>
<td>0.733</td>
</tr>
<tr>
<td>PRel</td>
<td>0.728</td>
<td>0.731</td>
<td>0.829</td>
<td>0.778</td>
</tr>
<tr>
<td>VC</td>
<td>0.649</td>
<td>0.657</td>
<td>0.849</td>
<td>0.704</td>
</tr>
</tbody>
</table>

Source: Adopted by authors

Table 2: Discriminant Validity Analysis (Fornell-Larcker Criterion)

<table>
<thead>
<tr>
<th></th>
<th>BMC</th>
<th>EWD</th>
<th>Paut</th>
<th>PCom</th>
<th>Penj</th>
<th>PRel</th>
<th>VC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EWD</td>
<td>0.16</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paut</td>
<td>0.17</td>
<td>0.07</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCom</td>
<td>0.26</td>
<td>0.17</td>
<td>0.19</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penj</td>
<td>0.09</td>
<td>0.04</td>
<td>0.18</td>
<td>0.13</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRel</td>
<td>0.28</td>
<td>0.17</td>
<td>0.22</td>
<td>0.19</td>
<td>0.48</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>VC</td>
<td>0.36</td>
<td>0.27</td>
<td>0.17</td>
<td>0.29</td>
<td>0.26</td>
<td>0.16</td>
<td>0.88</td>
</tr>
</tbody>
</table>

Source: Adopted by authors

Table 3: Heterotrait-Monotrait ratio (HTMT)

<table>
<thead>
<tr>
<th></th>
<th>BMC</th>
<th>EWD</th>
<th>Paut</th>
<th>PCom</th>
<th>Penj</th>
<th>PRel</th>
<th>VC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EWD</td>
<td>0.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paut</td>
<td>0.27</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCom</td>
<td>0.46</td>
<td>0.26</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penj</td>
<td>0.14</td>
<td>0.11</td>
<td>0.28</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRel</td>
<td>0.39</td>
<td>0.27</td>
<td>0.31</td>
<td>0.29</td>
<td>0.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VC</td>
<td>0.43</td>
<td>0.34</td>
<td>0.21</td>
<td>0.38</td>
<td>0.31</td>
<td>0.42</td>
<td></td>
</tr>
</tbody>
</table>

Shaded boxes are the standard reporting format for the HTMT procedure.

Source: Adopted by authors

Structural Model

Although the measurement model yielded significant results, this study continued to investigate the structural model before drawing any conclusions. A bootstrapping method with 5,000 sub-samples was used to ensure that the model accurately depicts the relationship between various paths (Hair, Anderson, Babin, & Black, 2010). In statistical hypothesis testing, Path coefficient (β), T-
Statistics, and P-values were reported to decide whether the hypotheses were accepted. Evidence from Table 4 and Figure 1, perceived enjoyment (β = 0.162, P < 0.05), perceived competency (β = 0.375, P < 0.05), perceived autonomy (β = 0.394, P < 0.001), and perceived relatedness (β = 0.243, P < 0.05) have significant positive impact on behavioral maintenance for organizational change, which supports the H-1, H-2, H-3, and H-4 respectively. Despite these results, value congruence (β = 0.083, P > 0.05) and excessive work demands (β = -0.083, P > 0.05) show insignificant positive and negative impact on behavioral maintenance for organizational change respectively. Thus, hypotheses H-5 and H-6 were insignificant. Surprisingly, the relationship between value congruence and BMC does not seem to influence substantially. This is because sometimes employees pursue organizational values at the expense of individual objectives. Finally, there is a possible reason for the insignificant findings of excessive work demands that pressure at work was insufficient to influence behavioral maintenance negatively. The tested model R² results demonstrated that the model could explain an acceptable portion of the variance of the constructs (R² = 0.675). These findings were consistent with the criteria proposed by (Chin, 1998; Hair et al., 2011 & Hair et al., 2013); thus, the model's nomological validity is deemed satisfactory (Chin, 1998). Then effect sizes (f²) are calculated. The p-value in the results shows the significance of the relationships but not the size of an effect. As a result, readers have difficulty interpreting data and results. As a result, both substantive (f²) and statistical significance (p) must be reported (Hair et al., 2013). The researcher used Cohen's (1988) guidelines to calculate effect size: >=0.02 for small effects, >=0.15 for medium effects, and >=0.35 for large effects. The effect size of all relations is shown in Table 6.6. The results indicate that perceived autonomy has a large effect (f² = 0.362) on behavioral maintenance for organizational change. Aside from the size of R² and f², the predictive sample reuse technique (Q²) can effectively demonstrate predictive relevance (Chin et al., 2008). Q² demonstrates how well data can be empirically reconstructed using the model and the PLS parameters based on the blindfolding procedure. A Q² greater than 0 indicates that the model is predictively relevant, whereas a Q² less than 0 indicates that the model is not predictively relevant. Our model correctly predicted behavioral maintenance for organizational change since Q² is equal to 0.530 in Fig. 1.

Table 4: PLS-SEM Path Analysis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>β</th>
<th>T Statistics</th>
<th>P Values</th>
<th>2.50%</th>
<th>97.50%</th>
<th>Decision</th>
<th>f²</th>
</tr>
</thead>
<tbody>
<tr>
<td>H6-1 PEJM → BMC</td>
<td>0.162</td>
<td>3.783</td>
<td>0.021</td>
<td>0.051</td>
<td>0.203</td>
<td>Supported</td>
<td>0.046</td>
</tr>
<tr>
<td>H6-2 PCOM → BMC</td>
<td>0.375</td>
<td>7.034</td>
<td>0.004</td>
<td>0.292</td>
<td>0.473</td>
<td>Supported</td>
<td>0.039</td>
</tr>
<tr>
<td>H6-3 PAUT → BMC</td>
<td>0.394</td>
<td>8.807</td>
<td>0.000</td>
<td>0.321</td>
<td>0.491</td>
<td>Supported</td>
<td>0.362</td>
</tr>
<tr>
<td>H6-4 PREL → BMC</td>
<td>0.243</td>
<td>4.519</td>
<td>0.038</td>
<td>0.047</td>
<td>0.224</td>
<td>Supported</td>
<td>0.017</td>
</tr>
<tr>
<td>H6-5 VC → BMC</td>
<td>0.083</td>
<td>0.061</td>
<td>0.951</td>
<td>-1.62</td>
<td>2.529</td>
<td>Unsupported</td>
<td>0.194</td>
</tr>
<tr>
<td>H6-6 EWD → BMC</td>
<td>0.083</td>
<td>0.022</td>
<td>0.983</td>
<td>-3.206</td>
<td>3.159</td>
<td>Unsupported</td>
<td>0.089</td>
</tr>
</tbody>
</table>

Predictive Relevance: R-Square: 0.675, Q-Square: 0.530 (DV = BMC)

Source: Adopted by authors

![Diagram](image)

β = 0.162*  
β = 0.375*  
β = 0.394**  
β = 0.243*

* Significant at a 0.05 level  
** Significant at a 0.01 level

Figure 1: Results of the Proposed Model; Source: Adopted by authors
Post-hoc Analysis of PLS-SEM

The IPMA allows researchers to supplement their PLS-SEM findings (Ringle and Sarstedt, 2016). The primary goal of the IPMA is to investigate important predictors that allow for significant impact while having a lower average latent factor score (Pisitsankkhakarn & Vassanadumrongdee, 2020). To better understand behavioral maintenance for organizational change, we used IPMA in conjunction with standard PLS analysis. Table 5 and Figure 2 exhibit IPMA findings, which imply that perceived autonomy has a substantial effect on behavioral maintenance for organizational change, with the highest total effect score of 0.394 at the performance level of 41.853. By looking at this figure, increasing one unit of "perceived autonomy" will increase behavioral maintenance by 0.394. Accordingly, perceived competency enhances behavioral maintenance at a total effect of 0.375, with an overall performance level of 52.964. These findings confirm that commercial banks should emphasize these predictors a lot.

Table 5: Importance-Performance Analysis

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Importance</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWD</td>
<td>0.083</td>
<td>47.014</td>
</tr>
<tr>
<td>PAut</td>
<td><strong>0.394</strong></td>
<td><strong>41.853</strong></td>
</tr>
<tr>
<td>PCom</td>
<td>0.375</td>
<td><strong>52.964</strong></td>
</tr>
<tr>
<td>Penj</td>
<td>0.162</td>
<td>47.462</td>
</tr>
<tr>
<td>PRel</td>
<td>0.243</td>
<td>46.91</td>
</tr>
<tr>
<td>VC</td>
<td>0.083</td>
<td>48.689</td>
</tr>
</tbody>
</table>

Source: Adopted by authors

Asymmetric Analysis (fsQCA)

The use of fsQCA can offer several benefits compared to traditional analysis methods. To capture combinations of conditions sufficient for an outcome to occur, fsQCA uses both qualitative and quantitative assessments and computes the degree to which a case belongs to a set (Ragin, 2000; Rihoux & Ragin, 2009), thus creating a bridge between qualitative and quantitative methods. FsQCA uses calibrated measures as data are transformed into the [0, 1] range. The main benefits of fsQCA occur when compared to typical variance-based methods and the latter's limitations (El Sawy et al., 2010; Liu et al., 2017; Woodside, 2013, 2014). In general, variance-based methods examine variables in a competing environment as they compute the net effect between variables in a model. At the same time, fsQCA focuses on the complex and asymmetric relations between the outcome of interest and its antecedents. An outcome may be the result of a variety of combinations, and each combination contributes independently to it. As fsQCA is based on fuzzy sets, the tool enables capturing conditions that are sufficient or necessary to explain the outcome and insufficient on their own but are necessary parts of solutions that can explain the result. These are called INUS conditions; insufficient but necessary parts of a condition that is itself unnecessary but sufficient for the result (Mackie, 1965). Such conditions may be present or absent in a solution or maybe conditions for which we "do not care". The "do not care" situation indicates that the outcome may either be present or absent and does not play a role in a specific configuration (Fiss, 2011). Thus, using fsQCA, researchers can identify which conditions are indispensable (or not needed) for an outcome and which combinations of conditions are more (or less) important than others. While symmetric analysis implies that high coefficient values for predictor variables are necessary and sufficient to predict outcome variables, asymmetric analysis suggests that high coefficient values for predictor variables are sufficient but not necessarily essential to predict outcome variables (Kaya et al., 2020).
Calibration

The most crucial step in fsQCA is data calibration. When a variable or construct is measured with multiple items, we need to compute one value per construct that will be used as input in fsQCA. In other words, for each case (row) in our dataset, we need one value for every construct (column). The simplest way is to compute the mean of all the items to create one single value per case (such as when testing correlations test) (DiStefano, Zhu, & Mindrila, 2009). In fsQCA, we need to calibrate our variables to form fuzzy sets with values ranging from 0 to 1 (Ragin, 2008). The fact that all values range from 0 to 1 means that a case with a fuzzy membership score of 1 is a full member of a fuzzy set (entirely in the set), and a case with a membership score of 0 is a full non-member of the set (entirely out of the set). A membership score of 0.5 is precisely in the middle; thus, a case would be both a member of the fuzzy set and a non-member and a member of what is known as the intermediate set. We used percentiles to find which values in our dataset correspond to 0.95, 0.50, and 0.05. The percentiles allow the calibration of any measure regardless of its original values. In detail, we computed the 95 %, 50 %, and 5 % of our measures and used these values as the three thresholds in fsQCA software. Table 6 presents the original values that correspond to each threshold.

<table>
<thead>
<tr>
<th>Conditions tested</th>
<th>Consistency</th>
<th>Coverage</th>
<th>Conditions tested</th>
<th>Consistency</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRel</td>
<td>0.981382</td>
<td>0.940995</td>
<td>~PRel</td>
<td>0.798707</td>
<td>0.929154</td>
</tr>
<tr>
<td>PCom</td>
<td>0.990568</td>
<td>0.892059</td>
<td>~PCom</td>
<td>0.607923</td>
<td>0.951698</td>
</tr>
<tr>
<td>PAut</td>
<td>0.864938</td>
<td>0.990426</td>
<td>~PAut</td>
<td>0.972649</td>
<td>0.687655</td>
</tr>
<tr>
<td>PEnj</td>
<td>0.964083</td>
<td>0.940228</td>
<td>~PEnj</td>
<td>0.799515</td>
<td>0.871878</td>
</tr>
<tr>
<td>EWD</td>
<td>0.968655</td>
<td>0.924629</td>
<td>~EWD</td>
<td>0.741714</td>
<td>0.878551</td>
</tr>
<tr>
<td>VC</td>
<td>0.977757</td>
<td>0.887635</td>
<td>~VC</td>
<td>0.595123</td>
<td>0.891063</td>
</tr>
</tbody>
</table>

Source: Adopted by authors

Analysis of Necessary Conditions

In fsQCA, the step of formulating necessary conditions should always come first. This study examines 'behavioral maintenance for organizational change' in the PLS-SEM model (Figure 1), as well as the outcome conditions that are associated with it. The fsQCA analysis examines the conditions of six predictors for the outcome variable, like with the SEM model, that affects 'behavioral maintenance for organizational change' and investigates all conditions that influence and do not influence the outcome results. According to Rihoux & Ragin (2009), the consistency range is from 0-1. Typically, the consistency range should never be less than 0.75 but greater than 0.80 (Greckhamer et al., 2018). Table 7 represents the specific findings, revealing considerable consistency.

<table>
<thead>
<tr>
<th>Conditions tested</th>
<th>Consistency</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRel</td>
<td>0.871878</td>
<td>0.878551</td>
</tr>
<tr>
<td>PCom</td>
<td>0.799515</td>
<td>0.871878</td>
</tr>
<tr>
<td>PAut</td>
<td>0.972649</td>
<td>0.687655</td>
</tr>
<tr>
<td>PEnj</td>
<td>0.940995</td>
<td>0.940228</td>
</tr>
<tr>
<td>EWD</td>
<td>0.990426</td>
<td>0.990568</td>
</tr>
<tr>
<td>VC</td>
<td>0.887635</td>
<td>0.940995</td>
</tr>
</tbody>
</table>

Source: Adopted by authors

Analysis of Sufficient Conditions

The first step in executing a sufficient condition analysis is creating the truth table (Rihoux & Ragin, 2009). A row represents every causal condition combination in the truth table, with 2k rows (k is the number of conditions). The truth table for this study on behavioral maintenance for organizational transformation was created using the fsQCA approach. Greckhamer et al. (2018) advise setting the frequency cut-off at 3 (or higher) for the big sample size. The combined assessment has provided meaningful solutions when consistency scores are more than 0.74 (Dul, 2016). Since we have 317 participants in our sample, the frequency threshold value is set at 5, and any combinations with a lower frequency are disqualified from further analysis. Next, to improve the presentation of the findings, we can transform the solutions from fsQCA output into a table that is easier to read (Table 8). Typically, the presence of a condition is indicated with a black circle (●), the absence/negation with a crossed-out circle (○), and the "do not care" condition with a blank space (Fiss, 2011). Table 8 also represents each solution's raw consistency, similar to the regression coefficient measurement. In addition, coverage scoring for each solution and circumstance indicates the size of the effects in hypothesis testing (Pappas, 2018). Finally, when evaluating the overall solution coverage, similar to the R-square value given in variable-based
approaches (Woodside, 2013), it is possible to see whether the revealed configurations influence behavioral maintenance for organizational change.

Table 8: fsQCA analysis (intermediate solution)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Solution 1</th>
<th>Solution 2</th>
<th>Solution 3</th>
<th>Solution 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRel</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>PCom</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAut</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>PEnj</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>EWD</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>VC</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Raw coverage 0.844796 0.921368 0.659446 0.586541
Unique coverage 0.0160227 0.0806507 0.0185353 0.0317162
Consistency 0.994714 0.97895 0.87726 0.99164

Solution coverage: 0.942416
Solution consistency: 0.97807

Source: Adopted by authors

Table 8 illustrates that no single predictors would provide superior performance rather than combining. The results of the fsQCA demonstrate that four pathways related to behavioral maintenance for organizational change are possible. However, all the solutions have high raw consistency (above 0.90) except solution 3 (0.87726), which has been identified as leading to high performance in behavioral maintenance for organizational change. In particular, the findings demonstrated that the combination of perceived relatedness, perceived competency, perceived autonomy, perceived enjoyment, and value congruence, except for excessive work demands (solution 1), is more likely to achieve high performance than the other combinations with a consistency score of 0.994714. Most 84.4% of employees have supported solution 1 (Raw coverage). According to Solution 2, all six predictors are equally significant except perceived autonomy, which is supported by 92.1% of respondents with a consistency of 0.97895. Solution 3 has comparatively low consistency (0.87726) with the full importance of perceived relatedness, perceived competency, and excessive work demands, negating the importance of the other three predictors. Alternatively, the combination of less perceived relatedness × perceived competency perceived autonomy × perceived enjoyment × excessive work demands × low-value congruence (solution 4) is equally expected to provide excellent performance since it has a consistency score of 0.99164 and is accepted by 58.6% of employees. However, the above six solutions explain 94.2% of the likelihood of achieving high performance. In summary, the findings suggest that having the same causative predictors leads to vital behavioral maintenance for organizational change, depending on how the presence or absence of predictors is configured with other causal factors.

Conclusions

It is not easy to determine the successfulness of organizational change without evaluating employees’ behavioral maintenance. There is evidence to suggest that the persistence of change is distressingly low in most organization development interventions. Most of the efforts either made some initial improvements but failed to sustain them or made no improvements (Raetzell et al. (2018). Maier et al. (2016) claimed that the persistence and impact of any organizational change intervention are determined by the extent to which the associated behaviors persist within the organization after the adoption phase. Behavioral maintenance is believed to occur when two or more people consistently act in a certain way and their behavior becomes ingrained in the organization's daily operations. However, the existing literature failed to address this critical issue for the success of the organizational change. This study tried to fill the gap in the literature by conducting a study on behavioral maintenance for organizational change.

The results confirmed that the intrinsic form of motivational factors (perceived enjoyment, perceived competency, perceived autonomy, and perceived relatedness) have significant positive impact on behavioral maintenance for organizational change. The result suggests that the quality of individuals’ motivation affects the extent to which individuals will engage in, and persist with, behaviors.

While the result didn’t show that value congruence positively affects behavioral maintenance for organizational change. This result is inconsistent with Yamoah (2014). According to Yamoah (2014), if value incongruence is not stopped in time, employees may avoid the change from becoming part of the organization's fabric in the long term. This is because sometimes employees pursue organizational values at the expense of individual objectives. Also, the negative effect of excessive work demands on behavioral maintenance for organizational change doesn’t support by this study, which is inconsistent with previous studies. Research has shown that high work demands, such as long hours or the pressure to work very hard or fast, may result in cognitive and emotional exhaustion, such as difficulty concentrating, lack of motivation, or trouble staying on task (Ruggerio, 2021). There is a possible reason for the insignificant findings of excessive work demands that pressure at work was insufficient to influence behavioral maintenance negatively.

In particular, the findings demonstrated that the combination of perceived relatedness, perceived competency, perceived autonomy, perceived enjoyment, and value congruence, except for excessive work demands, is more likely to achieve high performance than
the other combinations with a high consistency. In summary, the findings suggest that having the same causative predictors leads to vital behavioral maintenance for organizational change, depending on how the presence or absence of predictors is configured with other causal factors.

Contributions and Limitations

A significant strength of this study was the methodology used. The majority of earlier research on organizational change have used a single-stage data analysis technique, mainly the partial least square based structural equation modelling (PLS-SEM). A single-stage PLS-SEM analysis just capture only the linear relationship between predictors and outcome variables, which may be inadequate to anticipate real-world complicated decision-making processes. The use of fuzzy-set qualitative comparative analysis (fsQCA) as a second-generation data analysis technique has been suggested as a possible solution to this constraint. The fsQCA, on the other hand, has several challenges with respect to determining the “True Table” threshold value since there is no universally accepted rule for using it. Different cut-off points might lead to various degrees of consistency in the findings.

Despite that, this research also had limitations. This study is quantitative in nature which could have benefited from a qualitative examination that reinforces the development of the proposed model. Moreover, the results may have been influenced by aspects specific to the culture of the country under consideration. Also, it is limited under one sector and industry. In addition, the conceptual model did not consider different theories of regarding behavioral maintenance for organizational change. Other studies can integrate several theories to fill this gap. Plus, using fsQCA might lead to various degrees of consistency in the findings since there is no universally accepted rule for determining the “True Table” threshold value.

Implication for Practice and Future Research

In this study, the hypothesized framework provides a more comprehensive knowledge of employees' behavioral maintenance for organizational change. This study has a significant theoretical contribution to future research since it was investigating the intrinsic form of motivational factors (relatedness, competency and control) for examining behavioral maintenance for organizational change using a framework of SDT and a mixed-analytical method fsQCA. While prior literature on organizational change has focused on behavior change in organizational change planning and implementation, there has been a dearth of research on behavioral maintenance for organizational change. Behavioral maintenance secures the new state of equilibrium that prevents movement back toward the status quo. As a result of critically analyzing intrinsic forms of motivational factors, this research contributes to the existing body of organizational change literature, opening up a new avenue for policymakers to consider when making human resource and organizational change strategies. In summary, this study contributes to the gap between evaluating the void of findings (Miles, 2017) and the methodological gap (Dominika Kwasiacka et al., 2016).

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Conflicts of Interest: The authors declare no conflict of interest.

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