



Total Quality Management Practices and Microfinance Institutions Performance in Yemen: The Resource Based View Theory Perspective

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ABSTRACT

The total quality management (TQM) practices in most of the organizations have proven to be the key strategic approach to ensure the peak performance of the firms. In the microfinance institutional (MFIs) contexts, the contribution of TQM is undeniably importance. From a study that has been conducted in Yemen, 125 usable questionnaires were collected using a self-administered technique and analyzed from the branch managers of the MFIs operating in this country. It was done in 2014 at the early stage of the political crisis in the country where most financial institutions were not functioning at the optimum level. The analysis used the partial least squares approach, evaluating the research framework, the measurement model and the structural model. The results show that TQM has a significant effect on the MFIs performance and supports the resource-based view theory, the underlying theory for the research that views the organizational resources as a source of sustainable competitive advantage. The findings provide useful insights into the practices and the contribution of the TQM to the MFIs and could be the benchmark for the practices in the middle-east countries.

Keywords: Total Quality Management, Microfinance Institutions Performance, Resource Based View Theory

JEL Classifications: L5, G21

1. INTRODUCTION

Companies begin to realize that their customer taste and preference are more challenging today compared to the past. This has somewhat made customer personal preference an international agenda across continents. This is partly due to the fact that customers are more knowledgeable especially with the advancement of technology and the ease to obtain information over the internet. Customers begin to emphasize on quality and such a requirement is one of the factors that determine the success of the organization. Quality is not limited to only one aspect but overall including products, service, communications and others. Such traits could sustain the survival of an organization and provide the advantages especially in a highly competitive environment in business (Demirbag et al., 2006; Ghadiri et al., 2013). Organization understands that providing better quality will not happen if nothing is changed. They also know that their competitors are also fighting

to survive and will do anything to provide the best quality products and services. One of the approaches by the organization is to review and consider the business model which might have been practised since their inception as the transformation to meet the current environments and meeting customer's needs are crucial (Lam et al., 2011). With globalization, it is natural that demand will increase and this will also create stiff competition in the business requiring high quality products as well as services for their existing customers and hoping this will attract new customers in the long run.

One of the most important actions is to determine a quality vision for the organization. The quality vision is not only meant for the white collar but for everyone in the organization including the blue-collar workers. Most companies have also incorporated the quality vision as part of their company's objective and mission statements. The key performance indicators (KPI) include the quality aspects

and with targets assigned normally by the management. Having quality target in the organization does not imply benefit to customers only but in reality, having quality in an organization is giving a tremendous advantage to the organization. Such continuous improvements initiatives will definitely provide value to the internal processes as well as to avoid scraps or reworking which are waste of resources and time (Gharakhani et al., 2013). Kumar et al. (2009) mentioned that quality improvements can satisfy both the stakeholders and also the customers. As most organizations started to incorporate quality in their day to day activities, the concept of “Total Quality Management” (TQM) surfaces with the objectives to have a structured process of improvement in terms of superior quality.

Globally TQM has been accepted as a management tool for quality improvement and practised by many organizations throughout the world. It has been accepted as an effective tool as the system is able to recognise the changes needed in the organization to overcome challenges like new market or the new environment to continue to stay in business (El Shenawy et al., 2007; Irfan and Kee, 2013). Although there are many positive points, one of the set-backs of TQM is that it is conflicting with organizational performance as mentioned by Nair (2006) therefore a further research study is necessary to confirm the understandings. This study to be carried out together on empirical investigation on microfinance which is limited or none at this point (Homaid et al., 2015). Although there are studies done on the results of TQM and organization performance, the majority is done on developed countries and very few in the Arabic region (Al-Amri and Bon, 2012; Al-Swidi and Mahmood, 2012). The study of TQM in Yemen is very limited or maybe the least compared to the developed countries. Therefore, this research study is with intention to fill the gap as described above.

From the above discussions, there is definitely a need to perform a test on the relationship between TQM and the organization performance in the microfinance industry with a focus on the microfinance institutions (MFIs). Roy and Goswami (2013) state that these institutions are different from other organizations as they focus on both, the business and social objective. Khaled (2011) strongly emphasize on the worthiness of adopting TQM in the microfinance sector and therefore, this research examines the impact of TQM on the MFIs and share on the new findings and insights in this area.

2. LITERATURE REVIEW

2.1. Underpinning Theory

The premises of resource based view (RBV) are based on the argument that the organizational performance is determined by the key resources it possesses. The resources of an organization can be categorized as tangible resources, knowledge resources, system and procedural resources; cultural values and resources, network resources and resources that may have dynamic capability features and finally intangible resources (Mills et al., 2003). The resource-based view (RBV) theory has received a considerable attention as the major theory in the strategic management area (Almarri and Gardiner, 2014).

In contradict; in the research study conducted by Barney (1991), it is confirmed that not all tangible and intangible resources owned by an organization will contribute to the generation of sustained competitive advantage. Further study confirm that both, the sustainable competitive advantage and superior performance will only have their impact and value when it holds valuable, rare, imperfectly imitable and non-substitutable resources of an organization (Barney and Clark, 2007).

The concepts and philosophy of TQM have been accepted by many successful organizations and is recognize as a tool that continuously generating the improvements in quality and hence, provide the competitive advantage to the organization (Munizu, 2013; Kaur and Sharma, 2014). Organizations view this tool as very valuable, even though it may be limited and definitely to copy by competitions and the non-substitutable intangible resources is near impossible as each organizational needs for improvements vary. In the study done by Homaid et al. (2015), it was also found that TQM is an important organizational resources and that both, the theoretical and empirical evidences support the idea that TQM-oriented organizations create successfully barriers for competitors to copy or follow TQM practices while they obtain a sustainable competitive advantage. With the above description, the RBV theory is selected to be the underpinning theory for current study.

2.2. TQM

From our study and reviewing the past literature, there is definitely no one common or universal consensus on the definition of quality. Juran (1988) viewed quality as “fit for use” while Feigenbaum (1983) defined quality as “the total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet of the expectations of the customer.” Ishikawa (1985) defined quality as “quality does not mean the quality of the product only, but also of the quality of management or the reputation of the company.” By far, this is one where the customers’ needs and expectations are the key point in these definitions. Thus, viewing quality as “the degree to which products and/or service delivered is consistently value-added and excellent that can reach customer satisfaction” is deemed appropriate. Munizu (2013) states that quality is in fact defined differently by different scholars. Jaafreh and Al-abadallat (2012) state that the concept of quality has witnessed a significant evolution as influenced by the TQM originators like Crosby, Deming, Juran, Feigenbaum, Ishikawa, for their popular contributions and prominent role in the prosperity of quality. For example, Crosby (1979), defined quality as “conformance to requirements and quality is free” while Deming (1986) defined quality as “satisfying customer beyond expectations.”

It is a well-known fact that TQM implementation and practices vary from one organization to another, from one industry to another and definitely, also from one country to another (Singla et al., 2011; Fryer et al., 2007). With these findings, it is therefore important for organization to determine the critical success factors as the start of the process and determine the target and requirements for effective implementations (Karuppusami and Gandhinathan, 2006; Khanna et al., 2011). It is also important to note the successful implementation of TQM requires basically identifying and ranking

of TQM practices (Salaheldin, 2009; Talib and Rahman, 2010). The optimum number of TQM practices to be covered in any studies should range from 6 to 9 as recommended by Talib et al., (2011). Talwar (2011) strongly suggest that an organization can obtain a sustainable competitive advantage through adopting only a few of the quality principles where competitors may ignore.

For this research study, Homaid et al. (2015) suggested seven practices to study; (i) leadership management, (ii) customer focus, (iii) strategic planning, (iv) training, (v) continuous improvement, (vi) benchmarking and (vii) quality culture.

3. METHODOLOGY

3.1. Research Framework and Hypotheses Development

Referring to literature review in the field of quality research, the TQM-performance link has been extensively examined in numerous studies using different performance measures such as financial, innovation, operation and quality performance (Zehir et al., 2012). The majority of these studies adopted TQM as a single construct where findings proved that TQM has a positive and significant effect on the differentiation of organizational performance. Examples of direct effect are given by Munizu (2013), Iqbal et al. (2012) and Idris (2011) and examples providing for indirect effect are Su et al. (2008) and Demirbag et al., (2006). This research work on the composite construct format takes into consideration all the dimensions that represent TQM.

The conceptual framework for this research work, linking TQM practices as a composite construct and the performance of MFIs to propose that the greater application of the TQM the higher performance of the MFIs. So, for this paper, the hypothesis that needs to be highlighted here is the following:

H₁: There is a significant positive relationship between TQM dimensions as a composite variable with the MFIs performance.

The hypothesis, once tested, reveals whether TQM has a positive and significant relationship with the MFIs performance or otherwise as shown on Figure 1.

3.2. Data and Measurements

The sample involves 166 branches where branch managers were required to fill up the questionnaires. According to Al-Swidi and Al-Hosam (2012), the branch managers are the individuals who can provide reliable information regarding strategies adopted within commercial banks, which in this study, have a lot of similarity with the MFIs. From the total of 166 branches, 125 branch managers responded to the questionnaires and were used for the final analysis. This reflects a 75% response rate, which is quite high, and enough to represent the population of the study. The partial least squares (PLS) structural equation modeling was used in the data analysis to find the significant link between TQM and MFIs performance.

For this study, the performance of MFIs is measured by the balanced scorecard (BSC) measurement system (Kaplan and

Norton, 1996). As suggested by Kipesha (2013) and Roy and Goswami (2013), the four components of the BSC perspectives, financial and non-financial, are covered plus the social perspective. The social component of the social perspective was added to the four business field perspectives of financial, customer, internal process, learning and growth for the business components as MFIs focus on both business and social goals.

5-Likert scale questionnaires type used in the study. The questionnaires follow the questionnaires by Talib et al. (2013), Wang et al. (2012), Conca et al. (2004), Brah et al. (2000) and Lam et al. (2011). Their questionnaires were validated in the context of service sectors; therefore this study used them.

4. ANALYSIS AND FINDINGS

For the purpose of evaluating the model of the study, the two-stage approach was employed to assess the model, the measurement and the structural model as recommended by Valerie (2012) and Hair et al. (2014). The construct validity and reliability of the variables measures were established through conducting three main tests, namely content validity, convergent validity and discriminant validity in the measurement assessment. To assess the structural model, three main tests were conducted, namely R-square value, predictive relevance of the model and the significance levels of path coefficient.

4.1. Measurement Model Assessments

As mentioned earlier, the measurement model assessment was tested using three main tests namely content validity, convergent validity and discriminant validity. Following the suggestions of Chin (1989) and Hair et al. (2010), the factor loadings were employed to test the content validity. They suggested that an item's outer loading on the related construct should be higher than all of its loadings on other constructs. Table 1 showed that all items' loadings were higher than the cross loadings indicating accepted content validity.

For convergent validity, loadings, average variance extracted (AVE) composite reliability (CR) and Cronbach's alpha were the criteria for this assessment. The item loadings should be highly loaded and statistically significant in measuring the constructs with 0.70 or above, 0.50 or above for each construct EVA and 0.70 or above for both CR and Cronbach's alpha. In Table 2 and Figure 2, the results showed that the convergent validity was confirmed.

To assess the discriminant validity, the Fornell-Larcker criterion was used where the square root of AVE values should be compared with correlations of each latent construct as the requirement to

Figure 1: The research framework of the link between total quality management and Monetary Financial Institutions performance



achieve discriminant validity. As shown in Table 3, all the square root of the AVE values exceeded the correlations of latent construct suggesting that the discriminant validity was established in the

current study. Therefore, it can be concluded that by establishing the content validity, convergent validity and discriminant validity, the measurement model of the study is supported.

Figure 2: Item loadings and R² value

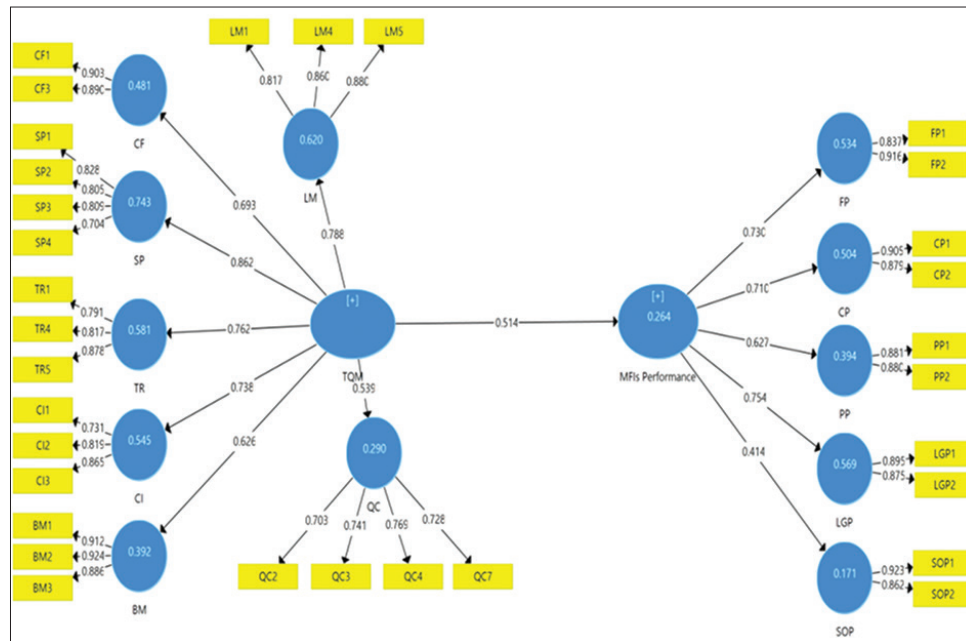


Table 1: The content validity test

CO	BM	CF	CI	CP	FP	LGP	LM	PP	QC	SOP	SP	TR
BM1	0.912	0.144	0.302	0.180	0.288	0.249	0.320	0.031	0.103	0.186	0.478	0.555
BM2	0.924	0.261	0.356	0.176	0.342	0.241	0.387	-0.004	0.152	0.194	0.513	0.561
BM3	0.886	0.260	0.212	0.148	0.305	0.345	0.252	0.123	0.100	0.105	0.411	0.536
CF1	0.197	0.903	0.439	0.245	0.122	0.233	0.563	-0.098	0.417	0.046	0.543	0.354
CF3	0.242	0.890	0.366	0.225	0.187	0.288	0.385	0.081	0.432	-0.011	0.468	0.432
CI1	0.180	0.280	0.731	0.364	0.113	0.353	0.341	0.134	0.272	0.226	0.438	0.379
CI2	0.294	0.412	0.819	0.161	0.062	0.403	0.355	0.150	0.305	0.249	0.470	0.396
CI3	0.298	0.388	0.865	0.293	0.218	0.380	0.566	0.116	0.264	0.269	0.619	0.390
CP1	0.206	0.195	0.236	0.905	0.489	0.374	0.187	0.210	0.320	0.071	0.280	0.214
CP2	0.121	0.278	0.365	0.879	0.329	0.292	0.317	0.142	0.415	0.249	0.351	0.184
FP1	0.223	0.103	0.044	0.294	0.837	0.229	0.032	0.231	0.180	0.083	0.153	0.312
FP2	0.364	0.187	0.224	0.493	0.916	0.351	0.204	0.336	0.352	0.220	0.292	0.373
LGP1	0.224	0.202	0.371	0.335	0.304	0.895	0.232	0.521	0.278	0.108	0.236	0.316
LGP2	0.317	0.315	0.463	0.330	0.296	0.875	0.356	0.261	0.231	0.223	0.419	0.459
LM1	0.386	0.516	0.463	0.211	0.325	0.392	0.817	0.029	0.327	0.162	0.567	0.525
LM4	0.269	0.404	0.405	0.271	0.066	0.252	0.860	-0.078	0.332	0.197	0.644	0.368
LM5	0.244	0.430	0.489	0.230	-0.035	0.183	0.880	-0.124	0.243	0.154	0.612	0.249
PP1	0.031	-0.014	0.075	0.217	0.334	0.326	-0.092	0.881	0.071	0.083	-0.005	0.101
PP2	0.059	-0.008	0.212	0.134	0.248	0.463	-0.020	0.880	0.148	0.107	0.007	0.175
QC2	0.142	0.458	0.276	0.299	0.219	0.316	0.266	0.147	0.703	0.040	0.166	0.112
QC3	0.035	0.198	0.108	0.203	0.266	0.037	0.084	0.083	0.741	0.055	0.146	0.145
QC4	0.094	0.351	0.365	0.335	0.231	0.300	0.387	0.042	0.769	0.186	0.288	0.203
QC7	0.100	0.344	0.214	0.332	0.225	0.144	0.242	0.099	0.728	0.203	0.294	0.321
SOP1	0.229	0.083	0.313	0.169	0.218	0.198	0.211	0.110	0.204	0.923	0.271	0.307
SOP2	0.074	-0.066	0.228	0.139	0.094	0.123	0.139	0.080	0.098	0.862	0.171	0.143
SP1	0.561	0.413	0.541	0.251	0.313	0.380	0.538	0.037	0.240	0.214	0.828	0.574
SP2	0.451	0.429	0.443	0.258	0.166	0.235	0.703	-0.034	0.269	0.116	0.805	0.469
SP3	0.380	0.339	0.603	0.353	0.278	0.220	0.519	0.028	0.282	0.293	0.809	0.440
SP4	0.204	0.629	0.418	0.246	0.052	0.316	0.481	-0.034	0.205	0.180	0.704	0.301
TR1	0.565	0.306	0.180	0.107	0.252	0.311	0.366	-0.011	0.254	0.087	0.394	0.791
TR4	0.385	0.392	0.513	0.212	0.267	0.342	0.450	0.212	0.253	0.339	0.546	0.817
TR5	0.574	0.382	0.468	0.227	0.452	0.422	0.312	0.168	0.179	0.209	0.477	0.878

CO: Construct, BM: Benchmarking, CF: Customer focus, CI: Continuous improvement, CP: Customer perspective, FP: Financial perspective, LGP: Learning and growth perspective, LM: Leadership management, PP: Internal process perspective, QC: Quality culture, SOP: Social perspective, SP: Strategic planning, TR: Training

4.2. Structural Model Assessment

As mentioned earlier, the structural model assessment used the R^2 values, predictive relevance of the model and the level and significance of the path coefficients as recommended by Chin (2010), Hair et al. (2011) and Valerie (2012). Table 3 shows that the R^2 value of MFIs performance was 0.264 suggesting that 26.4% of the variance in the MFIs performance can be explained by TQM. According to Cohen (1988), the value of R^2 is considered substantial with value higher than 0.26, moderate with a value higher than 0.13 and weak with a value higher than

0.02. Therefore, the R^2 value of the current model is considered substantial confirming the power of variable contained in the model to explain MFIs performance.

To assess the quality of the model, the values of cross-validated redundancy and cross-validated communality were generated by running the blindfolding technique in Smart PLS. According to Fornell and Cha (1994), the predictive quality of the model is confirmed when the cross-validated redundancy value is higher than zero. Table 4 also shows that the cross-validated redundancy

Table 2: The convergent validity test

Construct	Items	Loadings	Cronbach's alpha	CR ^a	AVE ^b
Benchmarking	BM1	0.912	0.893	0.933	0.823
	BM2	0.924			
	BM3	0.886			
Customer focus	CF1	0.903	0.757	0.892	0.804
	CF3	0.890			
Continuous improvement	CI1	0.731	0.731	0.848	0.651
	CI2	0.819			
	CI3	0.865			
Customer perspective	CP1	0.905	0.743	0.886	0.795
	CP2	0.879			
Financial perspective	FP1	0.837	0.709	0.870	0.771
	FP2	0.916			
Learning and growth perspective	LGP1	0.895	0.724	0.878	0.783
	LGP2	0.875			
Leadership and management	LM1	0.817	0.812	0.889	0.727
	LM4	0.860			
	LM5	0.880			
Internal process perspective	PP1	0.881	0.709	0.873	0.775
	PP2	0.880			
Quality culture	QC2	0.703	0.721	0.825	0.541
	QC3	0.741			
	QC4	0.769			
	QC7	0.728			
Social perspective	SOP1	0.923	0.750	0.887	0.797
	SOP2	0.862			
Strategic planning	SP1	0.828	0.795	0.867	0.621
	SP2	0.805			
	SP3	0.809			
	SP4	0.704			
Training	TR1	0.791	0.773	0.868	0.688
	TR4	0.817			
	TR5	0.878			

BM: Benchmarking, CF: Customer focus, CI: Continuous improvement, CP: Customer perspective, FP: Financial perspective, LGP: Learning and growth perspective, LM: Leadership management, PP: Internal process perspective, QC: Quality culture, SOP: Social perspective, SP: Strategic planning, TR: Training

Table 3: Correlation and discriminant validity

CO	BM	CF	CI	CP	FP	LGP	LM	PP	QC	SOP	SP	TR
BM	0.907											
CF	0.244	0.897										
CI	0.324	0.450	0.807									
CP	0.186	0.262	0.333	0.892								
FP	0.344	0.171	0.167	0.463	0.878							
LGP	0.303	0.289	0.469	0.376	0.339	0.885						
LM	0.356	0.531	0.531	0.278	0.149	0.329	0.853					
PP	0.051	-0.012	0.163	0.199	0.330	0.448	-0.064	0.880				
QC	0.132	0.473	0.345	0.409	0.316	0.289	0.355	0.124	0.736			
SOP	0.181	0.021	0.308	0.174	0.184	0.185	0.201	0.108	0.176	0.893		
SP	0.518	0.565	0.638	0.351	0.264	0.366	0.712	0.001	0.316	0.254	0.788	
TR	0.607	0.437	0.479	0.224	0.393	0.434	0.454	0.157	0.274	0.264	0.574	0.829

CO: Construct, BM: Benchmarking, CF: Customer focus, CI: Continuous improvement, CP: Customer perspective, FP: Financial perspective, LGP: Learning and growth perspective, LM: Leadership management, PP: Internal process perspective, QC: Quality culture, SOP: Social perspective, SP: Strategic planning, TR: Training

value was 0.079 for MFIs performance. In conclusion, the values of R² and cross-validated redundancy indicate that the study model has an adequate prediction quality.

In order to examine the hypothesized relationships among the study, the PLS algorithm and bootstrapping algorithm were run. The results shown in Figure 3 and Table 5 proved that TQM has a positive and significant relationship with MFIs performance at the 0.001 level of significance ($\beta = 0.514, t = 8.527, P < 0.001$). This result has proved that TQM, comprised of seven dimensions including, leadership management, customer focus, strategic planning, training, continuous improvement, benchmarking and quality culture, improve the MFIs performance. Therefore, the hypothesis (H1) developed by the study is supported.

5. DISCUSSION AND CONCLUSION

This study proposed and tested a model that establishes the relationship between TQM and MFIs performance. This study contributes to the body of knowledge by examining the mentioned relationships in microfinance sector, focuses on both business and social objectives, which has not been given the deserved attention scholarly. On other words, the most of studies regarding TQM-organization performance linkage were carried out in manufacturing industry and there is a dearth of study in the service sector particularly in the microfinance sector. It also examined the effect of TQM as composite construct on the MFIs performance in the view of the RBV theory. Moreover, it provides a useful framework for TQM implementation for the management of MFIs

and other stakeholders in Yemen. It can raise the awareness among the practitioners about the significant role of TQM practices in obtaining better performance and competitive advantage.

The results of the study proved that TQM is significantly associated with MFIs performance at the 0.001 level of significance ($\beta = 0.514, t = 8.527, P < 0.001$). This finding is in agreement with previous studies which examined the TQM-organization performance association such as Idris (2011), Iqbal et al. (2012), Munizu (2013), and Homaid et al. (2015). This is also in line the premises of RBV theory, which views organization resources such as TQM as a requirement for fostering the performance of organization. Therefore, it can be concluded that implementing TQM practices by MFIs is an advantage that assist in obtaining superior performance specifically, financial, customer, operation, learning and growth and social aspects.

Although this study contributes significantly to the body of knowledge, there are many gaps that can be filled up by future studies. For example, the data of the study was collected from microfinance sector so that future studies can be carried out in other sectors. It can also examine the mentioned relationships in other developing or least developed countries for generalization the results. A longitudinal research approach can be carried to detect the changes in the environment and extending the current research framework with other organization resources such as market orientation, entrepreneurial orientation and learning orientation which can be employed as complementary resources.

Figure 3: Significance of factor loadings and path coefficient

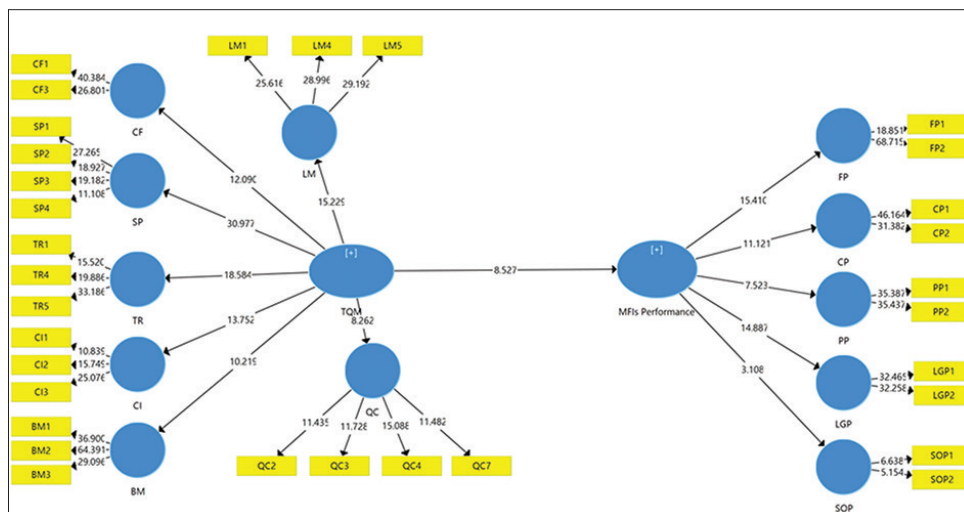


Table 4: Predictive quality indicators

Variable	Variable type	R ²	Cross-validated redundancy	Cross-validated communality
MFIs performance	Endogenous	0.264	0.079	0.187

MFIs: Microfinance institutions

Table 5: Hypothesis testing results

Number	Hypothesis path	Path coefficient	SE	T	P	Decision
H ₁	TQM ≥ MFIs performance	0.514***	0.060	8.527	0.000	Supported

***P<0.001. SE: Standard error, TQM: Total quality management, MFIs: Microfinance institutions

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