Instrument Development to Measure Organisational Change and Balanced Scorecard

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Keywords
Change Management, Balanced Scorecard, Instrument Development.

Abstract
The purpose of the paper is to develop a reliable and valid instrument to measure the performance of change and Balanced Scorecard in business organizations. A research instrument was designed based on extensive literature review of the change process and Balanced Scorecard framework. The research instrument was pilot tested and necessary modifications were made. The reliability and validity of the instrument was determined using Exploratory Factor Analysis (EFA). Data was generated and then subjected to analysis. Confirmatory Factor Analysis (CFA) was carried out where the measurement model for organizational change scale, Balanced Scorecard scale and entire scale was estimated using AMOS 16.0. A reliable and valid research instrument was developed to assess the performance of change management and Balanced Scorecard. Further, the measurement model for organizational change scale, Balanced Scorecard scale and entire scale was estimated. CFA model fit indicators for organizational change scale, Balanced Scorecard scale and entire scale were found acceptable according to recommended values.

The variables related to change depicted in the research instrument are the guidelines for change management in organizations, both for individual as well as groups. The four perspectives of Balanced Scorecard encircle the activities essential for business organizations. This research instrument offers the measurement of performance of change management process and Balanced Scorecard and subsequently, improvisation of the processes in future.

Introduction
As organizations around the world transform themselves for competition that is based on information, their ability to exploit intangible assets has become far more critical than their capacity to invest in and manage physical assets. In recognition to this change, Kaplan and Norton (1992) introduced a concept called Balanced Scorecard, which is an invaluable tool in transforming organizations. Change management is defined as "the continuous process of aligning an organization with its marketplace and doing it more responsively and effectively than competitors (Berger, 1997; p. 7). The Balanced Scorecard is a customer-based planning and process improvement system, with its primary focus on driving an organization's change process by identifying and evaluating relevant performance measures. Studies on Balanced Scorecard focused on many firms have found that the Balanced Scorecard is a useful tool for focusing and sustaining their continuous improvement efforts (Brewer, 2002; Gumbus & Lyron, 2002). Extensive literature review indicated lack of comprehensive tool to gain the outlook of organizations towards change management, Balanced Scorecard and organizational effectiveness. This expanded the need for designing a research instrument which could help researchers measure the degree of change management, Balanced Scorecard and organizational effectiveness in an organization. Hence, this paper introduces a formalized set of questions on the three aspects. The objective of this research paper is to identify constructs of change management and Balanced Scorecard from literature producing a reliable and valid research instrument.

Conceptual Background
The major categories of the research instrument are organizational change and Balanced Scorecard. Organizational change scale carries statements based on various changes occurring in organizations-technological change, social change, leadership change and structural change. Balanced Scorecard scale

includes statements related to the four perspectives of Balanced Scorecard- financial, customer, internal business process and learning and growth. The variable which is affected by the forces of measures of change management and Balanced Scorecard is organizational effectiveness. The research instrument followed a 5-point Likert scale with choices of responses as strongly agree (5), agree (4), neither agree nor disagree (3), disagree (2) and strongly disagree (1). Each response is given a numerical score to reflect its degree of attitudinal favorableness (Cooper & Schindler, 2009). Leedy and Ormrod (2001) stated that surveys should be easy and quick for the respondents to complete. Since the target respondents were senior managers who usually go on a time bound schedule, this survey used Likert scale which reduced the time taken to fill in the responses and proved to be an advantage. While forming the questionnaire as a whole, the researcher focused that it appear user-friendly and prominent to the respondents. The research instrument was developed in four steps: Identification of constructs of change management and Balanced Scorecard from literature; gaining opinions from academicians and practitioners and accordingly alteration of the designed draft questionnaire; pilot testing and confirmation of items; and finally, adapting the questionnaire according to the pilot study feedback.

Methodology

Reliability: Measurement results are reliable when they remain stable from one rating period to another or from one rater to other (Smith, 1976; Wexley, 1979). The preliminary questionnaire used for pilot study had 76 items. The first four categories were related to organizational change: technological change (TEC), social change (SOC), leadership change (LEC) and structural change (STC). The next four categories of Balanced Scorecard were financial perspective (FIP), customer perspective (CSP), internal business process perspective (IBP) and learning and growth perspective (LGP). The last category, overall effectiveness (OE), was acknowledged in one statement.

Table 1: Descriptive Statistics and Cronbach's Alpha Item Statistics

Items	Mean	Std. Deviation	Cronbach's Alpha
TEC2	3.44	.961	0.755
TEC3	3.20	1.041	
TEC4	3.12	1.269	
TEC5	4.08	.702	
SOC2	2.96	.735	0.681
SOC3	3.12	.600	
SOC7	3.40	1.190	
SOC10	3.64	.952	
SOC13	2.76	.970	
SOC14	3.40	.500	
LEC1	3.12	1.013	0.898
LEC2	3.04	1.060	
LEC3	3.28	.891	
LEC4	3.24	1.012	
LEC6	3.00	1.080	
STC1	3.68	.557	0.697
STC3	2.92	.997	
FIP1	4.12	.600	0.597
FIP3	4.04	.790	
FIP4	3.64	.757	
FIP5	4.08	.812	
FIP7	3.84	.943	
FIP8	3.72	.843	
CSP3	3.84	.800	0.729
CSP4	3.56	.917	
CSP6	4.04	.611	
CSP7	3.80	.957	
IBP1	3.80	.913	0.802
IBP3	3.84	.800	
IBP4	3.96	.790	
IBP6	3.76	.879	
IBP7	4.00	.913	
IBP9	4.64	.638	
IBP10	3.56	1.158	
LGP1	4.12	.781	0.739
LGP5	3.60	.866	
LGP6	3.96	.735	
LGP10	3.40	.816	
LGP12	3.44	1.121	
LGP14	3.56	1.003	
OE	3.72	.891	

Cronbach's alpha tends to be high if the scale items are highly correlated (Hair et al., 1998). Bowling (1997) suggests that an alpha of 0.50 or above is an indication of good internal consistency. According to a rule of thumb in social sciences, Cronbach's alpha should be at least 0.70 for the scale to be thought of as reliable (Nunnally, 1978; Bland & Altman, 1997). Kehoe (1995) recommends that an alpha value of at least 0.50 should be obtained for accepting the items "as in" within a dimension. The Cronbach's alpha of various items in each category of the research instrument was computed leading to data reduction where 76 statements were reduced to 41. This scale has nine perspectives and Cronbach's alpha value for each dimension after deleting the items are given in Table 1.

Validity: Validity is the extent to which an instrument measures what it purports to measure (Kimberlin & Winterstein, 2008). A scale is said to have face validity if it 'looks like' it is going to measure what is supposed to measure (Ahmad & Schroeder, 2003). After carrying out an extensive literature, a draft questionnaire was prepared. As suggested by Ahmad and Schroeder (2003), two researchers were requested to propose items for the questionnaire which were compared with those in the questionnaire plan. Next, two other researchers who belonged to the same area were requested to appraise the survey items and find out what it projected to measure. This confirmed that the instrument developed is logical and satisfactory.

Content validity is the degree to which the content of a measurement scale appears to tap all the relevant facets of the construct it is attempting to measure (Parasuraman et al., 1991; Ding & Hershberger, 2002; Malhotra, 2005; Warner, 2008). Garver and Mentzer (1999) admit that there is no formal statistical test for content validity and thus, researcher judgment and insight must be applied. In this research, a broad study of significant literature and dialogue with experts ensured content validity of the questionnaire. This avoided repetition of similar statements and adding appropriate terms for better understanding of the respondents. The questionnaire was administered on three strategists and academicians who were requested to provide their feedback on the items, statements and research instrument as a whole. After pilot testing, some of the items were re-framed, altered and deleted which modified the items into more relevant and representative of the chosen constructs.

The test for unidimensionality of a measurement scale is significant before undertaking reliability tests since reliability such as Cronbach's alpha does not guarantee unidimensionality, but instead assumes it exists (Hair et al., 1998). Unidimesionality is the degree to which a set of items signify a single underlying latent construct (Garver & Mentzer, 1999). Thus, the present research made certain that each set of indicators intended to determine a single construct attains unidimensionality. Principal components analysis examines the interrelationship of variables and offers a basis for the elimination of redundant items in a developing measure (Anthony, 1999) and identifies the associated underlying concepts, domains or subscales of a questionnaire (Oppenheim, 1992; Ferguson & Cox, 1993). Table 2 shows total variance explained by EFA. The results suggested that all items did not load on a particular construct, thus, negating presence of common method bias.

Table 2: Common Method Bias-Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	21.578	26.640	26.640	21.578	26.640	26.640
2	9.160	11.309	37.949	9.160	11.309	37.949
3	7.220	8.914	46.862	7.220	8.914	46.862
4	5.986	7.390	54.252	5.986	7.390	54.252
5	5.445	6.722	60.974	5.445	6.722	60.974
6	5.005	6.179	67.153	5.005	6.179	67.153
7	4.652	5.743	72.897	4.652	5.743	72.897
8	3.732	4.607	77.504	3.732	4.607	77.504
9	3.209	3.962	81.466	3.209	3.962	81.466
10	3.023	3.732	85.198	3.023	3.732	85.198
11	2.287	2.823	88.022	2.287	2.823	88.022
12	1.873	2.312	90.334	1.873	2.312	90.334
13	1.726	2.131	92.465	1.726	2.131	92.465
14	1.471	1.816	94.281	1.471	1.816	94.281
15	1.288	1.590	95.872	1.288	1.590	95.872
16	1.012	1.249	97.121	1.012	1.249	97.121
17	.766	.946	98.067			
18	.689	.850	98.917			
19	.599	.740	99.657			
20	.263	.324	99.981			
21	1.504E-02	1.856E-02	100.000			

Extraction Method: Principal Component Analysis.

Pilot Testing: A team of strategists and HR practitioners were requested to provide their remarks on the research instrument and its constructs. Their feedback on the items and complete research instrument assisted in overall refinement of the scale. The items were re-thought, re-stated and altered so that they could better represent the intended constructs and enhance content validity. Factor analysis was conducted and the Cronbach's alpha for different items in each category was calculated which resulted in data reduction. In this phase, the statements were reduced from 76 to 41. These 41 statements were used to gather responses and observe results of CFA. CFA was employed to test if relationship between observed variables and their underlying latent construct exists. For future research, entire data was again crystallized using EFA. This resulted in further refinement of the research instrument distilling statements to 27.

Exploratory Factor Analysis

Organizational Change Scale: The skewness for variables of organizational change scale varied from -0.219 to -0.752. The inter correlations among items of organizational change scale varied from 0.2 to 0.8. The initial promax-rotated factor loadings of variables of organizational change scale are given in Table 3.

Table 3: Initial Factor Loadings of Organizational Change Scale

Items	Factor 1 (TEC)	Factor 2 (SOC)	Factor 3 (LEC)	Factor 4 (STC)
TEC1	0.488	-0.055	0.035	0.179
TEC2	0.924	-0.179	0.048	-0.062
TEC3	0.436	0.080	0.131	0.213
TEC4	-0.009	0.036	0.000	0.871
SOC1	0.046	0.197	0.490	-0.044
SOC2	0.522	0.389	-0.129	-0.032
SOC3	-0.148	0.839	0.285	0.033
SOC4	-0.056	0.354	0.249	0.079
SOC5	-0.035	0.064	0.643	-0.076
SOC6	0.019	-0.105	0.417	0.117
LEC1	0.171	-0.036	0.574	-0.029
LEC2	0.212	-0.035	0.725	-0.264
LEC3	0.119	0.091	0.577	0.028
LEC4	0.046	-0.055	0.782	0.119
LEC5	-0.168	0.167	0.926	0.015
STC1	-0.005	0.039	0.784	0.036
STC2	0.108	-0.067	0.847	0.093
Eigen Values	1.28	0.88	0.81	0.93
% Variance	7.19	4.95	4.53	5.23
Cum % Var	59.68	69.87	74.40	64.92

Items loaded (≥0.25) on more than one factor were removed for further factor analysis. Final promax-rotated factor loadings of organizational change scale are given in Table 4**.**

Table 4: Final Factor Loadings of Organizational Change Scale

Items	Factor 1 (TEC)	Factor 2 (SOC)	Factor 3 (LEC)	Factor 4 (STC)
TEC1	0.660	-0.225	0.068	0.305
TEC2	0.784	0.171	-0.053	-0.021
TEC3	0.535	0.162	0.077	0.158
TEC4	0.142	-0.014	0.051	0.546
SOC1	-0.001	0.302	0.443	-0.056
SOC5	-0.084	0.288	0.486	0.055
LEC1	0.111	0.631	0.268	-0.034
LEC2	0.220	-0.062	0.850	-0.396
LEC3	0.079	0.058	0.612	0.032
LEC4	0.089	0.011	0.694	0.165
LEC5	-0.126	0.029	0.858	0.160
STC1	0.009	-0.111	0.799	0.049
STC2	0.097	0.232	0.636	0.152
Eigen Values	1.19	0.65	0.58	0.84
% Variance	8.36	4.58	4.04	5.90
Cum % Var	63.96	74.44	78.48	69.86

Balanced Scorecard Scale: The skewness for variables of Balanced Scorecard scale varied from -0.338 to 9.828. The inter correlations among items of Balanced Scorecard scale varied from -0.48 to 0.8. Table 5 shows the initial promax-rotated factor loadings of variables of Balanced Scorecard scale.

Table 5: Initial Factor Loadings of Balanced Scorecard Scale

Items	Factor 1 (FIP)	Factor 2 (CSP)	Factor 3 (IBP)	Factor 4 (LGP)
FIP1	0.154	-0.201	-0.100	0.280
FIP2	0.251	0.005	0.036	-0.134
FIP3	0.085	0.201	0.088	-0.276
FIP4	-0.047	-0.038	-0.053	0.096
FIP5	-0.148	0.310	-0.059	0.024
FIP6	0.070	0.231	-0.139	0.120
CSP1	0.692	0.096	0.012	-0.086
CSP2	0.641	0.123	0.157	0.070
CSP3	0.225	0.142	0.009	0.263
CSP4	0.381	0.265	-0.145	0.255
IBP1	0.240	0.730	-0.009	0.043
IBP2	0.272	0.747	-0.047	-0.125
IBP3	-0.049	0.630	0.042	-0.128
IBP4	0.122	0.672	-0.005	-0.045
IBP5	-0.187	0.493	-0.014	0.396
IBP6	-0.287	0.280	0.392	0.175
IBP7	0.135	-0.072	0.890	-0.005
LGP1	-0.084	0.129	0.064	0.849
LGP2	0.101	-0.123	-0.033	0.942
LGP3	-0.025	0.039	-0.023	0.662
LGP4	0.206	0.177	0.081	0.371
LGP5	0.089	-0.116	0.393	0.409
LGP6	0.214	0.075	0.374	0.208
Eigen Values	5.79	1.61	1.19	1.05
% Variance	13.53	3.76	2.77	2.46
Cum % Var	74.12	77.88	80.65	83.11

Each item loading greater than or equal to 0.25 was considered further whereas, items loaded (≥0.25) on more than one factor were deleted for further factor analysis. The final promax-rotated factor loadings of Balanced Scorecard scale are given in Table 6.

Table 6: Final Factor Loadings of Balanced Scorecard Scale

Items	Factor 1 (FIP)	Factor 2 (CSP)	Factor 3 (IBP)	Factor 4 (LGP)
FIP3	0.457	0.091	0.085	-0.225
FIP4	0.758	-0.082	-0.224	0.084
FIP5	0.484	-0.114	0.087	-0.001
FIP6	0.258	0.076	0.118	0.005
CSP1	0.220	0.563	0.095	-0.117
CSP2	-0.159	1.036	-0.010	0.016
CSP3	-0.125	0.117	0.211	0.287
IBP1	0.054	0.051	0.597	0.126
IBP3	0.250	-0.085	0.528	-0.053
IBP4	-0.091	0.012	0.851	-0.012
IBP7	0.033	0.160	-0.062	0.399
LGP1	-0.049	-0.094	0.094	0.898
LGP2	0.018	0.081	-0.055	0.848
LGP3	0.390	-0.157	-0.005	0.679
LGP4	0.247	-0.004	0.221	0.470
LGP6	0.224	0.288	-0.126	0.408
Eigen Values	4.46	1.41	1.04	0.82
% Variance	11.66	3.67	2.72	2.13
Cum % Var	79.06	82.74	85.45	87.59

Organizational Effectiveness: This aspect was recognized in one statement. The skewness for the item of organizational effectiveness scale was equal to 0.819. The principal factor analysis resulted in factor loading of 0.707 (>0.25) which was accepted. The EFA generated Eigen value (0.67), %Variance (100.00) and Cum%Var (100.00).

Entire Research Scale: The skewness for variables of entire scale varied from -0.219 to 9.828. Table 7 gives final promax-rotated factor loadings of full research instrument.

Table 7: Final Promax-Rotated Factor Loadings of the Entire Research

Scale

Items	Factor 1 (OC)	Factor 2 (BSC)	Factor 3 (OE)
TEC4	0.223	0.324	0.029
SOC1	0.500	0.327	0.033
SOC2	0.407	0.085	-0.311
SOC3	0.629	0.120	0.041
SOC5	0.623	0.013	0.253
LEC1	0.570	0.270	0.104
LEC2	0.762	0.081	0.044
LEC3	0.734	0.110	0.024
LEC4	0.855	0.066	-0.115
LEC5	0.778	-0.006	0.067
STC1	0.778	-0.225	0.009
STC2	0.824	-0.060	0.084
FIP3	0.084	0.565	-0.179
FIP4	0.015	0.465	0.107
FIP5	-0.095	0.461	0.014
FIP6	0.031	0.231	0.030
CSP1	0.285	0.263	-0.050
CSP2	0.376	0.078	0.125
CSP3	0.147	0.179	0.305
IBP1	0.180	0.485	0.000
IBP2	0.233	0.601	-0.184
IBP3	-0.162	0.841	-0.026
IBP4	0.089	0.681	-0.012
LGP1	0.016	0.078	0.782
LGP2	0.066	-0.038	0.900
LGP5	0.229	0.035	0.509
OE	0.295	0.232	0.336
Eigen Values	1.80	26.38	9.78
% Variance	3.49	51.16	18.96
Cum % Var	73.61	51.16	70.12

The inter correlations among organizational change vis-à-vis Balanced Scorecard and organizational effectiveness was 0.574 and 0.475 respectively. The inter correlation between Balanced Scorecard and organizational effectiveness was found to be 0.453.

Sampling Method

The respondents were senior managers or top management who belonged to Fortune 500 companies as these organizations are considered to be responsive to changes occurring in the business environment and adopting new techniques to manage change initiatives. Senior managers are involved in implementation, prosecution and realization of changes and developments in the organizations. They possess an overall managerial view on the various changes occurring at different levels of organization. This study has been conducted in public and private sector companies in India. The companies belonged to manufacturing as well as service industry.

Confirmatory Factor Analysis

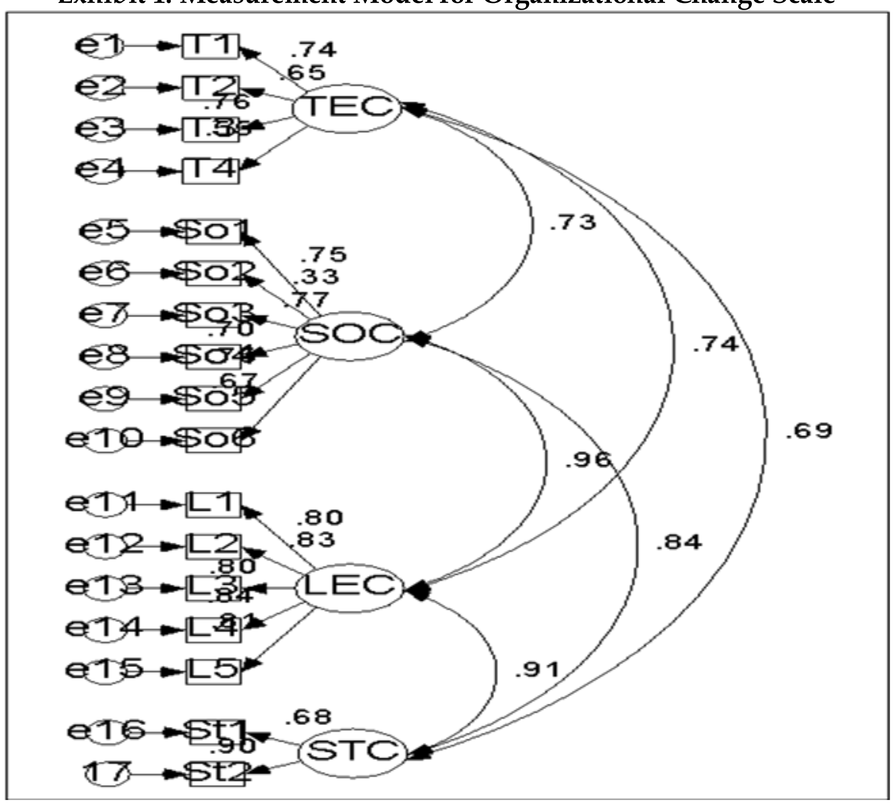
CFA is a statistical technique used to verify the factor structure of a set of observed variables. It allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists (Suhr, 2006). Iacobucci (2009, 2010) mentions that non-significant loadings on a factor may occur for measures that, in fact, measure other factors or alternatively are simply poor measures of the factor and could be dropped. At times two or more loadings are found high in value on a factor, while two or more other loadings are low, but still significant. The reason may be that the measures related with the low loadings are simply inadequate measures of the factor and hence, might be deleted from further analysis. But, it might also be the case that the measures associated with low loadings actually measure another factor, not originally specified, that is significantly correlated with the originally hypothesized factor. Here, CFA estimated measurement model for organizational change scale, Balanced Scorecard scale and entire scale using AMOS 16.0 (Arbuckle & Wothke, 1999).

In reference to model fit, researchers use various goodness-of-fit indicators to assess a model (Hu & Bentler, 1995; Hair et al., 1998; Kaplan, 2000; Bentler & Wu, 2002). If the vast majority of the indices indicate a good fit, then there is probably a good fit (Schreiber et al., 2006). GFI values range from 0 (poor fit) to 1.0 (perfect fit). The values greater than 0.80 are considered an acceptable threshold (Baumgartner & Homburg, 1996; Chau, 1997; Holmes-Smith & Coote, 2002; Joreskog & Sorbom, 1984; Segars & Grover, 1993). Values for AGFI range between 0 and 1 and it is generally accepted that values of 0.90 or greater indicate well fitting models. For RMSEA, with a range of 0.08 to 0.10 provides an acceptable fit (Browne & Cudeck, 1993; MacCallum, 1996; Hair et al., 2006) and values 0.05 to 0.08 indicate more desirable fit (MacCallam et al., 1996; Garver & Mentzer, 1999; Schumacker & Lomax, 2004). However, more recently an upper limit of 0.07 (Steiger, 2007) is considered adequate. The CFI ranges from 0 to 1 with higher values indicating better fit (Hu & Bentler, 1998, 1999; Engel et al., 2003; Hair et al., 2006). RMR should be less than 0.1 (Hu & Bentler, 1999). The value of NNFI, also known as Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973), should be greater than 0.95 (Hu & Bentler, 1999; Bagozzi, 2010). It has been argued that this cut- off value is too conservative under certain conditions and NNFI less that 0.95 may be meaningful, for example more than 0.90. The chi-square to degrees of freedom ratio of 3 or 2 or less has been supported as satisfactory level of fit for confirmatory factor models (Carmines & McIver, 1981). Table 8 suggests that value of GFI, RMSEA, CFI, RMR and NNFI is suitable. *Thus, the measurement model for organizational change scale is acceptable.* The measurement model for organizational change scale is shown in Exhibit 1.

Table 8: CFA Model Fit Indicators for Organizational Change Scale

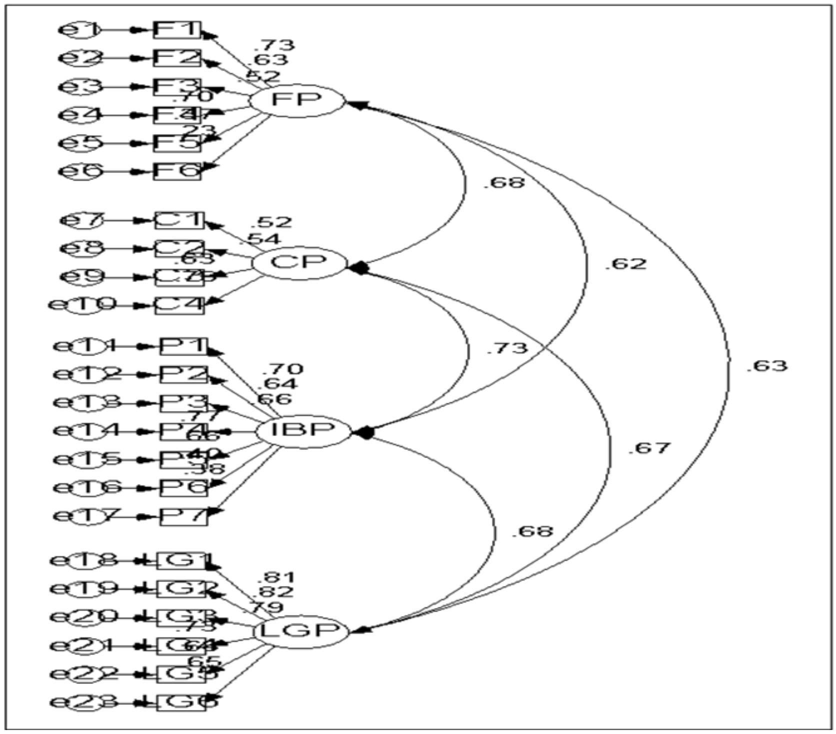
Fit Indicators	Observed Value
Goodness of Fit Index (GFI)	0.823
Adjusted Goodness of Fit Index (AGFI)	0.761
Non-Normed Fit Index (NNFI)	0.897
Comparative Fit Index (CFI)	0.914
Chi-square/Degrees of Freedom	1.798
Root Mean Square Error of Approximation (RMSEA)	0.088
Root Mean Square Residual (RMR)	0.053

Exhibit 1: Measurement Model for Organizational Change Scale



Minimum was achieved; Chi-square= 203.186; df= 113; Probability level= 0.000.

Exhibit 2: Measurement Model for Balanced Scorecard Scale



Minimum was achieved; Chi-square= 384.663; df= 224; Probability level= 0.000

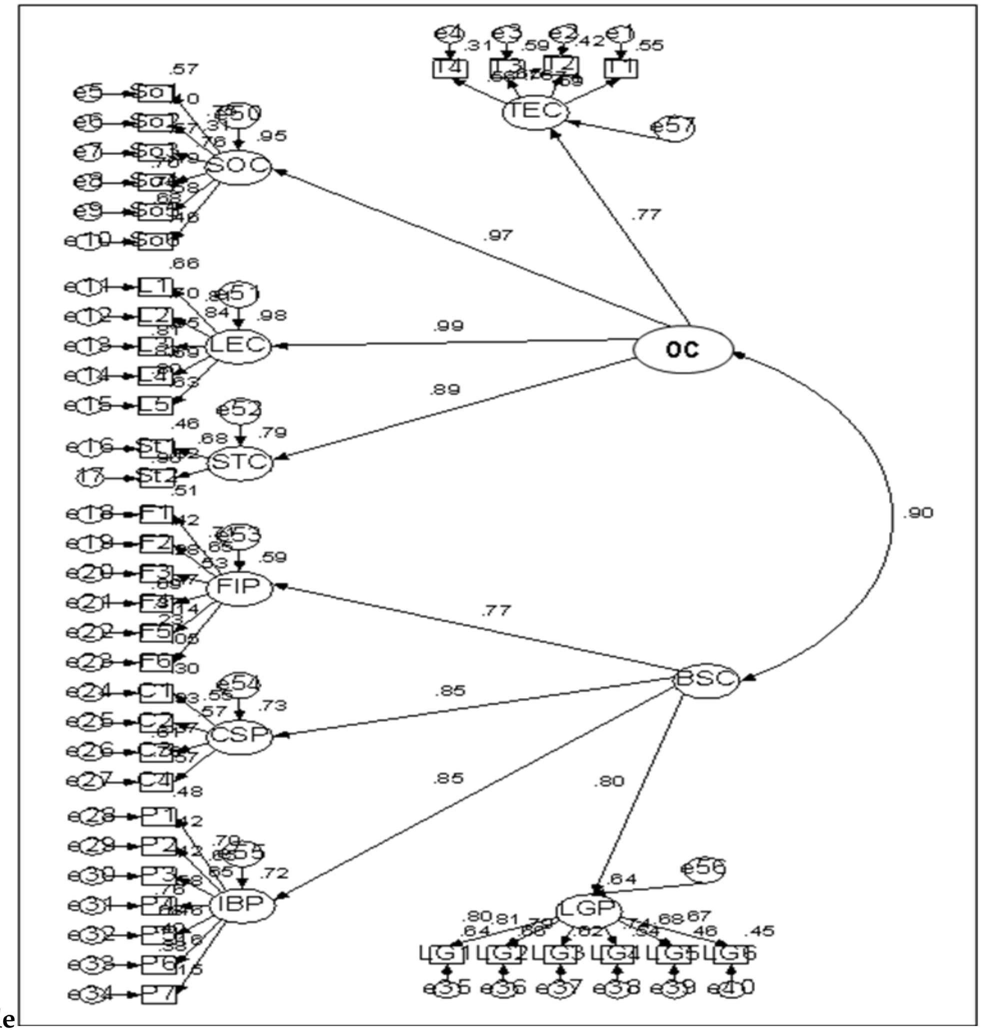
Table 9 shows the value of NNFI, CFI, RMSEA and Chi-square to degrees of freedom is satisfactory. Exhibit 2 shows the measurement model for Balanced Scorecard scale. *Therefore, the measurement model for Balanced Scorecard scale is acceptable.*

Table 9: CFA Model Fit Indicators for Balanced Scorecard Scale

Fit Indicators	Observed Value
Goodness of Fit Index (GFI)	0.754
Adjusted Goodness of Fit Index (AGFI)	0.697
Non-Normed Fit Index (NNFI)	0.806
Comparative Fit Index (CFI)	0.828
Chi-square/Degrees of Freedom	1.717
Root Mean Square Error of Approximation (RMSEA)	0.083
Root Mean Square Residual (RMR)	0.111

Exhibit 3 shows the second-order confirmatory factor analysis which is most valid and conceptually meaningful approach when the first-order factors loading on the second-order factor can be interpreted as sub-dimensions or components of a more abstract, singular construct (Bagozzi, 2010). Table 10 shows the fit indices for entire scale where the value of RMSEA, Chi-square to degrees of freedom and RMR is found satisfactory. *Thus, the measurement model for entire scale is acceptable.*

Exhibit 3: Second Order CFA-Measurement Model for Entire Scale



Minimum was achieved; Chi-square= 1330.218; df= 731; Probability level= 0.000

Table 10: CFA Model Fit Indicators for Entire Scale

Fit Indicators	Observed Value
Goodness of Fit Index (GFI)	0.634
Adjusted Goodness of Fit Index (AGFI)	0.590
Non-Normed Fit Index (NNFI)	0.738
Comparative Fit Index (CFI)	0.754
Chi-square/Degrees of Freedom	1.820
Root Mean Square Error of Approximation (RMSEA)	0.089
Root Mean Square Residual (RMR)	0.098

Conclusions

This research offered a reliable and valid instrument to measure organizational change and Balanced Scorecard. Factor analysis was conducted where Cronbach's alpha for various items in each category was calculated and resulted in data reduction. In this phase, the statements were reduced from 76 to 41. These 41 statements were used to collect responses and observe results of CFA. CFA was employed to test if relationship between observed variables and their underlying latent construct exists.

For future research, entire data was again crystallized using EFA. The development of this instrument fulfilled the lack of comprehensive tool to identify the attitude of organizations towards change management, Balanced Scorecard and organizational effectiveness. It will facilitate organizations in monitoring the success rate of various change programs and also activities associated with dimensions of Balanced Scorecard.

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