

**INCOMAR 2023**  
**The 9<sup>th</sup> International Conference on Marketing and Retailing**

**ORGANIZATIONAL RESILIENCE, BALANCED SCORECARD,  
PERFORMANCE EXCELLENCE: MODEL FOR  
ORGANIZATIONAL SUSTAINABILITY**

Christopher Dennis E. Catapang (a)\*, Francis K. Ashipaoloye (b)  
\*Corresponding author

(a) College of Business and Accountancy, Lyceum of the Philippines University-Laguna, Philippines,  
christopherdennis.catapang@lpulaguna.edu.ph

(b) Graduate School, Lyceum of the Philippines University-Laguna, Philippines,  
francis.ashipaoloye@lpulaguna.edu.ph

**Abstract**

Trans-national education, 4<sup>th</sup> industrial revolution, flexible learning pedagogies, learning algorithms; these are some of the many forces that are challenging the concept and structure of higher education. Much like the other sectors of the economy, higher education is experiencing an avalanche of changes which most authors consider disruptive in nature. This research describes the organizational resilience and balanced scorecard as predictors of performance excellence in a private educational institution with the goal of developing a model of organizational performance for institutions of higher education. Regression analysis was used in order to identify variables that influence performance excellence and to estimate their effect on organizational performance. Furthermore, perceptions of the respondents along the variables of interest namely Organizational Resilience, Balanced Scorecard and Performance Excellence represent the latent variables which can provide formative constructs that can be included in the structural model. The results of regression analysis showed that Excellence in Teaching and Learning, Effective and Efficient Governance and Management, Willingness to Learn, Cooperative Awareness, Increased Customer and Stakeholder Satisfaction, and Work Enthusiasm as key factors to performance excellence. The results of partial least squares structural equation modelling showed a linear path indicating causal relationship following an order of balanced scorecard affecting organizational resilience, and organizational resilience affecting performance excellence.

2357-1330 © 2024 Published by European Publisher.

*Keywords:* Balanced scorecards, organization resilience, performance excellence

## 1. Introduction

The fourth industrial revolution, global pandemic, machine learning; these are some of the many forces that are challenging the concept and structure of educational institutions. Much like the other sectors of the economy, private educational institutions are experiencing an avalanche of changes that most authors consider disruptive in nature. Technology has made the world so connected that access to knowledge and information has become as simple as a click of a mouse. Among Higher Education Institutions (HEIs), the desire for relevance has been more elusive than ever, as the changes in the external environment are happening at unprecedented speed.

As it is natural for HEIs to fight the forces shaping the higher education sector, most schools came creative in mapping strategic actions to temper the ill effects of the pandemic. Use of learning management systems, video conferencing and cloud data management have been the new normal during and after the pandemic. This however placed so much pressure for most of employees in the in the academic ranks whose digital technology skillsets is substantially lagging.

For the successful players, organizational resilience has been regarded as one of the critical organizational capabilities needed in order to cope with the shock brought by the pandemic. Organizational resilience is a newer tradition in management theory that incorporates insights from both coping and contingency theories. It refers to the ability of an organization to anticipate, prepare for, respond and adapt to incremental change and sudden disruptions in order to survive and prosper (Rezaei Soufi et al., 2021). Scholars see organizational resilience as the ability to cope with stressful, unexpected, and adverse situations and the ability to quickly pick up from where they left off. It has been argued that organizations that show better adaptation may lead their members toward a more sustainable plan to quickly get out of the crisis situation, eventually leading to a transformational process. Organizations that face challenges by transformation and core changes have in fact better chances of survival, whereas the ability of a system to adjust to a new ecology is fundamental for organizational renewal and sustainability (Miller, 2004).

As the ashes fall following the global crisis brought about by the pandemic, organizations find the importance of reviewing policies governing the implementation of strategic initiatives. The balanced scorecard, a seminal work of Robert Kaplan and Edward Norton, provides a useful basis for delineating institutional measures of performance to quickly recover from years of financial setbacks. In essence, the Balanced Scorecard approach insists that management track four different types of measures: financial measures, customer measures, internal business (process) measures, and innovation and learning measures. Using the Balanced Scorecard approach an organization identifies corporate objectives within each of the four categories and then aligns the management hierarchy by assigning each manager his or her own scorecard with more specific objectives in each of the four categories (Kaplan & Norton, 1996).

For most implementers of Kaplan's model of business level performance management system known as the Balanced Scorecard (BSC), organizations to a certain extent modify the factors involved in the BSC while still focusing on what it purports. Not surprisingly, even the education sector was challenged to take a look at these perspectives as globalization and technology are affecting them at large. Organizations providing education services began to attach importance to quality, performance management and organizational assessment. All stages of the education system use balanced scorecard as

a performance management tool to increase effectiveness and efficiency in their activities (Coskun & Nizaeva, 2023).

Assessing the four perspectives mentioned, education sectors are making their way of surviving the wave. (Chand et al., 2021) on his insights about the impact of COVID-19 on education, stated that even the higher education institutions were greatly affected by this pandemic after closing their premises in compliance with lockdown protocols and even though, there's a quick transition from face-to-face classes to online learning, these closures affected the way quality education is being delivered including the social opportunities, networking, and educational content. It is in this light, that given the volatility and uncertainty of what the future holds for organizations, it is important to review how effective the actions are, to allow the best rebound opportunities for institutions heavily affected by recent events. With most organizations caught off-guard, financial, and non-financial metrics templates found and the strategic initiatives that go with it represent pre-pandemic conditions, when markets are stable, and supply chains are functional.

Careful analysis on how finances should be used considering all the possibilities that may happen in the future is very vital for every organization. This is highlighted by the fact that the pandemic has caused huge amount of losses to private educational institutions. As of September 2020, there the Department of Education reported that a total of 865 private schools have suspended their operations for academic year 2020-2021 due to the pandemic (Magsambol, 2020). Aside from low enrolment turnout, the schools were unable to meet the requirements of learning management systems for the conduct of distance learning as required by the government. While some schools were able to sustain their operations, enrolment figures have dropped tremendously, as a sizeable number of students move to government schools offering free education, while some totally skip the schoolyear for health and or economic reasons.

For a private educational institution that is embracing the principles of performance excellence using the Malcolm Baldrige framework, achieving its strategic objectives along the existing context characterized by an era of rapid technological change, public health crisis, volatile economy, and changing customer preferences, the future may not be as vivid as they want it to be. While the institution continues to uphold its tradition of excellence by keeping up with the demands of the changing times, maintaining and sustaining competitive edge becomes even more daunting, as the rules of the game change at an unprecedented pace and speed. Research however suggests that in the COVID-19 pandemic context, pandemic emergency planning dimensions are positively related to organizational performance metrics (Nader et al., 2022). As such, it can be construed that a more resilient organization, one that is agile to address the unique requirements of the crisis situation, is in a better position to improve not only competitiveness but also its sustainability.

This study aims to describe organizational resilience and balanced scorecard as predictors of performance excellence in a private educational institution. More specifically, the study aims to determine the balanced scorecard of a private higher education institution in terms of Excellence in Teaching and Learning Process, Research and Innovation, Sustainable and Relevant Community Relations and Professional Exposure, Sustainable community relations, Customer Satisfaction and Stakeholder's Satisfaction with Academic and Support Services. Dealing with the last variable of interest, the study then

determines the performance excellence of employees in terms of leadership, strategic planning, customer focus, measurements, analysis and knowledge management, workforce focus, operation focus, and impact and outcomes. Lastly, this research aims to predict the factors contributing to the performance excellence of the organization. Information from this research is intended to be the basis for performance excellence in private educational institutions.

## 2. Methods

Quantitative method of research was used to gather the needed data on the balanced scorecard, performance excellence, and organizational commitment about employees of a private higher education institution. Descriptive studies are valuable in gaining more knowledge about the phenomenon under study. Participants of the study were teaching and non-teaching employees of one of the leading private HEI in the Philippines. The researcher used Gpower 3.1.9 with medium effects size of 0.3, 85% power size, 95% confidence level. The computed sample size is greater than or equal to 75.

The researcher utilized three (3) main data gathering tools. Part 1 is a standardized but modified questionnaire to determine organizational resilience patterned after a study conducted by Jiangxi University of Finance and Economics, BSI Organizational Resilience Index (2019), and the Resilient Organizations Research Programme at the University of Canterbury in New Zealand. Part 2 is an adopted but modified questionnaire to determine the balanced scorecard based on the private HEI institutional standard. Part 3 is also a modified questionnaire to determine organizational performance patterned from the framework of Baldrige on Baldrige's Excellence Builder (2019). The Baldrige Excellence Builder aids an institution in identifying and improving what is critical to the organization's success. The Baldrige Excellence Framework and its criteria for performance excellence includes Leadership (S), Strategic Planning (SP), Customer Focus (CF), Measurement, Analysis, and Knowledge Management (MAKM), Workforce Focus (WF), Operations Focus (OF), and Impact and Outcomes (IO). In completing and acting on this assessment, an institution can better position and accomplish their mission, improve their results, and become more competitive.

The gathered data were tallied, tabulated, encoded, and analysed accordingly using a four-point Likert Scale. The data obtained from the scales were transferred to computer medium using SPSS 16.0 package program and necessary statistical operations were made by means of this program. Regression was used to identify variables that influence performance excellence and to estimate their effect on dependent variable. Partial least squares path modelling of PLS-SEM was used in order to I order to estimate complex cause-effects relationship models with both latent and observed variables. The perceptions of the respondents along the variables of interest namely Organizational Resilience, Balanced Scorecard and Performance Excellence represent the latent variables which can provide formative constructs that can be included in the structural model. PLS-SEM hence provides close estimates of relationships between the latent variables (i.e., their strengths) and determines how well the model explains the target constructs of interest.

### 3. Results

Table 1 presents the summary table for assessments in Organizational Resilience for schools as to shared vision, commitment to resilience, network perspective roles and responsibilities, willingness to learn, adaption ability, cooperative awareness and work enthusiasm. For organizational commitment on shared vision, Cavite school showed strongest with a mean of 3.79 followed by Batangas school (CM=3.69) and Davao (CM=3.61). Taken together, respondents across schools strongly agree (total WM=3.65) that shared vision is present within the organization as an element of organizational resilience.

On commitment to resilience, Cavite school has the strongest rating with a mean of 3.79 followed by Batangas with a mean of 3.64 and Davao with a mean of 3.63. It can be noted that while the private higher HEI as a whole rated 3.59, Manila and Laguna have rated 3.37 and 3.49 respectively or “agree” marks based on individual weighted mean scores.

On network perspectives, Cavite school has the strongest rating with mean of 3.76 followed by Batangas with a mean of 3.61 and Davao with a mean of 3.49. Taken as a whole, the institution has a weighted mean of 3.67, with network perspective taking rank 2 spot in terms of highest rating among elements of organizational resilience.

On roles and responsibilities, Cavite school still has the strongest rating with a mean of 3.73 followed by Batangas with a mean of 3.56 and Manila with a mean of 3.55. Two schools Laguna and Davao posted slightly lower rating verbally interpreted as “agree”. This item however ranks 8 or lowest among the elements of organizational resiliency.

On willingness to learn, Cavite still has the strongest rating with a mean of 3.81 followed by Batangas with a mean of 3.79 and Davao with a mean of 3.68. Interestingly, this element of organizational resilience is strongest for the entire school having rank 1 among 8 elements from the survey. Willingness to learn got the highest mean score of 3.68.

On adaption ability, Cavite still has the strongest rating with a mean of 3.82 followed by Batangas with a mean of 3.76 and Laguna with a mean of 3.7. Taken as a whole, the entire system of schools has a weighted mean of 3.62, with adaption ability taking rank 4 spot in terms of highest rating among elements of organizational resilience.

Cooperative awareness got a weighted mean score of 3.61, therefore taking the 5th spot in ranking. Consistently, Cavite still has the highest rating for with a mean of 3.79 followed by Batangas with a mean of 3.75. Laguna trailed last with a mean score of 3.6 but still managed to stay within the zone of strong level of agreement.

Finally on work enthusiasm, Cavite school showed strongest at 3.77, while Batangas registered 3.65 and Davao with weighted mean of 3.53. Still, there is a consensus among all schools that work enthusiasm is highly present among people working in the organization as suggested by weighted mean score of 3.59.

Cavite campus showed highest rating in organizational resilience with weighted mean of 3.78, followed by Batangas (WM=3.68), Davao (WM=3.60), Manila (WM=3.56) Laguna (3.52).

Overall, the assessment result for organizational resilience showed a very impressive rating of 3.62 and verbal interpretation of “strongly agree”. Different schools may have varying rates but there appears

to be a general agreement that the entire school system was able to establish a culture of resiliency among its employees.

**Table 1.** Summary Table for Assessment in Organization Resilience

| Indicators                 | C    | L    | D    | B    | M    | Total |      |
|----------------------------|------|------|------|------|------|-------|------|
|                            | CM   | CM   | CM   | CM   | CM   | CM    | Rank |
| Shared vision              | 3.79 | 3.56 | 3.61 | 3.69 | 3.57 | 3.65  | 3    |
| Commitment to resilience   | 3.79 | 3.37 | 3.63 | 3.64 | 3.49 | 3.59  | 6    |
| Network perspective        | 3.76 | 3.46 | 3.49 | 3.61 | 3.48 | 3.67  | 2    |
| Roles and responsibilities | 3.73 | 3.43 | 3.48 | 3.56 | 3.55 | 3.56  | 8    |
| Willingness to learn       | 3.81 | 3.57 | 3.68 | 3.79 | 3.61 | 3.68  | 1    |
| Adaption Ability           | 3.82 | 3.70 | 3.68 | 3.76 | 3.65 | 3.62  | 4    |
| Cooperative awareness      | 3.79 | 3.60 | 3.72 | 3.75 | 3.66 | 3.61  | 5    |
| Work enthusiasm            | 3.77 | 3.50 | 3.53 | 3.65 | 3.45 | 3.59  | 7    |
| Over-all Mean              | 3.78 | 3.52 | 3.60 | 3.68 | 3.56 | 3.62  |      |

Legend: 3.50 – 4.00 –SA; 2.50 – 3.49 – A; 1.50 – 2.49 –DisA; 1.00 – 1.49 – Strongly DisA

Table 2 presents the summary table for assessments in Balanced Scorecard for the private HEI as to sustainable and relevant community relations and professional exposure, excellence in teaching and learning, increased customer/stakeholder satisfaction and effective and efficient governance and management. For sustainable and relevant community relations and professional exposure, Cavite showed strongest with a mean of 3.76 followed by Manila (WM=3.72) and Davao (WM=3.53). Taken together, respondents across schools strongly agree that measures to sustainable and relevant community relations and professional exposure is present within the organization as an element of the balanced scorecard with weighted mean of 3.51.

On measures to ensure excellence in teaching and learning, Cavite school again has the strongest rating with a mean of 3.78 followed by Manila with a mean of 3.6 and Davao and Batangas both coming close with a mean of 3.44. Interestingly, excellence in teaching and learning was the element with third highest perceived score for the system as whole among the four elements of the balanced scorecard with a composite mean of 3.45.

On increased customer/stakeholder satisfaction, Cavite campus maintains the highest rating with a mean of 3.78 followed by Manila with a mean of 3.69. All schools met the numerical rating for a verbal interpretation of “Strongly agree”. Taken as a whole, the school system has a weighted mean of 3.57, with customer/stakeholder satisfaction taking the top spot in terms of highest rating among elements of balanced scorecard. Being an ISO certified organization, the schools have in place measures to ensure processes are in place to ensure customer or student expectations are met. This result can be accounted to the numerous quality assurance mechanisms that it has committed to sustain like local and international accreditation, ISO certification, and efforts to sustain QS Stars university ratings. QS Stars is a rating system that provides a detailed look at an institution, enabling you to identify which universities are the best in the specific topics that we care about, like program strength, facilities, graduate employability, social responsibility, inclusiveness, and more.

Finally on effective and efficient governance and management, Cavite school still takes the lead in this performance measure with a rating mean of 3.74, followed by Manila with a mean of 3.59 and

Batangas with a mean of 3.45. On this last dimension of the balanced scorecard, the entire system has a weighted mean of 3.66 taking the 4th rank.

Overall, the institution gained a composite mean of 3.49 for effective delivery of performance measures in the form of the balanced scorecard. Relatively, this rating represents the measures that schools have installed to ensure that both financial and non-financial objectives are met, and strategic options are set. Following the scope and context of the institution, the balanced scorecard provides a systemic look at targets and actions plans, with each layer of the scorecard supporting next. Given the commitment of management to continuously monitor the different functions affecting its financial and non-financial bottom lines, the institution’s trajectory will most likely be towards the achievement of its vision and mission.

**Table 2.** Summary Table for Assessment in Balance Scorecard

| Indicators   | C    | L    | D    | B    | M    | Total |      |
|--|------|------|------|------|------|-------|------|
|  | CM   | CM   | CM   | CM   | CM   | CM    | Rank |
| Sustainable and Relevant Community Relations and Professional Exposure | 3.76 | 3.52 | 3.53 | 3.53 | 3.72 | 3.51  | 2    |
| Excellence in Teaching and Learning Process, Research, and Innovation  | 3.78 | 3.37 | 3.44 | 3.44 | 3.60 | 3.45  | 3    |
| Increased Customer/Stakeholders’ Satisfaction                          | 3.78 | 3.55 | 3.64 | 3.64 | 3.69 | 3.57  | 1    |
| Effective and Efficient Governance and Management                      | 3.74 | 3.31 | 3.45 | 3.45 | 3.59 | 3.42  | 4    |
| Over-all Mean  | 3.77 | 3.44 | 3.52 | 3.52 | 3.65 | 3.49  |      |

Legend: 3.50 – 4.00 –SA; 2.50 – 3.49 – A; 1.50 – 2.49 –DisA; 1.00 – 1.49 – Strongly DisA

Table 3 shows the summary table for assessment in Performance Excellence with an overall composite mean of 3.62. Of the results, leadership element showed strongest rating with weighted mean of 3.66 hence given rank 1. Leadership element was followed by impact and outcomes (WM=3.63), customer focus (WM=3.6285), measurement analysis and knowledge management (WM= 3.6219), strategic planning (WM=3.618), operations focus (WM=3.614) and workforce focus (WM=3.58). Result support similar research citing Leadership as a driver for all components in the Baldrige System, including measurement, analysis and knowledge management, strategic planning, faculty and staff focus and process management (Parast & Golmohammadi, 2019).

Similar to results of previous variables, Cavite school showed highest ratings in areas with weighted mean of 3.76, followed by Davao (3.61) and Batangas (WM=3.60). Interestingly, while the verbal interpretation for assessment in performance excellence is “strongly agree”, Laguna school had a rating of 3.45 which corresponds to verbal interpretation “agree”.

Overall, the institution gained a composite mean of 3.62 for performance excellence. What this suggests is a strong agreement among the sister schools that the university is well achieving its strategic objectives anchored of the ideals of its founder. The institution has long patterned its standard of performance to the Philippine Quality Award (PQA). PQA is a global competitiveness template that aims to encourage and engage public and private organizations and other stakeholders to strive for and attain performance excellence. Findings show congruence to related previous works asserting that achievement of global university standards must be pursued through the path of total operational quality management

by considering several elements that become the benchmarks provided for by the Malcolm Baldrige Criteria for Performance Excellence (Fauzi, 2021).

**Table 3.** Summary Table for Assessment in Performance Excellence

| Indicators                                    | C    | L    | D    | B    | M    | Total |      |
|---|------|------|------|------|------|-------|------|
|   | CM   | CM   | CM   | CM   | CM   | CM    | Rank |
| Leadership                                    | 3.79 | 3.54 | 3.67 | 3.63 | 3.56 | 3.66  | 1    |
| Strategic Planning                            | 3.77 | 3.44 | 3.51 | 3.61 | 3.54 | 3.62  | 5    |
| Customer Focus                                | 3.76 | 3.49 | 3.71 | 3.60 | 3.54 | 3.63  | 3    |
| Measurement Analysis and Knowledge Management | 3.77 | 3.44 | 3.67 | 3.61 | 3.52 | 3.62  | 4    |
| Workforce focus                               | 3.74 | 3.33 | 3.49 | 3.55 | 3.58 | 3.58  | 7    |
| Operations focus                              | 3.77 | 3.39 | 3.57 | 3.62 | 3.55 | 3.61  | 6    |
| Impact and outcomes                           | 3.75 | 3.55 | 3.67 | 3.60 | 3.51 | 3.63  | 2    |
| Over-all Mean                                 | 3.76 | 3.45 | 3.61 | 3.60 | 3.54 | 3.62  |      |

Legend: 3.50 – 4.00 –SA; 2.50 – 3.49 – A; 1.50 – 2.49 –DisA; 1.00 – 1.49 – Strongly DisA

Table 4 summarizes the predictors of performance excellence. Regression analysis showed that performance excellence was governed by multiple significant predictors which include assessment in organizational resilience in terms of Willingness to Learn ( $\beta=0.16, p=0.001$ ), Cooperative Awareness ( $\beta=0.12, p=0.005$ ) and Work Enthusiasm ( $\beta=0.1, p<0.02$ ). Included in the significant factors are categories from balanced scorecard which include Excellence in Teaching and Learning ( $\beta=0.31, p=0.001$ ), Effective and Efficient Governance and Management ( $\beta=0.18, p=0.001$ ) and Increased Customer and Stakeholder Satisfaction ( $\beta=0.18, p=0.048$ ). All six predictors were deemed significant based on computed p values of less than 0.05 level of significance.

Further, it can be noted that among the multiple significant predictors identified, *Excellence in Teaching and Learning Process, Research, and Innovation* ( $\beta=0.31$ ) presented the highest regression coefficient followed by *Effective and Efficient Governance and Management* ( $\beta=0.18$ ), *Willingness to Learn* ( $\beta=0.16$ ), *Cooperative Awareness* ( $\beta=0.12$ ), *Increased Customer Satisfaction* ( $\beta=0.11$ ), and *Work Enthusiasm* ( $\beta=0.10$ ). This means that in terms of rank, *Excellence in Teaching and Learning* has the highest effect size and hence, better predictive capability. This is particularly the position of most institutions of higher education seeking for long term sustainability in the new normal. As previously posited by authors, the key to success is the ability of learning institutions to remain focused to its core, that is to intentionally maintain excellent learning processes, and to continuously seek for improvements in ways of enhancing the sophistication and power of the learning processes, may it be for the sake of its internal or external customers (Leithwood & Louis, 2021). In the case of this private HEI, teaching and learning has always been the main focus of continued reforms through the years, as the institution has been engaged in so many benchmarking and quality assurance initiatives both locally and internationally. Finally, the predictive model presented with six identified multiple significant predictors posted an R-square of 0.89. This means that all six significant predictors contribute 89% of the data fit to the regression model.



Of the six significant predictors, three are dimensions of organizational resilience namely *Willingness to Learn*, *Cooperative Awareness* and *Work Enthusiasm*. In this current situation where the environment has been rapidly changing coupled by seemingly limitless uncertainty brought about by the pandemic, organizations need to continuously plan for the unexpected. This proactive stance is much needed in current times, as organizations needs to have a backup plan to be able to respond to all of the unexpected circumstances (Duchek, 2020). Furthermore, movement for organizational resilience requires individuals in the organization to recognize willingness to learn and cooperative awareness as an important organizational outcome (Malik & Kanwal, 2018).

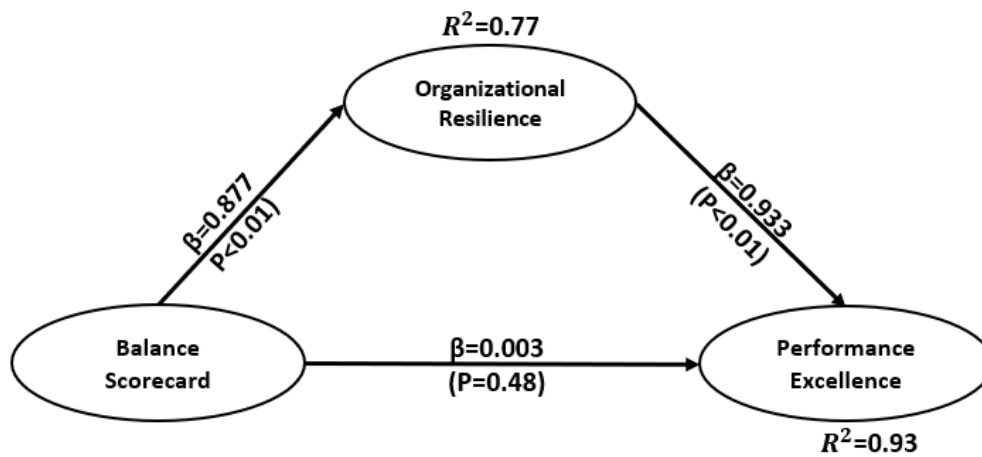
**Table 4.** Predictors of Performance Excellence

|  | Unstandardized |            | Standardized | t     | Sig.   |
|--|----------------|------------|--------------|-------|--------|
|  | Coefficients   |            | Coefficients |       |        |
|  | B              | Std. Error | Beta         |       |        |
| Constant   | 0.09           | 0.13       |              | 0.7   | 0.485  |
| Campus   | 0              | 0.01       | 0            | -0.13 | 0.896  |
| Age  | -0.01          | 0.01       | -0.02        | -0.91 | 0.364  |
| Length of service  | 0              | 0.01       | 0.01         | 0.28  | 0.778  |
| Educational Attainment   | 0.01           | 0.02       | 0.01         | 0.3   | 0.768  |
| Job Status   | 0.01           | 0.01       | 0.03         | 0.98  | 0.327  |
| Nature of Work   | 0.02           | 0.03       | 0.02         | 0.81  | 0.42   |
| Shared vision  | -0.02          | 0.05       | -0.02        | -0.47 | 0.642  |
| Commitment to resilience   | 0.07           | 0.05       | 0.06         | 1.41  | 0.16   |
| Network perspective  | -0.06          | 0.05       | -0.06        | -1.34 | 0.182  |
| Roles and responsibilities   | 0.06           | 0.05       | 0.06         | 1.18  | 0.239  |
| Willingness to learn   | 0.16           | 0.05       | 0.16         | 3.4   | 0.001  |
| Adaption Ability   | 0.05           | 0.05       | 0.06         | 1.11  | 0.269  |
| Cooperative awareness  | 0.12           | 0.04       | 0.12         | 2.83  | 0.005  |
| Work enthusiasm  | 0.08           | 0.04       | 0.1          | 2.33  | 0.02   |
| Sustainable and Relevant Community Relations and Professional Exposure | -0.02          | 0.05       | -0.02        | -0.43 | 0.665  |
| Excellence in Teaching and Learning Process, Research, and Innovation  | 0.28           | 0.05       | 0.31         | 5.36  | <0.001 |
| Increased Customer/Stakeholders' Satisfaction                          | 0.1            | 0.05       | 0.11         | 1.99  | 0.048  |
| Effective and Efficient Governance and Management                      | 0.16           | 0.04       | 0.18         | 3.88  | <0.001 |

Legend: Significant at  $p$ -value < 0.05; R – Rejected; FR – Failed to Reject; S – Significant; NS – Not Significant

Extending further the analysis, figure 1 presents the hypothesis framework which serves as the precursor to exploratory and confirmatory analysis of relationships between latent variables identified as

balanced scorecard, organizational resilience, and performance excellence. Figure above shows the multidirectional relationships schematically explaining multiple constructs, indicator variables and structural paths. As shown, Performance Excellence as the endogenous variable can be achieved with relatively high levels of statistical fit ( $R^2=0.93$ ) by having organizational resilience as a moderating variable. Chin (1998) recommended  $R^2$  values for endogenous latent variables based on: 0.67 (substantial), 0.33 (moderate), 0.19 (weak). Therefore, the proposed construct based on observed statistics showed a linear pattern of having Balanced Scorecard as the endogenous variable, Organizational Resilience as moderating variable, all affecting Performance Excellence. The role of organizational resilience as an important mediating factor has similarly been observed in other related research on performance excellence.



**Figure 1.** Hypothesis Framework

Interestingly, the construct of having balanced scorecard and performance excellence alone suggests a weak predictive capability as well as insignificant relationship ( $\beta =0.003$ ). In essence, balanced scorecard does not show formative and predictive capability to the endogenous variable performance excellence.

The effective execution of balanced scorecard however contributes to strong organizational resilience ( $R^2=0.77$ ). This means that performance measurement systems of both financial and non-financial indicators as framed in the balanced scorecard model strongly contributes to a more resilient organization. In retrospect, organizational resiliency refers to the ability of an organization to anticipate, prepare for, respond, and adapt to incremental change and sudden disruptions in order to survive and prosper (Denyer, 2017). More than ever, organizations need to be more precise in terms of strategies during extraordinary times. Balance scorecard in essence provides an effective tool to map the programs in consonance to strategic theme applied in crisis. Balanced scorecard encourages company managers to choose valuable measures from indicators of key performance. In effect, scorecard provide an effective means to monitor both lagging and leading indicators that offer organizations an effective way to handle the situation of crisis (Hoque, 2003). As such, balanced scorecard helps organizations achieve a balance in all spheres of performance management, which is particularly critical when an organization is shifting

from the usual strategic management stance to a more intentional format provided by business continuity templates common during times of crisis.

Supplemental to the model of performance excellence for learning institutions drafted from the structural equation model using partial least squares method, table 5 provides a more granular look at the dimensions of balanced scorecard that have significant causal relationship to organizational resilience. All four dimensions of the balanced scorecard namely Sustainable and Relevant Community Relations and Professional Exposure (cr), Excellence in Teaching and Learning Process, Research and Innovation (tl), Increased Customer/Stakeholders' Satisfaction (cs), and Effective and Efficient Governance and Management (gm) were identified to have causal relationship with organizational resilience based on 0.05 level of significance. Standardized beta coefficients showed close variability, with Sustainable and Relevant Community Relations and Professional Exposure (cr) posting the strongest contribution to the degree of change ( $\beta = 0.189$ ) among the predictor variables. This is followed by Increased Customer/Stakeholders' Satisfaction ( $\beta = 0.164$ ) which is indicative of the customer-oriented practices of the institution subscribing to customer centric management systems like ISO 9001:2015 and the Philippine Quality Award.

**Table 5.** Balanced Scorecard to Organizational Resilience

| Model |            | Unstandardized |            | Standardized | t      | Sig.  |
|-------|------------|----------------|------------|--------------|--------|-------|
|       |            | Coefficients   |            | Coefficients |        |       |
|       |            | B              | Std. Error | Beta         |        |       |
| 1     | (Constant) | -0.116         | 0.13       |              | -0.898 | 0.37  |
|       | CR         | 0.213          | 0.055      | 0.189        | 3.838  | 0     |
|       | TL         | 0.134          | 0.058      | 0.115        | 2.33   | 0.021 |
|       | CS         | 0.175          | 0.054      | 0.164        | 3.253  | 0.001 |
|       | GM         | 0.494          | 0.048      | 0.506        | 10.358 | 0     |

a. Dependent Variable: Organizational Resilience

Table 6 shows the causal relationship between the dimensions of the mediating variable Organizational Resilience to Performance excellence. In the most practical sense, the regression analysis above provides the extent to which the dimensions of organizational resilience affect performance excellence being the dependent variable. Of the eight dimensions of organizational resilience, six items namely Shared vision (sv), Network perspective (np), Roles and responsibilities (rr), Adaption Ability (aa), Cooperative awareness (ca), Work enthusiasm (we), were identified to establish causal relationship to performance excellence. Of the six predictors of organizational resilience, Adaption Ability (aa) posted the strongest contribution to the degree of change ( $\beta = 0.189$ ) among the predictor variables. Interestingly, Commitment to Resilience (co) and Willingness to learn (wl) were posted as not significant factors affecting performance excellence at p value  $\leq 0.05$ .

**Table 6.** Organizational Resilience to Performance Excellence

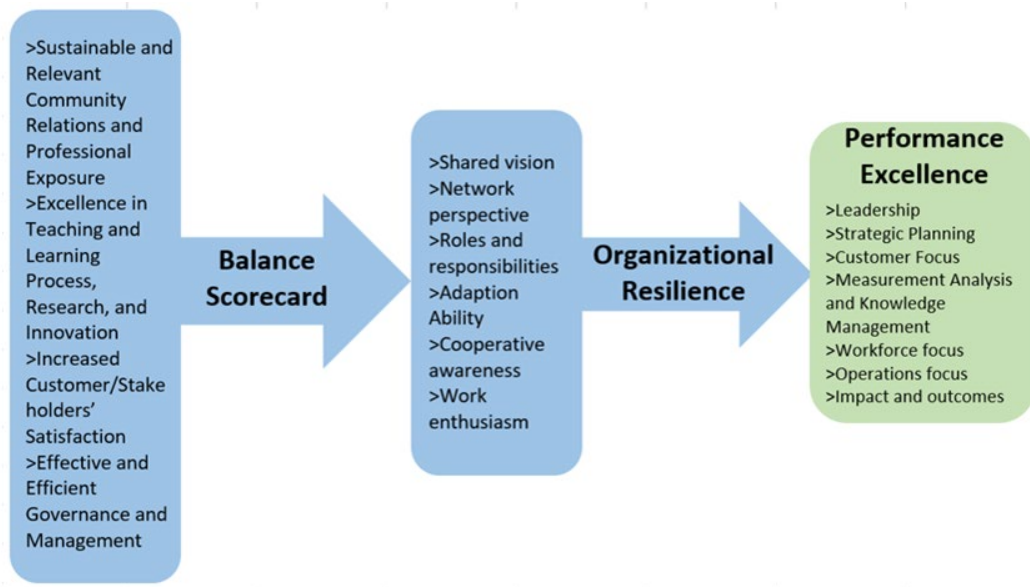
| Model |            | Unstandardized |            | Standardized | t      | Sig.  |
|-------|------------|----------------|------------|--------------|--------|-------|
|       |            | Coefficients   |            | Coefficients |        |       |
|       |            | B              | Std. Error | Beta         |        |       |
| 1     | (Constant) | 0.159          | 0.087      |              | 1.835  | 0.068 |
|       | SV         | 0.159          | 0.042      | 0.158        | 3.814  | 0     |
|       | CO         | 0.06           | 0.043      | 0.068        | 1.395  | 0.164 |
|       | NP         | 0.131          | 0.04       | 0.127        | 3.269  | 0.001 |
|       | RR         | 0.088          | 0.035      | 0.105        | 2.551  | 0.011 |
|       | WL         | -0.018         | 0.048      | -0.019       | -0.381 | 0.703 |
|       | AA         | 0.271          | 0.05       | 0.297        | 5.453  | 0     |
|       | CA         | 0.111          | 0.046      | 0.122        | 2.398  | 0.017 |
|       | WE         | 0.155          | 0.04       | 0.177        | 3.896  | 0     |

a. Dependent Variable: Performance Excellence

Integrating results of PLS SEM and regression analysis, Figure 2 provides the linear causal relationships between balanced scorecard, organizational resilience and performance excellence. Of the possible paths presented in the hypothesis framework, the model for Performance Excellence for Learning Institutions is a linear path starting with an effective execution of the Balanced Scorecard resulting to a higher level of Organizational Resilience, thereby resulting to Performance Excellence.

It is important to note that organizational resilience showed direct and indirect role in mediating the model for performance excellence. As a mediating variable, it can be construed that the causal relationship between Balanced Scorecard and performance excellence only holds true with an established sense of Organizational Resilience from within. The use of balanced scorecard alone is not likely to produce the indicators of performance indicators, and instead may encourage employees to take a narrow view of what actions are required to achieve targets. Emphasis on increased performance measures by BSC adoption may in some cases lead to information overload. Such systems may result in significantly increased stress because of the workload (Hoque, 2003).

From a practical standpoint, organizational resilience should be continuously applied both operationally and strategically in order to maintain sustainability of organizations (Suryaningtyas et al., 2019). Therefore, learning institutions seeking for performance excellence along the dimensions of the Malcom Baldrige needs to develop a strong sense of organizational resilience in order to fully leverage from the model of financial and non-financial measures of the balanced scorecard.



**Figure 2.** Organizational Model for Performance Excellence

#### 4. Conclusions

Respondents strongly agree that organizational resilience is present in the institution and its independent schools in Cavite, Laguna, Davao, Batangas and Manila. All areas of organizational resilience namely Shared Vision, Commitment to Resilience, Network Perspective, Roles and Responsibilities, Willingness to Learn, Adaption Ability, Cooperative Awareness and Work Enthusiasm were all rated strongly agree. The strongest areas are Willingness to Learn, Network Perspective and Shared Vision. Respondents agree that the balanced scorecard as a performance measure system is functional in the institution and its independent schools in Cavite, Laguna, Davao, Batangas and Manila. Two of four areas of the balanced scorecard namely Sustainable and Relevant Community Relations and Professional Exposure, and Increased Customer/Stakeholder Satisfaction were rated strongly agree. The strongest areas are Increased Customer/Stakeholder Satisfaction, and Sustainable and Relevant Community Relations and Professional Exposure. Respondents strongly agree that performance excellence is present in the institution and its independent schools in Cavite, Laguna, Davao, Batangas and Manila. All areas of performance excellence namely Leadership, Strategic Planning, Customer Focus, Measurement Analysis and Knowledge Management, Workforce Focus, Operations Focus; and Impact and Outcomes were all rated strongly agree. The strongest areas are leadership, impact and outcomes, and customer focus. The results of regression analysis showed that Excellence in Teaching and Learning, Effective and Efficient Governance and Management, Willingness to Learn, Cooperative Awareness, Increased Customer and Stakeholder Satisfaction, and Work Enthusiasm are the key factors to performance excellence. The results of partial least squares structural equation modelling showed a linear path indicating causal relationship following an order of balanced scorecard affecting organizational resilience, and organizational resilience affecting performance excellence.

## References

- Chand, A. A., Lal, P. P., & Chand, K. K. (2021). Remote learning and online teaching in Fiji during COVID-19: The challenges and opportunities. *International Journal of Surgery*, 92, 106019. <https://doi.org/10.1016/j.ijisu.2021.106019>
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Coskun, A., & Nizaeva, M. (2023). Strategic Performance Management Using the Balanced Scorecard in Educational Institutions. *Open Education Studies*, 5(1). <https://doi.org/10.1515/edu-2022-0198>
- Denyer, D. (2017). *Organizational resilience*. UK: BSI and Cranfield University.
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215-246. <https://doi.org/10.1007/s40685-019-0085-7>
- Fauzi, I. (2021). Analysis of Ptkin Opportunities: Quality Measurement through the Malcolm Baldrige Criteria for Using The World Class Universty. *AL-TANZIM: Jurnal Manajemen Pendidikan Islam*, 5(1), 1-13. <https://doi.org/10.33650/al-tanzim.v5i1.1367>
- Hoque, Z. (2003). Total Quality Management and the Balanced Scorecard Approach: A Critical Analysis Of Their Potential Relationships And Directions For Research. *Critical Perspectives on Accounting*, 14(5), 553-566. [https://doi.org/10.1016/s1045-2354\(02\)00160-0](https://doi.org/10.1016/s1045-2354(02)00160-0)
- Kaplan, R., & Norton, D. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74, 0-0.
- Leithwood, K., & Louis, K. S. (Eds.). (2021). *Organizational learning in schools*. Taylor & Francis.
- Magsambol, B. (2020). 865 private schools halt operations this year due to pandemic. *RAPPLER*. Retrieved on March 15, 2022, from <https://www.rappler.com/nation/private-schools-halt-operations-school-year-2020-2021/>
- Malik, M. S., & Kanwal, M. (2018). Impacts of organizational knowledge sharing practices on employees' job satisfaction: Mediating roles of learning commitment and interpersonal adaptability. *Journal of Workplace Learning*, 30(1), 2-17. <https://doi.org/10.1108/jwl-05-2016-0044>
- Miller, D. (2004). Building sustainable change capability. *Industrial and Commercial Training*, 36(1), 9-12. <https://doi.org/10.1108/00197850410516058>
- Nader, J., El-Khalil, R., Nassar, E., & Hong, P. (2022). Pandemic planning, sustainability practices, and organizational performance: An empirical investigation of global manufacturing firms. *International Journal of Production Economics*, 246, 108419. <https://doi.org/10.1016/j.ijpe.2022.108419>
- Parast, M. M., & Golmohammadi, D. (2019). Quality management in healthcare organizations: Empirical evidence from the baldrige data. *International Journal of Production Economics*, 216, 133-144. <https://doi.org/10.1016/j.ijpe.2019.04.011>
- Rezaei Soufi, H., Esfahanipour, A., & Akbarpour Shirazi, M. (2021). A Quantitative Measure for Financial Resilience of Firms: Evidence from Tehran Stock Exchange. *Scientia Iranica*, 0(0), 0-0. <https://doi.org/10.24200/sci.2021.55845.4433>
- Suryaningtyas, D., Sudiro, A., Troena, E., & Irawanto, D. (2019). Organizational Resilience: As Mediating Effect of Organizational Culture and Organizational Performance. *Proceedings of the Proceedings of the 1st Sampoerna University-AFBE International Conference*, SU-AFBE 2018, 6-7 December 2018, Jakarta Indonesia. <https://doi.org/10.4108/eai.6-12-2018.2286329>