

# **Performance Measurement in Private HEIs: Performance Indicators, Data Collection and Analysis**



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# **Overview of Presentation**

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- **What are PM approaches?**
- **What are PIs?**
- **Benefits of PIs**
- **Population and the sample size of the study**
- **The results?**



# PM approaches

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**The most efficient approach to assure the PM were:**

- **External Quality Monitoring (EQM);**
- **Total Quality Management (TQM);**
- **SMART** performance pyramid;
- **Balanced Scorecard (BS)and**
- **Performance Indicators.**



# Definition of Performance Indicators (PIs)

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- “A range of **statistical parameters** representing a measure of the extent to which a **HEI** or a **program** is performing in a certain quality dimension” (the UNESCO).

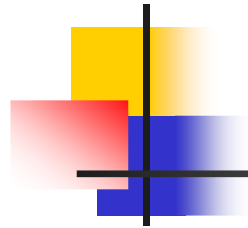


# Literature Review

**Kaufman (1988)** has published the first paper of our interest, **which coined the concept of performance measures/indicators (PMs/Is).**

**It is worth to be mentioning that many papers have also conducted on PMs/Is. Examples include:**

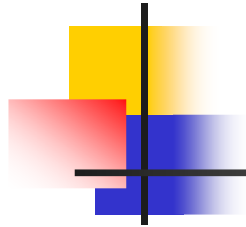
**Cave et al.,(1979), Akiyoshi and Kaiser (2003), Bird(2005), Chaney et al. (2007),**



# Literature Review

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**Bird(2005), Chaney et al. (2007), Franceschini et al., (2008), Chalmers et al., (2008), Shun-Hsing et al. (2008), Striteska, and Spickova (2012), Al-Hemyari & Al sarmi(2013, 2014,2015) and Al sarmi & Al-Hemyari (2014a,b,c).**



## **Benefits of PIs**

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- **to enable HEIs benchmark their own performance,**
- **to provide reliable information to the government,**
- **to contribute to the public the accountability and transparency,**

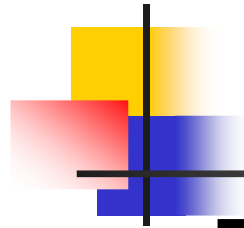


# **Benefits of PIs-Continued**

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- **for continued advancement of institutional performance and**
- **reinforcing the quality of teaching and learning.**





# **Research Objectives**

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**The research was planned to serve the following objectives:**

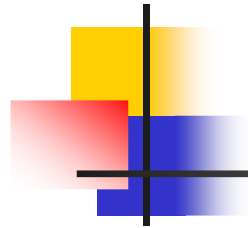
- **to select and apply some important PIs in private HEIs.**
- **to study and compare the performance of private HEIs through the PIs.**



## **Methodology**

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**In order to appraise the **quality** of any **HEI** and its **performance**, the broad **goals** of HEI should be **clearly defined** (the priority areas of HEIs were identified and **5 goals** were proposed (Alsarmi & Al-Hemyari, 2014a)),**



## Methodology-Continued

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**constructed and refined to present  
brief, measurable and clear  
objectives (thirty objectives were  
refined and they were categorized  
under the five goals(Alsarmi & Al-  
Hemyari, 2014b)),**



## Methodology-Continued

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Then, a set of **PIs** were **selected** and **aligned** with refined objectives (**150 PIs** were refined for all objectives and the characteristics of PIs were studied (Alsarmi & Al-Hemyari, 2014c)). In this paper **20 PIs** are applied and studied in 30 private HEIs.



# Population and Sample size of the Study

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**The target population of this research has included all the academic staff (1907) and students (40281) of 30 HEIs.**

**The total sample size was 4571 and was taken proportionally to 11% from each HEIs.**



# Results

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The **numerical results** of the 20 PIs are given in this paper, where the **actual performance** and the **average** of each PI of HEIs are obtained. The **performance** of the 30 HEIs to be grouped into three groups and given by the following Table.



# Results

$PI_i$	Performance of HEIs		
	below average	average	good
<b>1</b>	<b>8,9,11,12,14,15,19,24,29</b>	<b>10,16,28</b>	<b>1-7,13,17,18,20-23,25-27,30</b>
<b>2</b>	<b>1-4,6,7,15,17,19,27</b>	<b>5,26,28,29</b>	<b>8-14,16,18,20-25,30</b>
<b>3</b>	<b>1-4,6,8,12-14,17,23,</b>	<b>5,11,15,18,30</b>	<b>7,9,16,19-22,24-29</b>
<b>4</b>	<b>2-4,6,10,12-14,24,25,27</b>	<b>16-19,23,28</b>	<b>1,5,7-9,11,15,20-22,26,29,30</b>
<b>5</b>	<b>2-4,6,8,12-14,16 18,24, 27</b>	<b>15,23,25,28,30</b>	<b>1,5,7,9,11,19-22,26,29</b>
<b>6</b>	<b>2-4,8-10,12-14,16-18,24,27</b>	<b>15,19,23,25,28,30</b>	<b>1,5,6,7,11,20-22,26,29</b>
<b>7</b>	<b>6,7,15,17,19,20,22,24,30</b>	<b>2,4,25,29</b>	<b>1,3,5,18,8-14,16,18,21,16,27,28</b>
<b>8</b>	<b>1,5,7,12,15,16,20,22,23,25,2 6,28,30</b>	<b>11,18,21</b>	<b>2-4,6,8-10,13,14,17,19,24,27,29</b>
<b>9</b>	<b>2-4,</b>	<b>6,7,9,10,12,13,15,20,2 2,28,30</b>	<b>1,5,8,11,14,21,23-27,29</b>
<b>1 0</b>	<b>2,3,6,24,28</b>	<b>4,7,8,12,14,16,17,19- 20, 24,25,30</b>	<b>1,5,9,11,13,15,18,21,23,26,27,28</b>



# Results-Continued

11	2,3,6,24,28	4,7,10,12,14,16,17,19, 20,21,25,30	1,5,11,13,15,18,22,23,26,27, 29
12	2-7,9,15,16,19,21,25,28-30	17,26	1,8,10-14,18,20,22,23,24,27
13	6,7,10,15,17,19,20,21,24,25,27,28	1,5,8,9,11,16,18,23,30	2-4,12,13,14,22,26,29
14	6,8,19,21,22,24,27	2-4,5,7,9,10,11,15,20, 25,26, 29	1,12-14,16-18,23,28,30
15	2,3,6,12,13,14,17,25	4,16,18,19,24,28,30	1,5,7-11,15,20-23,26,27,29
16	5,7-11,17,19,26,27,29,30	1,12,14,16,18,20,21,2 3,24,28	2-4,6,15,22,25,
17	2-4,5-7,13,16,17,21,23-25	18,29	1,8-12,14,15,19,20,22,26-28,30
18	2-7,10,16,17,19,21,24-26, 29,30	12,15,23,27,28	1,8,9,11,13,14,18,20,22,
19	2,5,6,12-14,16,18,19,23-25,29,30	7	1,3,4,8-11,15,17,20-22,26-28,
20	1-4,8,9,12-14,23,	11	5-7,10,15-22,24-30





# References

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- [1] Akiyoshi, Y. and Kaiser, F. (2003), System-Level and Strategic Indicators for Monitoring Higher Education in the Twenty-First Century', UNESCO, Bucharest, pp. 1-227. <http://www.eric.ed.gov/>
- [2] Al-Hemyari, Z. A. and Al-Sarmi, A. M. (2015), Developing and Establishing Statistical Indicators for Fostering the Quality of Omani HEIs. International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), Volume 6, Issue 2, pp. 2142-2151.
- [3] Al-Hemyari, Z. A. and Al-Sarmi, A. M. (2013), Ranking and performing indicators for HEIs, Proceedings of the Fourth International Statistical Conference, Union of Arab Statistician, Baghdad, Nov. 20-22, p.299-319.
- [4] Al-Hemyari, Z. A. and Al-Sarmi, A. M. (2014), Features of performance indicators in quality improvement of HEIs, Proceedings of the Ireland International Conference in Education (IICE), Oct. 26-28, Dublin, pp. 390-395.



# References

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- [5] Al-Sarmi, A. M. and Al-Hemyari, Z. A. (2014a), Goals and objectives: Statistical techniques and measures for performance improvement of HEIs in Oman, *Int. J. of Management in Education* Vol. 8, No. 3, pp.244–264.
- [6] Al-Sarmi, A. M. and Al-Hemyari, Z. A. (2014b), Quantitative and qualitative indicators to assess the performance of higher education institutions, *Int. J. of Information and Decision sciences*, Vol.6, No. 4, pp.369-392.
- [7] Al-Sarmi, A. M. and Al-Hemyari, Z. A. (2014c), Statistical characteristics of performance indicators, *Int. J. of Quality and Innovation*, Vol.2, No.3-4, pp. 385-309.
- [8] Bird, S. M. (2005), Performance indicators: good, bad, and ugly, *Journal of Royal Statist., Society*, Vol. A,168, No. 1, pp. 1–27.
- [9]Cave, M., Hanney, S., Henkel, M., and Kogan, M. (1997), *The Use of*



# References

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Performance Indicators in Higher Education: The Challenge of the Quality Movement, 3rd edition, Jessica Kingsley Publishers: London.

[10]Chalmers, D., Lee, K. and Walker, B. (2008), International and national quality teaching and learning performance models in use.  
<http://www.uwa.edu.au/>

[11]Chaney, B. H. , Eddy, J. M., Dorman, S. M., Glessner, L. , Green, B. L. and Lara-Alecio, R. (2007), Development of an Instrument to Assess Student Opinions of the Quality of Distance Education Courses, The American Journal of Distance Education, Vol.21, No. 3, pp.145–164.

[12] Franceschini, F., Galetto, M., Maisano, D. and Mastrogiacomo, L. (2008), Properties of Performance Indicators in Operations Management: A Reference Framework, The International Journal of Productivity and Performance Management, Vol. 57, No.2, pp137-155.



# References

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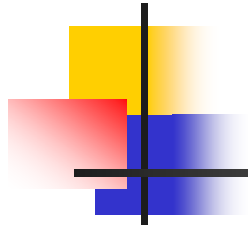
- [13] Kaufman, R. (1988), Preparing useful performance indicators, Training and Development Journal, Vol. 42, No. 9, pp.80–83.
- [14] Shun-Hsing Chen , Wang, Hui-Hua and Yang, King-Jang (2008), Establishment and application of performance measure indicators for universities, The TQM Journal, Vol.21, Issue 3, pp.1-10.
- [15] Striteska, M. and Spickova, M.(2012), Review and Comparison of Performance Measurement Systems, J. of Organizational Management Studies, Vol. 2012, pp.1-13.



# Questions

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**Thank you**