Mapping An Internal-External (I-E) Matrix Using Traditional And Extended Matrix Concepts

Christopher M. Cassidy, Sam Houston State University, USA
Michael D. Glissmeyer, Westminster College, USA
Charles J. Capps III, Sam Houston State University, USA

ABSTRACT

Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices allow an organization to visualize their strengths, weaknesses, opportunities and threats while a Competitive Profile Matrix (CPM) utilizes critical success factors to allow an organization to compare itself to competitors. Capps and Glissmeyer (2012) proposed an extension of the EFE and IFE concepts to an External Competitive Profile Matrix (ECPM) and an Internal Competitive Profile Matrix (ICPM) which provides greater insight in understanding the external and internal categories to which an organization must attend. The authors of this paper extend the observations of Capps and Glissmeyer (2012) by suggesting that visual mapping of the ECPM and ICPM, in a manner similar on the Internal-External (I-E) matrix, would enable greater comparative understanding of the relative strengths, weaknesses, opportunities, and threats of the respective companies.

Keywords: Performance Measurement; Competitive Profile Matrix; Internal Factor Evaluation Matrix; External Factor Evaluation Matrix; Internal-External Matrix

INTRODUCTION

There is always a need for new analytical tools that enhance insight in strategic decision-making in organizations. Fleisher and Gensoussan (2003) noted the lack of systematic rigor in the strategic analysis of organizations and argue for greater use of better tools. The goal of this paper is to expand the tool set available to strategists by developing a new matrix, the Company Comparison Internal-External (CCI-E) Matrix, for the interpretation of the ECPM and ICPM previously proposed by Capps and Glissmeyer (2012). The CCI-E Matrix is a marked improvement over conventional matrices used in strategic analysis because it provides greater depth of understanding when evaluating an organization's competitive position compared to its rivals.

New Model

The CPM is a traditional tool for analyzing an organization and its rivals in terms of external and internal factors (Bygrave and Zacharkis, 2010). The inputs to the CPM are the Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices that are determined from an analysis of the organization's internal and external environments. The limitations of the CPM are that ratings are subjectively assigned leading to values that differ from one evaluator to another (Chang & Huang, 2006). The total weighted score from an IFE and EFE are frequently plotted on an I-E Matrix for a better visual comparison of the relative advantages of each organization. The three regions of the nine cell I-E matrix are frequently labeled Grow and Build, Hold and Maintain, or Harvest and Divest as suggested strategic activities. Of course, the actual action taken will depend on the relative strategic positions of rivals. It would make little sense to divest a division that was superior to rival divisions simply because it plotted out in the Harvest and Divest sector.

The ECPM and ICPM are improvements over the traditional CPM using IFE and EFE inputs. Improvement comes from forcing a ranking of organizations compared to rivals based on internal and external factor categories.

A hypothetical four company example (David, 2012) applying Capps and Glissmeyer (2012) improved ECPM and ICPM approach to an I-E matrix is presented below. The data are derived by first separating a CPM into its internal and external components as shown in Tables 1-3 below. The use of the ECPM and ICPM show strategic insights not present in the use of the standard CPM. The use of ECPM and ICPM draws attention to those external and internal factors that need special attention from management. The following three tables (Table 1-3) illustrate the traditional approach to conducting the internal and external analysis of firms by using the CPM matrix and the EFE and IFE outputs as the inputs available in a traditional I-E matrix.

Table 1: Traditional Approach to Competitive Profile Matrix (CPM) for Four Hypothetical Companies

Critical Success Factors	Weight	Company 1		Company 2		Company 3		Company 4	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score
Advertising	0.20	1	0.20	4	0.80	3	0.60	3	0.60
Product Quality	0.10	4	0.40	3	0.30	2	0.20	2	0.20
Price Competitiveness	0.10	3	0.30	2	0.20	4	0.40	1	0.10
Management	0.10	4	0.40	2	0.20	3	0.30	2	0.20
Financial Position	0.15	4	0.60	3	0.30	3	0.45	3	0.45
Customer Loyalty	0.10	4	0.40	3	0.30	2	0.20	3	0.30
Global Expansion	0.20	4	0.80	1	0.20	2	0.40	1	0.20
Market Share	0.05	1	0.05	4	0.20	3	0.15	3	0.15
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Total	**1.00**		**3.15**		**2.50**		**2.70**		**2.20**

Table 2: Cumulative Traditional Approach to External Factor Evaluation (EFE) Matrix for Four Companies

External Factors For Success	Weight	Company 1		Company 2		Company 3		Company 4
		Rating	Score	Rating	Score	Weight	Rating	Score	Rating
The Competition	0.125	2	0.250	4	0.500	3	0.375	2	0.250
Economic Impact	0.125	4	0.500	4	0.500	1	0.125	1	0.125
Social-Cultural-Demo	0.125	4	0.500	2	0.250	4	0.500	2	0.250
Political-Legal-Govt	0.125	3	0.375	1	0.125	3	0.375	2	0.250
Natural Environment	0.125	3	0.375	2	0.250	1	0.125	3	0.375
Technological Change	0.125	4	0.500	1	0.125	3	0.375	3	0.375
Trends	0.125	2	0.250	1	0.125	2	0.250	3	0.375
Market Share	0.125	2	0.250	4	0.500	4	0.500	2	0.250
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Total	**1.00**	**3.000**		**2.375**		**2.625**		**2.250**	

Table 3: Cumulative Traditional Approach to Internal Factor Evaluation (IFE) for Four Companies

Internal Factors For Success	Weight	Company 1		Company 2		Company 3		Company 4	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score
Management Team	0.10	1	0.10	4	0.40	4	0.80	2	0.20
Org Structure/Culture	0.10	4	0.40	3	0.30	1	0.10	1	0.10
Distinctive Competency	0.10	3	0.30	2	0.20	3	0.30	1	0.10
Competitive Advantage	0.10	4	0.40	1	0.10	2	0.20	2	0.20
Operations	0.10	4	0.40	1	0.10	1	0.10	3	0.30
Marketing	0.10	4	0.40	1	0.10	2	0.20	4	0.40
Human Resources	0.10	4	0.40	1	0.10	2	0.20	4	0.40
Finance & Accounting	0.10	1	0.10	3	0.30	3	0.30	2	0.20
Information Tech/Sys	0.10	3	0.30	1	0.10	1	0.10	4	0.40
R&D	0.10	2	0.20	2	0.20	3	0.30	1	0.10
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Total	**1.00**		**3.00**		**1.900**		**2.600**		**2.400**

Tables 4 and 5 illustrate the calculations of the ECPM and ICPM. Figure 1 compares the results of the traditional approach and the proposed ECPM and ICPM measures to illustrate the benefits of the new method.

Table 4: Externally Focused Competitive Profile Matrix (ECPM) for Four Companies

External Factors For Success	Weight	Company 1		Company 2		Company 3		Company 4	
		Rating	Score	Rating	Score	Weight	Rating	Score	Rating
The Competition	0.125	1	0.125	4	0.500	3	0.375	2	0.250
Economic Impact	0.125	4	0.500	3	0.375	2	0.250	1	0.125
Social-Cultural-Demo	0.125	3	0.375	2	0.250	4	0.500	1	0.125
Political-Legal-Govt	0.125	4	0.500	1	0.125	3	0.375	2	0.250
Natural Environment	0.125	4	0.500	2	0.500	1	0.125	3	0.375
Technological Change	0.125	4	0.500	1	0.500	2	0.250	3	0.375
Trends	0.125	4	0.500	1	0.125	2	0.250	3	0.375
Market Share	0.125	1	0.125	4	0.500	3	0.125	2	0.250
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Total	**1.00**		**3.125**		**2.750**		**2.250**		**2.125**

Table 5: Internally Focused Competitive Profile Matrix (ICPM) for Four Companies

Internal Factors For Success	Weight	Company 1		Company 2		Company 3		Company 4	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score
Management Team	0.10	1	0.10	4	0.80	3	0.60	2	0.20
Org Structure/Culture	0.10	4	0.40	3	0.30	2	0.20	1	0.10
Distinctive Competency	0.10	3	0.30	2	0.20	4	0.40	1	0.10
Competitive Advantage	0.10	4	0.40	1	0.10	3	0.30	2	0.20
Operations	0.10	4	0.40	2	0.30	1	0.10	3	0.30
Marketing	0.10	4	0.40	1	0.10	2	0.20	3	0.30
Human Resources	0.10	4	0.40	1	0.20	2	0.30	3	0.30
Finance & Accounting	0.10	1	0.10	4	0.20	3	0.30	2	0.20
Information Tech/Sys	0.10	3	0.30	1	0.10	2	0.20	4	0.40
R&D	0.10	2	0.20	3	0.30	4	0.40	1	0.10
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Total	**1.00**		**3.00**		**2.60**		**3.00**		**2.20**

The I-E Matrix is a portfolio management tool that is used to compare the various divisions of an organization in terms of revenue and percentage profit with respect to the IFE and EFE. The I-E Matrix categorizes IFE as weak, average or strong on one axis, and categorizes EFE as low, medium, and high on the other axis. Revenue and percentage profit can be displayed by the size of the divisional marker within the matrix.

To better compare companies using the newly developed measures of ECPM and ICPM, the authors developed a company comparison tool that is analogous to the I-E Matrix, the Company Comparison I-E Matrix (CCI-E Matrix). This matrix plots each company in terms of its ECPM on the vertical axis and ICPM on the horizontal axis (see Figure 1). The EFE and IFE scores are also plotted for a comparison of the two methods. Arrows indicate how each company changes when forced ranking is used to calculate ECPM and ICPM. Please note the differences between the traditional approach to company strategic analysis and the proposed improvements using the ICPM and the ECPM in Figure 1. The squares indicate the traditional values obtained using the EFE and IFE values plotted in a standard I-E Matrix. The circles indicate the values obtained using the newly proposed ECPM and ICPM values.

In the example provided, the relative superiority of each company using each method can be compared to the others in terms of external factors, internal factors, or both. The example below clearly shows that company 1 is superior to company 4 in terms of both external and internal factors regardless of method used. It also clearly shows that company 1 and company 3 are the same in terms of ICPM scores. A comparison of companies 2 and 3 show that company 3 is superior in terms of ICPM but that company 2 is superior in terms of ECPM. The changes indicate the differences obtained by forced ranking and highlight the additional insights gained by the newly developed method.
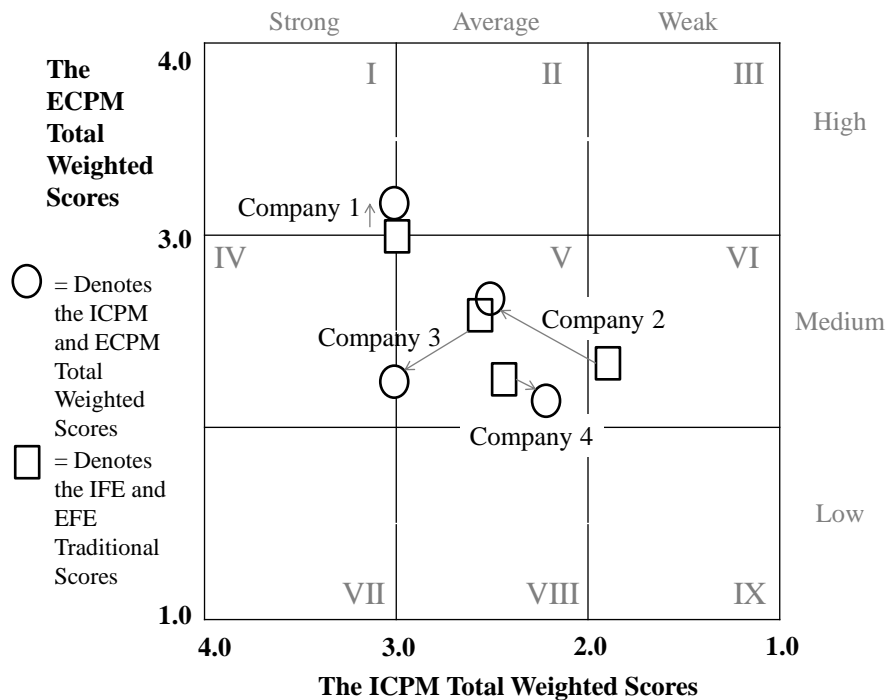

Figure 1: Company Comparison IE (CCI-E) Matrix using ICPM and ECPM for Four Companies

While the same information can be derived from the tabular data provided in Tables 4 and 5, the CCI-E Matrix puts all the information together for ease of comparison. As such it provides better visual communication of the data and additional insight for strategic analysts and their intended audience. The extended CCI-E matrix proposal is theoretically sound, but remains to be validated with a variety of empirical data samples and constructed data sets intended to test the utility of the model.

CONCLUSION

Our conclusion is simple: the CCI-E Matrix is another valuable tool that complements the expanded CPM matrices developed by Capps and Glissmeyer (2012). It converts the data into a sharp strategic picture that allows for easy visual comparison of all companies in an analysis. It allows strategists to more easily incorporate and

interpret ECPM and ICPM in their strategic analysis, so they can better plan to improve their organization's future competitive position.

AUTHOR INFORMATION

Christopher M. Cassidy is an Assistant Professor of Management at Sam Houston State University. He earned his Ph.D. at Texas A&M University, and his research interest areas include: strategy implementation, organizational control systems, ethics and pedagogical research. E-mail: cassidy@shsu.edu

Michael D. Glissmeyer is Assistant Professor of Management at Westminster College. He earned his Ph.D. at New Mexico State University, and his major research interest areas include: trust, opportunism and pedagogical research. E-mail: mglissmeyer@westminstercollege.edu

Charles J. Capps III is Professor of Management at Sam Houston State University. He earned his DBA at Louisiana Tech University, and his research interest areas include: human resource management, human resource development and strategy. E-mail: capps@shsu.edu (Corresponding author)

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