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Full Length Research Paper

Shared vision invention: A case from the financial industry

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To not just survive, but also succeed, in today's highly competitive global economic marketplace, a shared vision that allows an industry to develop a competitive advantage is required. In Taiwan, the financial industry was once helpful for Taiwanese economic growth, but it has currently lost competitive advantage and now needs support from the government. Although, past research has focused on how to improve the performance of the financial industry, it seems to have ignored the development of shared vision, which results in treating the symptoms, but not the root, of the problem and thus, getting half the result with twice the effort. To address this problem, this study aims to construct critical indices for the Taiwanese financial industry through a Multiple Criteria Decision-Making (MCDM) approach based on the Fuzzy Analytic Hierarchy Process (FAHP) and a Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). Based on these results, Taiwanese banks were advised to create a shared vision that is suitable for future global competition in compliance with the research findings.

Key words: Shared vision, financial industry, FAHP, TOPSIS.

INTRODUCTION

When facing today's globalized hypercompetitive, turbulent and complex economic environment, an industry leader must adopt a proactive attitude to gain a first entrance advantage in the field (Nemati and Barko, 2003; Wang et al., 2004) and keep or gain competitive advantages. The leader has to open a conversational space in which to challenge existing assumptions and introduce fresh possibilities and then construct a new shared vision of the corporate environment and corporate future (Roubelat, 2006; Finkelstein et al., 2008). By utilizing such a shared vision to develop a collective imagination among members, promote member reliability, and motivate members to improve their performance (Bowen and Lawler, 1992; Hays and Hill, 2001; De Vries, 2003; Elkins and Keller, 2003; Patton, 2003; Karr, 2005; Wibowo and Kleiner, 2005), a leader can maximize his organization's profits (Greengarten-Jackson et al., 1996; Johannessen et al., 1999; Abell, 2006).

Since joining the World Trade Organization (WTO), each industry faces great global competition; thus, it is necessary for an industry to change their traditional ways of thinking and methods of operating. Developing a shared vision has become an optimal alternative strategy. The shared vision may be replaced by a new one to fit changes in the external competitive market environment. The financial industry in Taiwan was once the industry that contributed the most to the growth of the Taiwanese economy, but today it has lost its competitive advantage and needs government support due to domestic and international problems. The aim of this paper is to construct critical indices of an entire conduction style for today's financial industry and leaders using an MCDM approach based on the Fuzzy Analytic Hierarchy Process (FAHP) and Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). The FAHP method is used to determine the weighting of evaluation criteria among decision makers (Hsieh et al., 2004), and the TOPSIS method determines the solution with the shortest distance from the ideal solution and the farthest distance from the negative-ideal solution (Opricovic and Tzeng, 2004). Here, the FAHP is utilized to explore the weights of each of the critical indices of shared vision invention, and the TOPSIS is adapted to explore the optimal entire conduction style.

The rest of this paper is organized as follows: The shared vision invention is discussed; a difficult illustration of the financial industry is then described; FAHP and TOPSIS are introduced and; a numerical analysis is then conducted. Finally, discussions and conclusions are presented.

THE SHARED VISION INVENTION

In the competitive and changing market environment of today, a leader has to make correct judgments about the future and maintain communication with members to shape a shared vision to acquire support from members, appropriately allocate resources, and maximize performance (Hall, 2005; Naaranoja et al., 2007; Finkelstein et al., 2008). In accordance with the mainstream literature, a recognizable vision perceived by both the leader and the members (Finkelstein et al., 2008) and a well-suited organizational management (Denton, 1997; Doppelt, 2003; Krais and Bloomfield, 2005) for vision invention are the two main factors for successfully inventing a shared vision (Finkelstein et al., 2008).

Recognizable vision perception by both the leader and the members is always easier said than done, as it involves two processes that are difficult to complete and control: leading with vision-orientation (Abell, 2006; Finkelstein et al., 2008), and members' vision (Elkins and Keller, 2003; Marquard, 2003).

Leading with vision-orientation is a new operation style with a precise definition. Generally, a leader needs to present his own perceptions and ideas (Gokenbach, 2003; Hanna and Glassman, 2004), understand members' needs (Day and Schoemaker, 2006), and make plans for helping his organization achieve its goal (Hanna and Glassman, 2004). Due to the changeable nature of global competition, a leader needs to have anticipative insight to assume and analyze possible future outcomes (Dymowski and Saake, 1992; Lammers, 1992; Calfee, 1993; Greengarten-Jackson et al., 1996; Gokenbach, 2003; Hanna and Glassman, 2004; Day and Schoemaker, 2006) so as to appropriately allocate resources and assess the advantages and disadvantages of his organization (Wibowo and Kleiner, 2005; Day and Schoemaker, 2006). Knowing how to lead members is also critical for creating a recognizable vision perception (Elkins and Keller, 2003; Finkelstein et al., 2008). Previous studies have found that if a leader lacks intuition, creativity, imagination, knowledge of how to embrace uncertainty, credibility, and/or vision visualization (Hackett and Spurgeon, 1998; Dawes, 2002; Patton, 2003; McKee, 2003; De Vries, 2003), he will not be able to complete recognizable vision perception successfully.

To encourage the members' vision, due to the perceptual gap between leader and members, a leader must know what members need and sense such needs as self-value assessment (Cacioppe, 2000b) and belonging (Bezzina, 2000). In addition, for perceptions among the leader and the members to be compatible, the leader must develop a commitment to members and help them to develop their personal goals so as to make members believe that the organization is solid and has reachable goals for the future (Bloomfield and Vurdubakis, 1997; Davenport, 1998; 2000; Johannessen et al., 1999; Bingi et al., 1999; Markus and Tanis, 2000; Zagotta and Robinson, 2002; Finkelstein et al., 2008; Ifinedo, 2008); this is especially true for service-oriented organizations (Hammer and Champy, 1993; Johannessen et al., 1999; Hays and Hill., 2001).

A well-suited organizational management is also hard to develop (Denton, 1997; Doppelt, 2003; Krais and Bloomfield, 2005) for two major reasons: organizational culture (Ha°kanson, 1995; Boland, 1986; Bloomfield and Vurdubakis, 1997; Ndlela and du Toit, 2001; Finkelstein et al., 2008) and organizational structure (Huxham and Vangen, 2000; Husted and Vintergaard, 2004; Finkelstein et al., 2008).

Due to its invisible nature, organizational culture is difficult to control; thus, good communication is always necessary because without it the understanding between the parts of the organization will be destroyed (Nahapiet and Ghoshal, 1998; Ndlela, and du Toit, 2001; Naaranoja et al., 2007; Finkelstein et al., 2008). This would increase the number of unsolved problems (Greengarten-Jackson et al., 1996; Li, 2005; Wibowo and Kleiner, 2005; Finkelstein et al., 2008) and eventually destroy the shared vision invention (Cacioppe, 2000a; Kibort, 2004). Choosing the right orientation of culture for shared vision invention is also critical. One body of literature found that a well-functioning culture contains proactive features (Johannessen et al., 1999; Currie, 1999; Finkelstein et al., 2008) and innovative thinking (Johannessen et al., 1999; Byrne et al., 2007; Finkelstein et al., 2008), so it can always discover opportunities, which are necessary for a process.

Additionally, imbalances in knowledge and information in either member-member or leader-member relationships occur frequently, making it hard to complete a (Nahapiet and Ghoshal,1998; Lane and Lubatkin, 1998; Rodriguez and Wilson, 2000; Yli-Renko et al., 2001 ; Parsons, 2002; McEvily et al., 2003; Li, 2005). Therefore, facilitating teamwork to promote knowledge and information-sharing has recently become a crucial issue for shared vision invention (Streharsky, 1997; Elkins et al., 2003; Williams, 2005).

As for organizational structure, since a leader's management style and the working style of the members are largely influenced by organizational structure, current research has put much more focus on organization structure and found three main structures that are used when inventing a shared vision: learning organization, team-oriented organization, and pyramid organization (Huxham and Vangen 2000; Husted1 and Vintergaard, 2004).

According to current studies, learning organization

includes numerous factors that are useful for rapidly resolving learning restrictions (Hays and Hill, 2001; Ndlela and du Toit, 2001) and increasing shared vision inventing; these include a leader with a clearly defined vision, a detailed and measurable action plan, rapid sharing of information, inventiveness, and the ability to implement the action plan (Appelbaum and Goransson, 1997). Additionally, team-oriented organization is good for increasing innovation ability and improving performance. Such atmospheres are self-management-oriented (Nonaka and Takeuchi, 1995; Amabile et al., 1996; Kirkman and Rosen, 1999; Langfred, 2004) and can make it much easier for members to accept personal and organizational challenges (Hackett and Spurgeon, 1998; Killen et al., 2005; Draper, 2006) and feel that they are important because their ideas are always respected (Carmen et al., 2006). The final structure used when developing a shared vision is pyramid organization. The management style of a pyramid organization is similar to a topside-down management style (Finkelstein et al., 2008). On the other hand, a leader is not only a strategy planner but also a decision-maker; thus, members need only to obey the leader's decisions (Currie, 1999; Johannessen et al., 1999). Although, the latter is quite totalitarian, this organization structure has still been mentioned as an efficient way for shared vision invention to develop in today's organizations.

A DIFFICULT ILLUSTRATION OF THE FINANCIAL INDUSTRY

Over the past fifty years, the financial industry has played a critical role in Taiwanese economic growth. It was not until 1991 that the financial resources for most of official departments of Taiwan reached about four times their value since 1981. Moreover, finances acquired from loans made by financial institutes reached their peak between mid-1981 and mid-1991.

However, problems for financial industry have always existed, especially after the explosion of the third quarter of Asia financial crisis in 1997 and the explosion of the domestic financial crisis due to the tank stocks effect in 1998. Additionally, several issues such as party transitions in the government, the huge decrease in American hi-tech stock, and finance moving outward seriously affected domestic stock and further still the Taiwanese financial industry.

The financial industry in Taiwan is currently one of the least profitable among Asian countries. In today's global economic depression, this difficulty becomes even more problematic. Based on the conclusions of banking-related background experts, the difficulty will not improve in the short term because the Taiwanese banking system remains in a highly competitive and scattered structural situation.

Nevertheless, although the return ratio of the Taiwanese financial industry keeps tightening, due to different operations for each bank, such a difference may results in an extreme development trend. Government support for local influential banks can decrease the negative effects of domestic and international environment pressures. However, this treats the symptoms of the problem but not its root.

Based on the earlier stated, it is necessary for each bank to transform its original operation style to fit the needs of today's global economic environment. Although there have been several studies on improving the operation and performance of either the financial industry as a whole or a certain bank, there have been none on shared vision invention, a facet of organization development; the aim of this study is to construct critical indices and an optimal entire conduction style for organizations in today's financial industry to successfully invent a brand new shared vision by utilizing an MCDM approach based on fuzzy AHP and TOPSIS, as discussed in detail in the following sections.

FUZZY ANALYTIC HIERARCHY PROCESS (FAHP)

Fuzzy set theory

Fuzzy set theory was first developed in 1965 when Professor L.A. Zadeh was trying to solve fuzzy phenomenon problems that exist in the real world, such as in uncertain, incomplete, unspecific, and fuzzy situations. Fuzzy set theory has advantages over traditional set theory in describing set concepts in human language. It uses unspecific and fuzzy characteristics in language for the evaluation and employs a membership function concept to represent the field in which a fuzzy set can permit situation such as "incompletely belong to" and "incompletely not belong to."

Fuzzy number

The study orders the universe of discourse such that U is a whole target that was discuss, and each target in the universe of discourse is called an element. Fuzzy $\tilde{A}$ states for U that random $x \rightarrow U$, appointing a real number $\mu_{\tilde{A}}(x) \rightarrow [0,1]$. We call anything above that level of x *under A*.

The universe of real number R is a triangular fuzzy number (TFN): $\tilde{A}$, which means $x \in R$, appointing $\mu_{\tilde{A}}(x) \in [0,1]$, and The triangular fuzzy number above can be shown as:

$$\mu_{\tilde{A}}(x) = \begin{cases} (x-L)/(M-L), & L \le x \le M, \\ (U-x)/(U-M), & M \le x \le U, \\ 0, & otherwise, \end{cases}$$

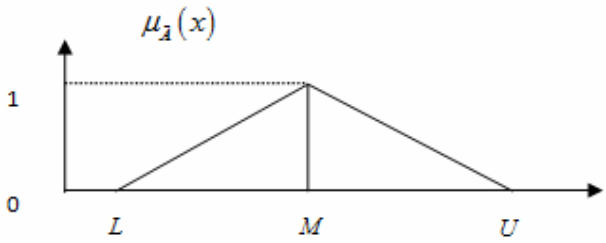

Figure 1. Triangular fuzzy number.

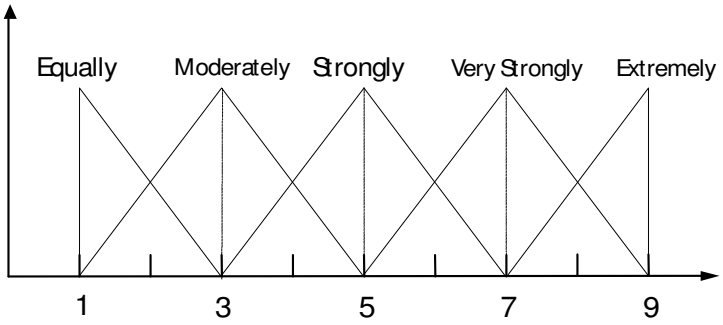

Figure 2. Fuzzy membership functions for linguistic values for attributes.

$\tilde{A}=(L,M,U)$, where *L* and *U* represent the fuzzy probability between the lower and upper boundaries of evaluation information, as shown in Figure 1. Assume two fuzzy numbers $\tilde{A}_1=(L_1,M_1,U_1)$ and $\tilde{A}_2=(L_2,M_2,U_2)$, then

$$\tilde{A}_1 \oplus \tilde{A}_2 = (L_1,M_1,U_1)\oplus(L_2,M_2,U_2) \quad (1)$$

$$=(L_1+L_2,M_1+M_2,U_1+U_2) \quad (2)$$

$$\tilde{A}_1 \otimes \tilde{A}_2 =(L_1,M_1,U_1)\otimes(L_2,M_2,U_2)=(L_1L_2,M_1M_2,U_1U_2),$$

$L_i>0$, $M_i>0$, $U_i>0$

$$\tilde{A}_1 - \tilde{A}_2 = (L_1,M_1,U_1)-(L_2,M_2,U_2) \quad (3)$$

$$=(L_1-L_2,M_1-M_2,U_1-U_2)$$

$$\tilde{A}_1 \div \tilde{A}_2 =(L_1,M_1,U_1)\div(L_2,M_2,U_2) \quad (4)$$

$$=(L_1/U_2,M_1/M_2,U_1/L_2).\ L_i>0,\ M_i>0,\ U_i>0$$

$$\tilde{A}_1^{-1} = (L_1,M_1,U_1)^{-1} = (1/U_1,1/M_1,1/L_1),$$

$L_i>0$, $M_i>0$, $U_i>0$

Fuzzy linguistic variable

The fuzzy linguistic variable is a variable that reflects the different levels of human language. Its value represents the range from natural to artificial language. When precisely reflecting the value or meaning of a linguistic variable, there must be an appropriate way to indicate change. Variables in a human word or sentence can be divided according to numerous linguistic ratings, such as equally important, moderately important, strongly important, very important, and extremely important, as shown in Figure 2; their definitions and descriptions are shown in Table 1. For the purpose of the present study, the 5-point scale (that is, equally important, moderately important, strongly important, very strongly important and extremely important) were used.

Calculation steps of FAHP

The four-step procedure of this approach is as follows:

Step 1: Comparing the performance score
Assuming K experts, we proceeded to decision-making on P alternatives with n criteria.

Step 2: Constructing a fuzzy comparison matrix
The study used a triangular fuzzy number to represent the meaning of questionnaires and constructed positive reciprocal matrixes.

Step 3: Examining the consistency of fuzzy matrix $\tilde{A}_i$
Assuming $A=[a_{ij}]$ is a positive reciprocal matrix and

Table 1. Definition and membership function of fuzzy numbers.

Fuzzy number	Linguistic variable	Triangular fuzzy number
$\tilde{9}$	Extremely important/preferred	(7,9,9)
$\tilde{7}$	Very important/preferred	(5,7,9)
$\tilde{5}$	Strongly important/preferred	(3,5,7)
$\tilde{3}$	Moderately important/preferred	(1,3,5)
$\tilde{1}$	Equally important/preferred	(1,1,3)

$\tilde{A}=\left[\tilde{a}_{ij}\right]$ is a fuzzy positive reciprocal matrix. If $A=\left[a_{ij}\right]$ is consistent, $\tilde{A}=\left[\tilde{a}_{ij}\right]$ will be consistent also.

Step 4: Calculating a fuzzy evaluation of a number $\tilde{r}_i$ $\tilde{r}_i=\left[\tilde{a}_{i1}\otimes\ldots\otimes\tilde{a}_{in}\right]^{1/n}$

Step 5: Calculating the fuzzy weight $\tilde{W}_i$ $\tilde{w}_i=\tilde{r}_i\otimes(\tilde{r}_i\oplus\cdots\oplus\tilde{r}_m)^{-1}$

Step 6: Defuzzy

The study finds the best crisp value or nonfuzzy value in accordance with Center of Area (COA or Center Index, CI), which was developed by Teng and Tzeng (1993), meaning that we calculated clear weights for each index. The calculation method is as follows:

$$BNP_i=[(UR_i-LR_i)+(MR_i-LR_i)]/3+LR_i,\forall i$$

TECHNIQUE FOR ORDER PREFERENCE BY SIMILARITY TO IDEAL SOLUTION (TOPSIS)

The Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS) method was proposed by Chen and Hwang in 1992, with reference to Hwang and Yoon (1981). The foundational principle is that the chosen alternative ought to have the shortest distance from the ideal solution and the farthest distance from the negative-ideal solution (Opricovic and Tzeng, 2004).

The procedure of TOPSIS includes the following six steps (Opricovic and Tzeng, 2004):

Step 7: Calculate the normalized decision matrix. The normalized value is r_{ij}, calculated as

$$r_{ij}=f_{ij}\Big/\sqrt{\sum_{j=1}^{J}f_{ij}^2},$$
$$j=1,\ldots,J;\ \ i=1,\ldots,n$$

Step 8: Calculate the weighted normalized decision matrix. The weighted normalized value v_{ij} is calculated as:

$$v_{ij}=w_i r_{ij},\quad j=1,\ldots,J;\ \ i=1,\ldots,n,$$

Where w_i is the weight of the ith attribute or criterion, and $\sum_{i=1}^{n}w_i=1$.

Step 9: Determine the ideal and negative-ideal solutions.

$$A^*=\{v_1^*,\ldots,v_n^*\}$$
$$=\{(\max_j v_{ij}|i\in I'),(\min_j v_{ij}|i\in I'')\}$$
$$A^-=\{v_1^-,\ldots,v_n^-\}$$
$$=\{(\min_j v_{ij}|i\in I'),(\max_j v_{ij}|i\in I'')\}$$

Where I' is associated with benefit criteria, and I'' is associated with cost criteria.

Step 10: Calculate the separation measures, using the n-dimensional Euclidean distance. The separation of each alternative from the ideal solution is given as:

$$D_j^*=\sqrt{\sum_{i=1}^{n}(v_{ij}-v_i^*)^2},\quad j=1,\ldots,J.$$

Similarly, the separation from the negative-ideal solution is given as:

$$D_j^-=\sqrt{\sum_{i=1}^{n}(v_{ij}-v_i^-)^2},\quad j=1,\ldots,J$$

Step 11: Calculate the relative closeness to the ideal solution. The relative closeness of the alternative a_j with respect to A^* is defined as

$$C_j^*=D_j^-/(D_j^*+D_j^-),\quad j=1,\ldots,J.$$

Table 2. The hierarchical research structure of this study.

Goal	Dimension	Evaluating criteria	Evaluating indices
Vision Invention	Vision perception by leader and members (D1)	Leading with vision-orientation (C1)	Leader's perception
			Leader's idea
			Future assumption and analysis
			Visional characteristics
		Members' vision (C2)	Personal need
			Organization commitment
			Personal goal
	Organization management (D2)	Organization culture (C3)	Intercommunication
			Proactive orientation
			Innovation thinking
			Knowledge and information sharing
			Encourage and team work
		Organization structure (C4)	Learning organization
			Team organization
			Pyramid organization

A NUMERICAL STUDY

Based on the current literature related to Shared Vision Invention as discussed, 53 evaluation indices were created initially. Given the 80/20 principle, it was impossible and costly to conduct all of the evaluation indices for a financial company. Hence, the Delphi method to a group of 21 experts (10 from academia and 11 from practice) was adopted first; based on the result, 15 evaluation indices that contain 4 evaluation criteria (Leading with vision-orientation, members' vision, organization culture, and organization structure) and 2 evaluation dimensions (vision perception by leader and members and organization management) were extracted. The hierarchical structure of Shared Vision Invention is provided in Table 2. Although, a clear way for Shared Vision Invention is important, if the leader does not have an optimal entire conduction style, the will not be successfully accomplished. In this regard, after summarizing recent literature, three possible entire conduction styles of core-extension, environment-extension, and involving were proposed. The detailed definitions for the three entire conduction styles are provided in Table 3.

Before completing the hierarchical structure construction of vision invention, local weights for the dimensions, criteria, and indices were calculated. A FAHP questionnaire was adopted to explore the professional opinions of 30 senior experts (15 from academia and 15 from practice), each having fifteen years of service in universities and financial companies, by utilizing a 5-point scale ranging from 9 (extremely important) to 1 (no effect) as given in Table 1. Through the steps of FAHP calculation, global weights for evaluation dimensions were calculated and listed in the in the far right column of Table 4. The results of the evaluation dimensions and a similar method were used to calculate the weights for the evaluation criteria and indices; the local and global weights for each are listed in the final two columns of Table 5 to Table 10. In accordance with the results, the top concern for vision invention is "Future Assumption and Analysis (0.308)"; the top four evaluation indices are "Visional characteristics (0.193)", "Leader's Idea (0.140)", "Leader's perception (0.066)", and "Personal goal (0.053)".

After calculating the weights of the evaluation indices, the rankings for the three entire conduction styles (core-extension, environment-extension, and involving) for leader decision-making were computed using the TOPSIS method. Of the original 20 senior experts, 9 were unable to continue the survey for personal reason; the remaining 11 were surveyed utilizing a range from 10 (the best) to 1 (the worst) based on their professional experience and perceptions. On the basis of the initial scores provided by the 11 senior experts (shown in Table 11) and the global weights of the measurement indices shown in Tables 7 to 10, and after going through the steps of TOPSIS, the study obtained all of the necessary values; the ranking of the three alternatives is shown in Table 12. Based on the result, "core-extension (0.7064)" is the optimal entire conduction style.

DISCUSSION

In today's globalized hypercompetitive, turbulent and

Table 3. The entire conduction styles for shared vision invention.

Alternative	Description	Author(s)
Core-Extension	The core value of the vision already made by the leader. That is, the overall mission and goal of the organization has been confirmed. Thus, members during vision invention are based on the confirmed core value of vision.	Olian and Rynes, 1991; Blackburn and Rosen, 1993; Prahalad and Hamel, 1994; Masterson, 1997; Christenson and Walker, 2004; Finkelstein et al., 2008
Environment-Extension	The leader develops an innovative and brainstorming environment for members and adopts different channels to present the value of possible vision and jobs. The leader will try his best to listen and communicate with members to get their opinions. In the end, the leader's vision may become an issue of members' life planning and work content.	Hackett and Spurgeon, 1998; Nwankwo and Richardson, 1996; Karr, 2005; Hewett and Bearden, 2001; Li, 2005
Involving	The leader gives members many organizational value concepts, meanings, and clear directions. At this time, the leader will be a listener and use ways of arguing and discussion for members to communicate and further shape a possible shared vision. Note that members' involvement with the activity and proactive behavior are expected.	Hays and Hill, 2001; Thamhain, 2003; Hirst and Mann, 2004; Carmen et al., 2006; Naaranoja et al., 2007

Table 4. Pairwise comparison matrix and weights of evaluation dimension.

	Vision perception			Organization management			BNP	Global weight
Vision perception	1.000	1.000	3.000	5.621	7.675	8.777	1.061	0.878
Organization management	0.114	0.130	0.178	1.000	1.000	3.000	0.148	0.122

Table 5. Pairwise comparison matrix and weights of D1 criteria.

	Leading with vision orientation			Member's vision			BNP	Local weight	Global weight
Leading with vision-orientation	1.000	1.000	3.000	4.586	6.312	7.603	1.511	0.857	0.728
Members' vision	0.132	0.158	0.218	1.000	1.000	3.000	0.253	0.143	0.122

Table 6. Pairwise comparison matrix and weights of D2 criteria.

	Organization culture			Organization structure			BNP	Local weight	Global weight
Organization Culture	1.000	1.000	3.000	1.311	1.593	3.835	0.212	0.682	0.102
Organization Structure	0.261	0.628	0.763	1.000	1.000	3.000	0.099	0.318	0.048

Table 7. Pairwise comparison matrix and weights of C1 indices.

	Leader's perception			Leader's idea			Future assumption and analysis			Visional characteristics			BNP	Local weight	Global weight
Leader's perception	1.000	1.000	3.000	0.331	0.372	0.483	0.331	0.372	0.483	0.268	0.331	0.455	0.258	0.093	0.066
Leader's idea	2.071	2.686	3.023	1.000	1.000	3.000	0.415	0.581	0.896	0.336	0.516	0.824	0.550	0.198	0.140
Future assumption and analysis	2.071	2.686	3.023	1.116	1.721	2.409	1.000	1.000	3.000	3.157	5.171	7.178	1.213	0.436	0.308
Visional characteristics	2.197	3.023	3.737	1.214	1.937	2.978	0.139	0.193	0.317	3.905	4.656	6.473	0.759	0.273	0.193

Table 8. Pairwise comparison matrix and weights of C2 indices.

	Personal need			Organization commitment			Personal goal			BNP	Local weight	Global weight
Personal need	1.000	1.000	3.000	0.426	0.531	0.689	0.434	0.535	0.706	0.100	0.207	0.025
Organization commitment	1.451	1.884	2.347	1.000	1.000	3.000	0.521	0.700	1.116	0.174	0.361	0.044
Personal goal	1.415	1.868	2.306	0.896	1.429	1.918	1.000	1.000	3.000	0.208	0.432	0.053

Table 9. Pairwise comparison matrix and weights of C3 indices.

	Inter-communication			Proactive orientation			Innovation thinking			Knowledge and information sharing			Encouragement and teamwork			BNP	Local weight	Global weight
Intercommunication	1.000	1.000	3.000	4.358	6.812	7.803	3.561	4.703	7.045	0.543	0.783	1.933	0.344	0.573	1.476	0.169	0.330	0.043
Proactive orientation	0.128	0.147	0.229	1.000	1.000	3.000	0.362	0.593	1.513	0.263	0.365	0.576	0.268	0.369	0.591	0.040	0.078	0.010
Innovation thinking	0.142	0.213	0.281	0.661	1.688	2.764	1.000	1.000	3.000	2.496	3.682	5.656	0.277	0.378	0.591	0.075	0.146	0.019
Knowledge and information	0.517	1.277	1.841	1.693	2.646	3.614	0.177	0.272	0.401	1.000	1.000	3.000	0.369	0.459	0.736	0.071	0.138	0.018
Encouragement and teamwork	0.678	1.745	2.909	1.693	2.713	3.737	1.693	2.646	3.614	1.359	2.178	2.709	1.000	1.000	3.000	0.158	0.308	0.040

Table 10. Pairwise comparison matrix and weights of C4 indices.

	Learning organization			Team organization			Pyramid organization			BNP	Local weight	Global weight
Learning organization	1.000	1.000	3.000	0.434	0.535	0.706	2.855	3.865	1.647	0.041	0.261	0.011
Team organization	1.415	1.868	2.306	1.000	1.000	3.000	5.209	7.478	8.276	0.102	0.642	0.026
Pyramid organization	0.607	0.259	0.350	0.121	0.134	0.192	1.000	1.000	3.000	0.015	0.097	0.004

Table 11. The initial values given by senior experts for three alternatives.

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15
Core-extension	9.467	9.467	7.133	9.000	4.996	6.934	6.215	5.345	5.919	5.919	6.450	8.116	6.215	6.338	7.931
Environment-extension	7.464	7.464	6.901	7.324	7.047	7.673	8.039	8.434	8.116	7.191	7.979	7.596	7.824	7.397	5.185
Involving	6.627	7.158	6.919	7.413	7.464	6.618	6.976	7.464	7.182	7.740	7.678	8.159	7.824	5.809	4.996
W	0.066	0.140	0.308	0.193	0.025	0.044	0.053	0.043	0.010	0.019	0.018	0.040	0.011	0.026	0.004

Table 12. The result of alternatives ranking by TOPSIS.

Wed M	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	D*	D-	D*+D-	C*j	Ranking
Core-extension	0.045	0.095	0.182	0.126	0.011	0.025	0.027	0.018	0.005	0.009	0.009	0.024	0.005	0.015	0.003	0.015	0.037	0.052	0.7064	1
Environment- extension	0.036	0.075	0.176	0.103	0.015	0.027	0.035	0.029	0.007	0.011	0.011	0.022	0.007	0.017	0.002	0.033	0.013	0.046	0.2749	2
Involving	0.032	0.071	0.176	0.104	0.016	0.024	0.030	0.026	0.006	0.012	0.011	0.024	0.007	0.013	0.002	0.036	0.008	0.044	0.1744	3
W	0.066	0.140	0.308	0.193	0.025	0.044	0.053	0.043	0.010	0.019	0.018	0.040	0.011	0.026	0.004					
A^+	0.045	0.095	0.182	0.126	0.016	0.027	0.035	0.029	0.007	0.012	0.011	0.024	0.007	0.017	0.003					
A^-	0.032	0.071	0.176	0.103	0.011	0.024	0.027	0.026	0.005	0.009	0.009	0.022	0.005	0.013	0.002					

complex market economic environment, a nation's industrial competition is no longer just domestic, but also international; thus, a global orientation must represent a shared vision for an organization.

Industries in Taiwan, since it joined the WTO, have encountered global economic competition; to survive in such an environment, these industries must alter their traditional style of operation. Based on the investigation, developing a shared vision is not only an optimal alternative strategy, but also treats both the symptoms and the causes of the problems of Taiwanese industries. Of the numerous industries, the financial industry has played a critical role in the growth of the economy in the past as well as today. However, based on a recent industrial survey of Taiwan, the financial industry is facing several domestic and international problems; thus, the industry is suffering from large decreases in profitability and relying more on government support.

To overcome such difficulties, it is necessary to transform the financial industry's original operation style to fit the needs of today's global economic environment. As mentioned previously, several previous studies have indeed focused on improving the operation and performance of either the financial industry or a specific bank, but none of these have focused on shared vision invention, an important feature of organization development. In this regard, the aim of this paper is to construct critical indices of an optimal entire conduction style for today's financial industry and top managers, using an MCDM approach based on FAHP and TOPSIS.

According to the FAHP results, when inventing a shared vision, the top priority is "Future Assumption and Analysis (0.308)". After that, the next four most highly ranked priorities are "Visional Characteristics (0.193)", "Leader's Idea (0.140)", "Leader's Perception (0.066)", and "Personal Goal (0.053)". The top five critical indices belong to the dimension of leading with vision-orientation, which indicates that a leader must have a strong perception in order to build a new shared vision and also ought to have practical, useful, and diverse ideas to share with members. Thus, the most critical skills for a leader are the presence of intuition, creativity, imagination, the ability to embrace uncertainty, credibility, and vision visualization (Hackett and Spurgeon, 1998; Dawes, 2002; Patton, 2003; McKee, 2003; De Vries, 2003), so that the leader is always able to analyze changes and trends in the environment and imagine possible future situations.

Additionally, because members are highly involved not only in their own affairs, but also in

results, the leader should always be aware of the members' personal goals. Similar to Maslow's hierarchy of needs, everyone has his or her personal goal. If the invented shared vision contains the feature of being able to help members to achieve their personal goals, or if the leader can guarantee or assure members that the invention of shared vision is good for their own personal goal achievement, organization commitment (0.044) will be much more efficient.

Intercommunication (0.043) is also important, especially in traditional and large banks. Since it is invisible and highly related to the future development direction of a bank, lack of sufficient communication between members and from leader to member will destroy the invention of shared vision. Hence, this study suggests that a well-developed communication mechanism throughout departments is necessary before and during shared vision invention.

Moreover, as referred to in the previous section, since the management style of the leader and the working style of the members are largely influenced by organizational structure, an inappropriate organizational structure may gradually stifle shared vision invention. Based on the results, team organization (0.026) is the optimal structure, and the indices of encouragement and teamwork (0.040) are found to have higher weighting. These two results indicate that if the power of members is ignored, it has a significant chance of failing to develop. Thus, the leader should assign enough responsibility and accountability to members to ensure the success of shared vision invention.

Although other indices are also critical in different aspects, due to the 80/20 principle, banks in Taiwan are strongly encouraged to follow the top nine indices to precede shared vision invention. Once the indices are managed and they exhibit high performance, the rest can then be further utilized. Such shared vision invention will yield twice the results with half the effort.

Based on the TOPSIS analysis, the optimal entire conduction style is core-extension (0.7064). Hence, leaders of Taiwanese banks are encouraged to build up core values for a new shared vision in advance and make it a central guideline for members to participate in shared vision invention with adoption of the top nine indices before attempting to invent a shared vision. By following these guidelines, Taiwanese banks would have a solid and brand new future-oriented shared vision to develop their sustainable competitive advantage and to survive locally as well as globally.

Conclusions

Industries in any country cannot avoid global competition. Thus, a shared vision that is suitable for an industry to not only survives, but also gains sustainable competitive advantage in such global competition is required. In Taiwan, the financial industry, which once exhibited great achievements for Taiwanese economic growth, currently faces numerous domestic and international difficulties, resulting in a loss of competitive advantage and a need for government support. Although, previous studies have explored ways to improve performance, these studies overlook the original nature of development, shared vision, and treat the symptoms but not the root of the problem. Thus, the aim of this study was to construct critical criteria for shared vision invention and optimal entire conduction style for today's financial industry and leaders. On the basis of these results, Taiwanese banks are encouraged to invent a new shared vision that is suitable for future global competition. In addition, these results can be adapted to other situations for future research.

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