Full length research paper

Is it time to withdraw from china?

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This research cross-employs the Social Cognitive Theory (SCT) and three major labor theories comprised of Maslow's theory, Alderfer's theory and Herzberg's theory with Multiple Criteria Decision Making (MCDM) consisting of Factor Analysis (FA), Analytical Network Process ("ANP"), Fuzzy Analytical Network Process (FANP) and Grey Relation Analysis (GRA) to evaluate the four types of innovative investment strategies in China after the Domino Effect of the China's Labor Revolution. The most contributed conclusion is that the "change of original business at the raising compensation policy" (CBRCP) is the best choice for Taiwanese manufacturers operating in China because it is the highest scores of three assessed measurements in the CBRCP. This conclusion further indicates that manufacturing enterprises have little leverage, in the interim, but to increase employment compensation and benefits to satisfy the demands from the ongoing Chinese labor revolution even though it brings about an incremental expenditure in their manufacturing costs. Therefore, the next step beyond this research is to collect additional empirical macroeconomic data to develop a more comprehensive evaluation model that takes into consideration a more in-depth vertical measurement and horizontal assessment methodologies for developing added comprehensive and effective managerial strategies for surviving in this momentous, dynamically-changing and lower-profit Chinese manufacturing market.

Keywords: China labor revolution; Maslow theory; Alderfer theory and Herzberg theory; Multiple criteria decision making

INTRODUCTION

As cost-down-oriented development and the tendency of most manufacturers, Taiwanese manufacturers have been setting up manufacturing factories in China for the lowest labor expenditures, since the early 1950s, which is earlier than that of most America, European and Japanese international companies and the Chinese government's economic revolution policies of the 1980s. In terms of cultural advantages, Taiwan manufacturers have grown at a rapid pace in China which has not only brought wealth to Taiwan but it has also brought the coastal Chinese cities from an agricultural economy to an industrial and business economy. With the economic development and educational popularization in China, Chinese laborers have shifted from accepting the companys' stated wages to determining how much compensation they should obtain from their respective employers. The rising power of laborers due to China's labor revolution has had immense cost pressures on the Taiwanese manufacturers in China (Cabrera, 2009). With the objective of increasing the average level of income and completing the integrity of the employment structure in China, the Chinese government issued the first

employment law in 2008 called the "law of the people's Republic of China on employment contracts(1)". The features of this employment law introduced the regulation of a minimum wage system that corrected past unfair and inconsistent wage structures used by employers. This "law of the people's Republic of China on employment contracts" has resulted in the rapid increment of the average minimum wages in a lot of economic areas in China. Consequently, in empirical statistics, according to the annual reports of the Chung-Hua Institution for Economic Research in Taiwan, Figure 1 expresses that the average minimum wages increased up 30 percent in seven major economic areas comprising Shanghai, Beijing, Tianjin, Hebei, Jiangsu, Zhejiang and Guangdong, in China.

The new law also established protection in the recruitment contract system whereby laborers can demand permanent employment after two stints of temporary contract work with the same company. This paramount employment law has directly facilitated Chinese laborers to request more employment benefits and bonuses, which has also resulted in some laborers
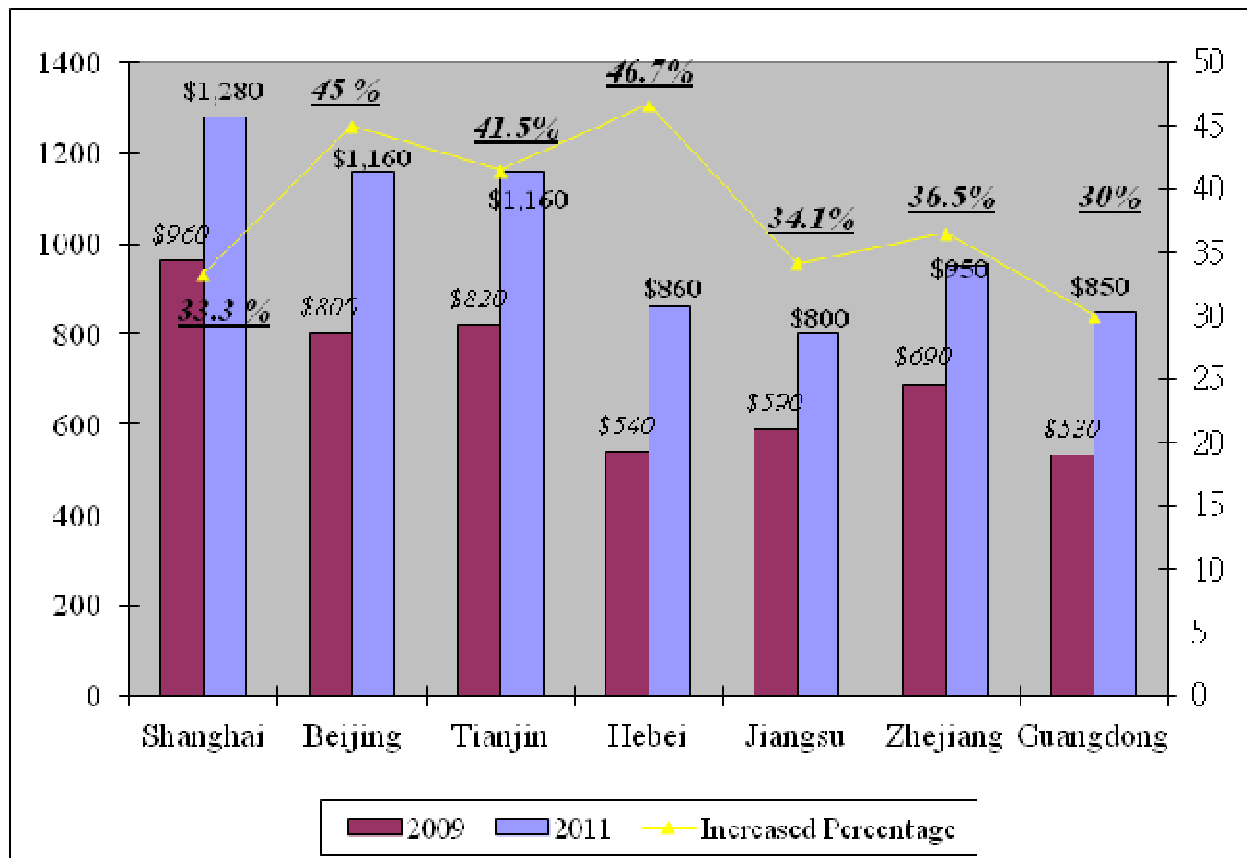
Figure 1: The tendency of average minimum wages in seven economic areas in China

moving back to their rural hometowns (McCahon and Lee, 1992) because of the lower standard of living. Consequently, after the requirement of the minimum wages, Chinese employees have considered the various emoluments and diversified performance bonus. Therefore, many strikes by Chinese laborers have taken place in at least seventeen east-coast provinces in China (Vroom, 1966). These laborers were striking for higher wages and more benefits and even took the route of suicides to draw attention to their requirements (Blickle and Witzki, 2008). One of the most serious employment conflicts was at a large manufacturer, Foxconn International Holdings (2), which experienced a series of high-profile suicides by employees (Markus and Kitayama, 1991).

Through the constant deliberate reporting by Chinese mass media, this employment conflict soon fully convulsed the entire world because these employees did not hesitate to utilize death as a means to announce what they wanted. At the end of this conflict, Foxconn had no choice but to increase their laborers' wages (Vroom and Deci, 1971). These strikes have forced Taiwanese manufacturers to consider a series of operational strategies in order to confront the tough challenges of the domino effect of the labor revolution in China by

addressing the main three relative questions (Patchen, Pelz and Allen, 1965) based on the research topic: (1) Is there an alternative for handling the incremental payroll cost caused by the rise of worker protests (Van, 2004)? (2) Is it worthwhile to continue manufacturing in China (Van and Roodt, 2008)? and (3) Is there a better investment decision in other countries with a significant pool of low-paid laborers and lenient employment regulations such as Vietnam, Thailand or Laos (Veldsman, 2008)? For a better discussion of these research questions, this research synthetically cross-employed the Social Cognitive Theory (SCT) and three major labor theories comprised of Maslow theory, Alderfer theory and Herzberg's theory to construct the analytical relations (Courtney, 2003) and then, the four principle hierarchies were formed in the research framework based on the essential concept of the hierarchical relations of the Analytical Network Process ("ANP") approach (McCahon and Lee, 1990). In order to increase the research reliability and validity and avoiding the uncertainty, this research further applied the Multiple Criteria Decision Making ("MCDM") methodology consisting of Factor Analysis ("FA"), Factor Analysis - Analytical Network Process ("ANP"), Fuzzy Factor Analysis -Analytical Network Process ("F FA-ANP") and Grey Relation

Analysis ("GRA") to analyze the interactive relationship and dependance between the corporate strategic investment selection (More, 2003) and tendency and the desires of China's laborers under the Domino Effect of the China's Labor Revolution (Miller, 2005).

LITERATURE REVIEW

This research mainly cross-employed three major labor theories comprised of Maslow's theory, Alderfer's theory and Herzberg's theory with Multiple Criteria Decision Making ("MCDM") consisting of Factor Analysis ("FA"), Analytical Network Process ("ANP"), Fuzzy Analytical Network Process ("FANP") and Grey Relation Analysis ("GRA") to evaluate the four types of innovative investment strategies in China after the Domino Effect of China's Labor Revolution. These four potential and effective investment strategies consisted of (1) constantly running a business at the same employment-compensation policy (CRSECP); (2) keeping a business at the rising compensation policy (OBRCP); (3) change original business at the same compensation policy (CBSCP); and (4) change original business at the raising compensation policy (CBRCP).

On account of comprehensively expounding the impact of social relationship on the employees in this complicatedly contemporary society, the Social Cognitive Theory (SCT) has recently become the innovative theory to deeply expound the relative issues in the human resource management. In terms of the original concept of the SCT, Miller and Dollard (1941) creatively expressed the comprehensively inducted model for forming the Social Learning Theory ("SLT") that is the most momentous and fundamental social theory through observing the various individual behaviors in society from their life and collecting the relative social literatures for a long time. Bandura (1978) integrated the concept of behaviorism and observativism into the SLT to develop the SCT which has been employed in various science fields including education, healthcare management, medicine management, diagnosis management, human resource management and so on. The characteristics of SCT explain the relationships among individual cognitivism, behaviorism and environment observativism to discuss the related humanity (Bandura, 1982).

Due to discussions on definitions of job satisfaction of employees in contemporary society, McGregor (1960) articulately addressed the categorical concept and definition of job satisfaction in his published book, "Job Satisfaction" (McClelland et al., 1953). He not only defined job satisfaction as the comprehensive subjective comments consisting of the physical and psychological perceptions regarding the surrounding work environment of the employees' comprehensive (McClelland, 1961) and subjective responses (Quick, 1988), he also discovered

that the higher the job position and the greater the job satisfaction. Further, there are many researches that concentrate on the structure of job satisfaction (McClelland et al., 1955) because of the higher job satisfaction affirmed need-hierarchy theory (Schunk, 1991) that there are always desires in everyone's mind and these are at different hierarchies but also everyone is constantly pursuing higher hierarchical need after satisfying the lower hierarchical need. There are five needs in Maslow (1954) which consists of physiological need, safety need, love/belonging need, esteem need and self-actualization need. In addition, Maslow (1965) further redefined job satisfaction by including job content, job position, job payment, job environment, colleagues' relationships, and promotion system. Alderfer (1969) further refined Maslow's hierarchy theory to express the new ERG theory which contains the following needs: existence need, relation need and growth need (Vroom and Yetton, 1973). There are two main differences between Maslow's hierarchy theory and Alderfer's need theory. Alderfer (1969) deemed the motivation characteristics are included in each hierarchical need and the discouragement feature are comprised into each hierarchical need because people are going to pursue lower hierarchical need if they fail to aspire to higher hierarchical need. Subsequently, based on the Maslow's and Alderfer's theories, Herzberg (1996) advocated the two-factor theory (Motivation-Hygiene theory) which included the factors of hygiene and motivation in Table 1.

In addition, Adams (1963) addressed the equity theory which not only concentrates on what valuable returns (such as, compensation, job satisfaction, social reputation and etc.) the employees are going to obtain for their job efforts and performances but also provides a reasonable comparison among employees who are at the same job position or the same industry. On the other hand, Bandura (1977) first addressed the need achievement theory which states that humans' needs consist of the need for achievement (achievement motive), need for power (power motive), and need for affiliation (affiliation motive) with the need for achievement being the principal motivation in order to meet the other two motives. Vroom (1964) developed the valence-instrumentality-expectancy theory in his published research that creatively defined the valence, the instrumentality and the expectancy. The valence is that managements are supposed to discover and appreciate what employees value in order to utilize these extrinsic (such as money, promotion, time-off, benefits and etc.) to lead them to achieve higher performance. The instrument is that managements have to make sure the promises of performance rewards are satisfied and further that on the overall employees perceive this information because the employees always want to know whether they will actually get what they desire even if it has been promised by a manager. The expectancy is that management must completely

Table 1: A comparison among Maslow's, Alderfer's and Herzberg's theories

Maslow (1943) Need-hierarchy theory	Alderfer (1969) ERG theory	Herzberg (1996) Two-factor theory
Physiological Need - Physiological need is to meet physical requirements such as food, clothing, shelter, recreation, sleeping and etc. **Safety Need** - Safety need is to offer security protection in order to prohibit people from suffering fears, anxiety, anarchy, nervousness, hazard and menace. **Love/belonging need** - Love/belonging need is to build closed relationships between individuals and groups in order not to avert people from solitude, strangeness but also to be a part of society.	**Existence need** - Basic need is a kind of a substance form consisted of food, clothing, recreation, shelter, sleeping, job, social welfare and etc. **Relation need** - Relation need is to share personal thinking, feeling and desire to related people who can be colleagues, family, friends and etc.	**Hygiene Need** - Needs out of job scope, such as security, self-identification, self-actualization, social recognition and etc. **Motivator Need**
Esteem need - Esteem need is not only for maturity, self-respect which results from capacities, confidences, autonomy, relatedness, competence and etc. but also for respect from public that cause from reputation, ambition and etc. Self-actualization need - Self-actualization need is to achieve personal goals, develop individual potentials, complete people's growth in order to integrate themselves, such as comprised of autonomy consideration, innovative thinking, humanness, democracy and etc.	**Growth need** - Growth need is for individual creation or personal growth.	- needs in job scope, such as job environment, job content, job relationship, job compensation, job benefits and etc.

understand what resources, training, or supervision employees need in order to meet the various expectations and levels of confidence of employees regarding what they are capable of doing. Ultimately, based on the concept of the discrepancy theory which was proposed by Locke and Latham (1990).They deemed that the difference between actual compensations and expected compensations is the level of job satisfaction. Besides, based on Maslow's theory, Nadler and Lawler (1977) extensively considered the various methodologies to find out the most effective human resource strategy after estimating costs and profits through practical surveyed the human resource strategies of over ten companies. Further, McClelland (1966) further proved that not only motivation of expectancy plays a critical role on performance of employees, but also the work environmental elements deeply influence employees' efforts and performance as well in his empirical survey. Generally, Vroom and Sternberg (2002) deeply integrated the expectancy model to explain that effective performance is a sum of thinking, behaviors and desires of employees in their questionnaire. Recently, the fuzzy set theory and grey system theory were used in various researches to assess performance in managerial and strategic research fields. The literature review of this research concentrated on the major labor theories and the four methods by combining these measurements to facilitate the sub-criteria in order to select the best

potential innovative strategy in a hypercompetitive Chinese environment.

Research Methodology

In order to effectively evaluate the integrity and uncertainty, the MCDM methodology was utilized by employing a collection of surveyed data from the opinions of empirical interviewees and experts for achieving retrospective cross-sectional analysis of the relations among the Taiwanese manufacturers from two estimated indicators of the two-factor theory. This section not only characterized the overall research design, research measure-process and specification of collection-data but also expressed the evaluated comparison between each appraised pattern, criterion, sub-criterion and selected candidate through complete analytical hierarchies.

The research design framework is presented in Figure 2, which consists of four principal research design phases in the research design framework: identifying, selecting, utilizing and integrating based on the typical measurement statistics process of Hsieh (2011). The overall research design framework includes identifying the motivation, selecting the methodology, utilizing methodology to analyze empirically collected data and to appraise overall assessable criteria through applying the Delphi method in order to make a comprehensive
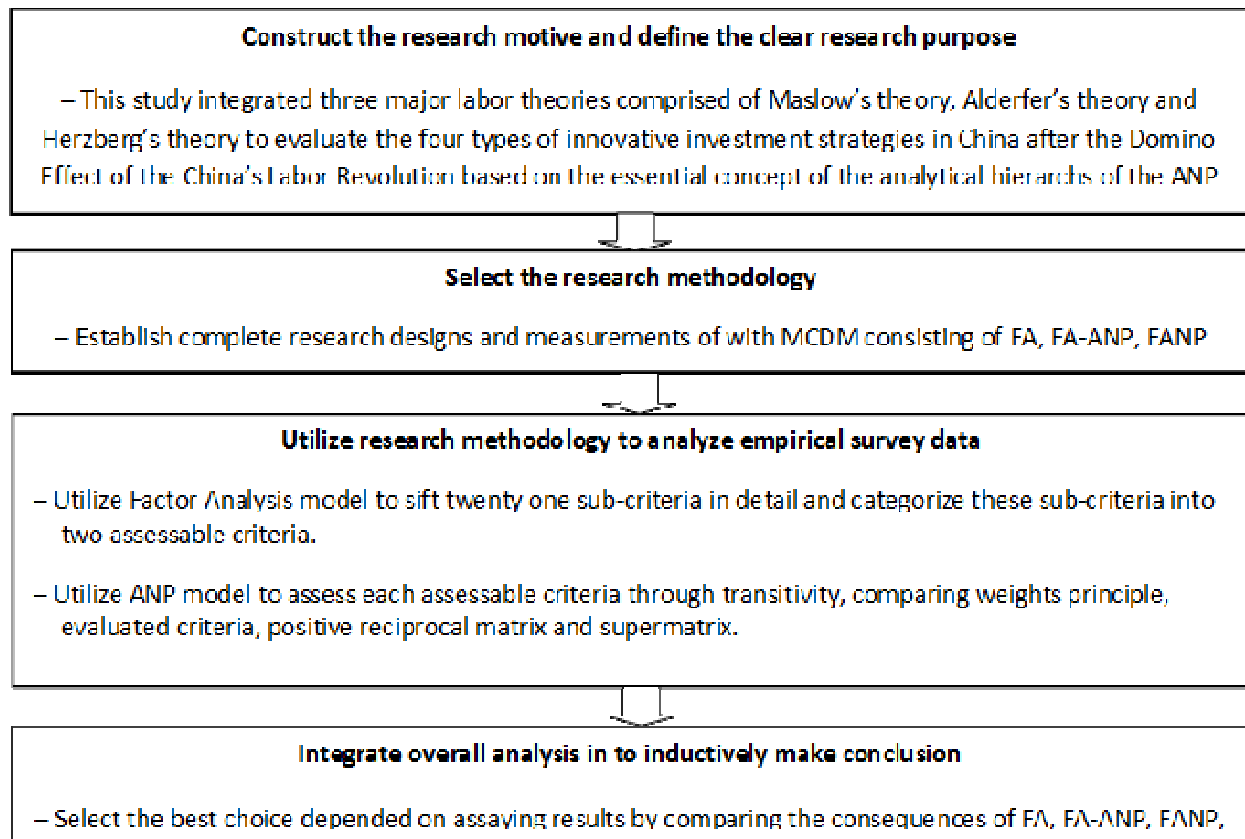
Figure 2: The research design framework

conclusion and suggestion.

After accomplishing the research design, the overall related-impacted factors were categorized into four groups which match the three major labor theories and then, according to the patterns of the ANP approach, these related-impacted factor-groups are decomposed as third hierarchy of criteria of assessment according to second hierarchy of the three patterns of employees' demand. The related-impacted factors are also decomposed as fourth hierarchy of sub-criteria of each criterion. The framework of the best innovative strategy with the higher compensation in the hypercompetitive Chinese environment is described in figure 3 (Saaty, 1996).

On account of increasing the reliability and validity in research and averting the uncertainty and missing in collection-data, this research implemented the four assessable approaches of MCDM methodology. For execution of the FA approach, there were 138 first-level valid questionnaires out of 500 sent, which were completed by laborers who are presently employed in various industries in China in order to organize the assessed hierarchy by distinguishing each of the related-impacted factors from collecting influenced elements. Moreover, in terms of the representativeness of

the efficient model of the three analytical approaches through establishing fuzzy transitivity, comparing weights principle, evaluating criteria, and estimating positive reciprocal matrix and supermatrix, research data source must collectively and statistically consist of all impacted expert's opinion related to each assessable criteria. According to the assessable characteristics of the ANP approach, the pairwise comparison of the evaluation characteristics, criteria and attribution at each level are evaluated with respect to the related interdependence and importance from equal important (1) to extreme important (5) as expressed in Figure 4.

Furthermore, Barbarosoglu and Yazgac (1997) expressed that there are the least errors of validity and reliability in the Delphi method when the collected questionnaires are, at least, over 20 percent of the total surveyed data. Hence, the next step in the MCDM approach was to collect a second-level questionnaire from twelve experts. The twelve experts consisted of five managers who have over ten years of working experience in China, two directors who have over twenty years of working experience for Taiwan companies listed in the Taiwan Stock Exchange with operations in China and five scholars with at least 10 years of extensive research in Chinese employment practices. In terms of the reliability,
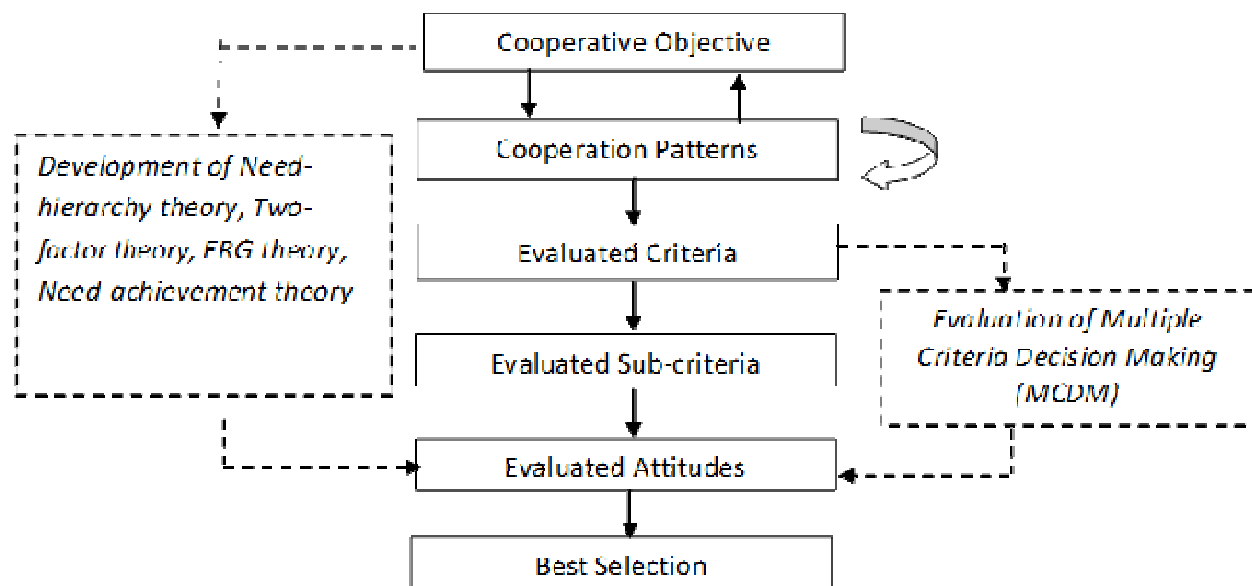
Figure3: The research measurement

Assessable Patterns 1	1	2	3	4	5	Assessable Patterns 2
	Equal-----------------------------Extreme Important					

Assessable Criteria 1	1	2	3	4	5	Assessable Criteria 2
	Equal-----------------------------Extreme Important					

Assessable Sub-criterion 1	1	2	3	4	5	Assessable Sub-criterion 2
	Equal-----------------------------Extreme Important					

Selected candidate 1	1	2	3	4	5	Selected Candidate 2
	Equal-----------------------------Extreme Important					

Figure 4: The evaluation scale of pairwise assessment

the Cronbach α of surveying questionnaires is 0.751 which means the reliability of the questionnaires can represent the population of users after the measurement of FA by collecting 138 completed questionnaires out of total of 500 questionnaires sent to Chinese employees.

Based on the fundamental evaluated hierarchy of the ANO assessable approach, the three patterns, two assessable criteria and twenty-one assessable sub-criteria are categorized into four hieratical relations in Figure 4. Further, for employing the effective model to measure the performance of consolidated strategy, Saaty (1996) addressed the most major different point between AHP and ANP is that, based on the original assumption, AHP is not able to directly evaluate each assessable criterion by hierarchical relations but that, on the contrary, ANP can be utilized to dispose of direct interdependence

relationships and inter-influence between each criteria and criteria at the same or different levels through conducting the "supermatrix" (Adamopoulos and Pappis, 1996). Based on the principle of consistency ratio ("C.R.") of the ANP approach, the pairwise comparison matrix can be accepted when the number of C.R. is equal or smaller than 0.01 (Chen and Hwang, 1992). Subsequently, based on the integration of the lecture reviews related to the measurement of employment performance and satisfaction and are employed in China's employment market, the twenty-one sub-criteria were identified as in figure 5. Furthermore, according to the first measured results of the FA assessable approach, the twenty-one sub-criteria were categorized into the two main assessable criteria comprising hygiene factor indicators and motivator factor indicators as expressed in figure 5.
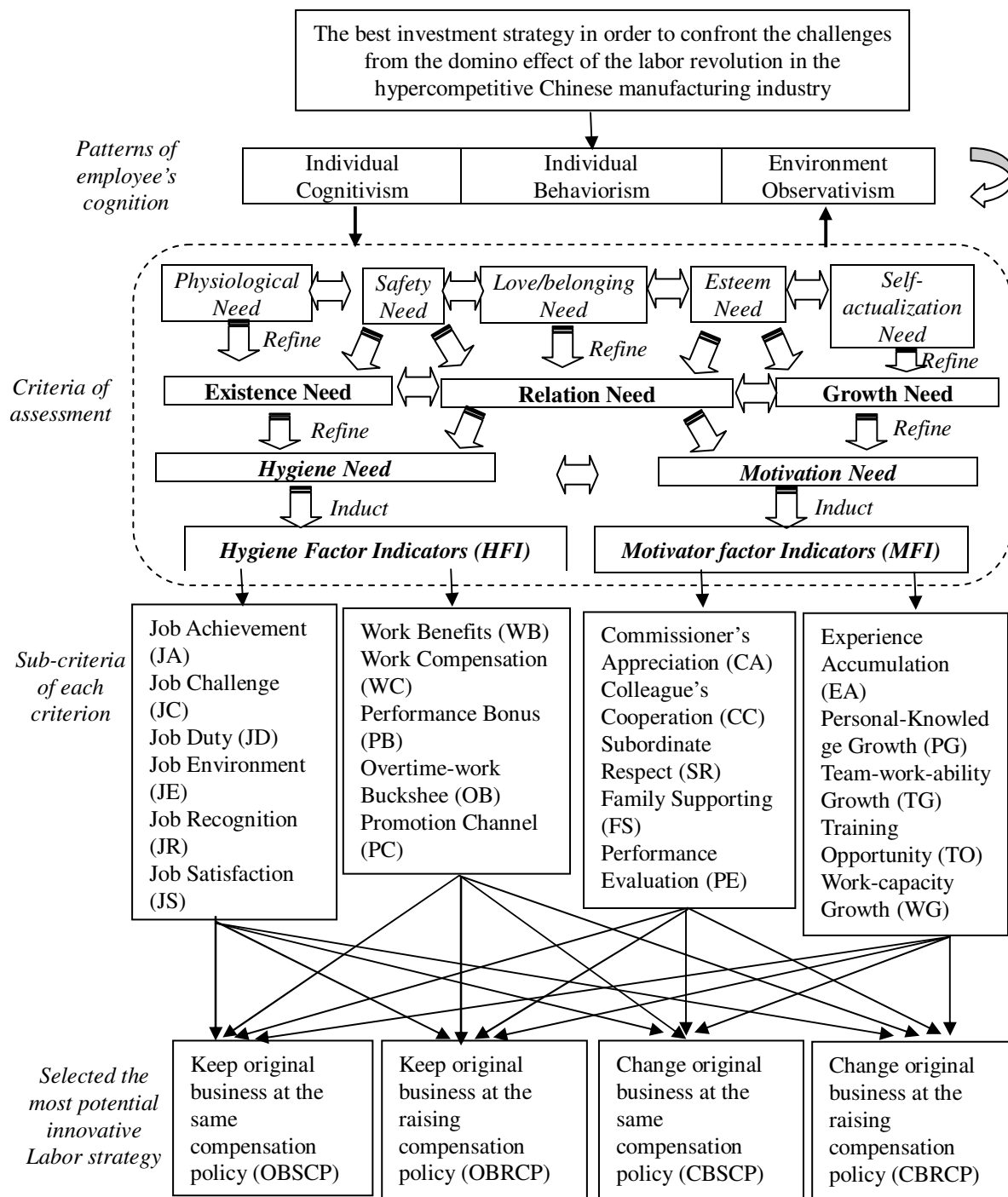
Figure 5: Relationship for characteristic, criteria, sub-criteria and selected candidates

Further, the three assessable patterns consisted of individual cognitivism, individual behaviorism and environmental observativism, were systematically and synthetically appraised by the measured evaluation of the four hierarchies to identify and analyze the consistency of the four kinds of innovative strategies: (1) constantly run business at the same employment-compensation policy ("CRSECP"); (2) keep original business at the raising compensation policy ("OBRCP"); (3) change original business at the same compensation policy ("CBSCP"); and (4) change original business at the raising compensation policy ("CBRCP") as expressed in figure 5 (Chiu and Weng, 1994).

(1) *Hygiene Factor Indicators.* For the overall reflection of

the employees' desires through the effective evaluation in performance, according to comprehensive concepts and expert's discuss, a total of eleven sub-criteria are categorized in two estimated groups.   The eleven sub-criteria are job achievement ("JA"), job challenge ("JC"), job duty ("JD"), job environment ("JE"), job recognition ("JR"), job satisfaction ("JS"), work benefits ("WB"), work compensation ("WC"), performance bonus ("PB") overtime-work buckshee ("OB"), and promotional channel ("PC").

(2) *Motivator Factor Indicators.* In terms of ensuring the arising of employees' performance and satisfaction in the workplace and based on expert's opinion, the ten assessable sub-criteria are organized in two groups and pondered over in the criterion of qualitative and quantitative review: commissioner's appreciation ("CA"), colleague's cooperation ("CC"), subordinate respect ("SR"), family support ("FS"), performance evaluation ("PE"), experience accumulation ("EA"), personal-knowledge growth ("PG"), team-work-ability growth ("TG"), training opportunity ("TP") and work-capacity growth ("WG").

Spearman (1927) first invented FA which evaluates correlation coefficient among each analytical variable in order to acquire communality between each factor. Moreover, Sheppard (1996) addressed that the analytical dimension of FA consists of two principal factors: common factor (or latent factor) and unique factor in order to construct validity to categorize FA into two typical factor analyses: exploratory factor analysis ("EFA") and confirmatory factor analysis ("CFA"). In addition, Sheppard mentioned the sequence of FA and cluster analysis through differentiating segmentation and dimensionality of assessable variables by factor scores. Darlington et al., (1973) expressed the component analysis and common FA which are two principal structures and analyses, to prompt two similarities of problems in FA because of analytical data format. First, the variable is same with two groups, for example: "the same set of measures might be taken on men and women, or on treatment and control groups and then, the question arises whether the two factor structures are the same (Darlington, Sharon and Herbert, 1973)." Another is two sets of variables in the one group, for example: "two test batteries might be given to a single group of subjects, and questions asked about how the two sets of scores differ. Or the same battery might be given under two different conditions (Gorsuch, 1983)." Additionally, Gorsuch (1983) addressed four research problem examples which can be measured by FA: "how many different factors are needed to explain the pattern of relationships among these variables? What is the nature of those factors? How well do the hypothesized factors explain the observed data? And how much purely random or unique variance does each observed variable include (Gorsuch. 1983)"? The FA originated from the mental philosophical researches from

1900s and in statistics, is inductively created to handle the complex analysis with complex factors because there are a lot of indirectly observed potential influenced factors in the discussions of mental philosophical researches. Specifically, these potential factors are supposed to be organized to common influenced factors (oblique factors) or uncommon influence factors (orthogonal factors) and based on the patterns of linear combination of these organized common factors, the multilateral analyses are discussed around the research problems. Hence, the linear combination equation (1) is able to present that K numbers of common potential factors are organized from the L numbers of general influenced factors (the M numbers are more than the K numbers). The directly observed influenced factors are presented as y_1, y_2,..., y_k, directly unobserved influenced factors are presented as x_1, x_2,..., x_k and the constants are shown as w_{ij} which represent the factor loading in FA and mean weights of overall influenced factors under as shown in equation (1):

$$y_k = w_{k1}x_1 + w_{k2}x_2 + ... + w_{kL} + n_k$$
(1)

After the FA, the ANP approach was utilized to construct the analytical hierarchies and relations consisting of assessable patterns, criteria (factors), sub-criteria and selected candidates. Saaty(1996) pioneered the initial concept of the ANP approach and then utilized it to handle the more complex research questions that were solved by the analytical hierarchy process ("AHP"). Because of the original decision hypothesis principle (variable) of AHP, the AHP is reconsidered for its fundamental theory by some scholars and decisive leaders because the relationships between patterns, criteria, sub-criteria and selected candidates are not certain. Saaty (1997) delivered the new research methodology, positive reciprocal matrix and supermatrix, to pierce out this limitations of the AHP in order to carry out more complex hierarchical analysis by collecting expert's opinion through the Delphi method and brainstorm approach under the comprehensive, limited-resource and difficult-decision environment. Hence, the purpose of the AHP in trying to analyze complex problems by hierarchical research which integrates the influenced analytical factors to be the refined patterns: criteria, sub-criteria and candidates and then, evaluates each other's influenced weights by calculating the assessable matrix of pair wise (Saaty, 1998).

In terns of the methods of the ANP, the primarily critical points are that of the Consistency Ratio ("C.R.") by calculating the Consistent Index ("C.I.") and the Random Index ("R.I."). The acceptable regulation is that the evaluated numbers of C.R. and C.I. both are necessarily smaller than 0.1 (Hsieh, 2011). Further, the assumption of

AHP approach is based on the fact that the criteria and sub-criteria are independent of each other but more researchers discovered the situation in which there are two kinds of relationships between criteria and sub-criteria: internal/external dependency and feedback, for dealing with the more complicated research problems. From the preceding, there is another approach (Hsieh and Kung, 2011), the ANP, which was created for dealing with more complicated research problems. According to the characteristics of the ANP, the AHP method can be utilized to carry on the major twelve kinds of assessable research fields (Pajares and Schunk, 2001) that includes setting priority, generating a set of alternatives, choosing a best policy alternative, determining requirements, allocating resources, predicting outcomes, risk assessment, measuring performance, system design, ensuring system stability, optimization, planning, and conflict resolution. Ultimately, more scholars have combined the AHP model into a more analytical approach to inductively invent the ANP (Hsieh, 2011).

In 1965, Zadeh first delivered the fuzzy set theory that created the fuzzy set and membership of meaning in order to substitute the crisp set of traditional mathematics which can set up the uncertain and fuzzy research problems. In traditional mathematics, there is the two-side (correct or incorrect) logical positivism to solve the accurate research problems. However, in terms of the uncertain and fuzzy research problems, Zadeh (1965) induced the fuzzy set which is based on two characteristics (membership degree and membership function) of the fuzzy set theory to solve these research problems. Further, based on the doctrine of Zaheh's fuzzy theory, Deng (1982) further expressed the more complete and innovative theory - Grey System Theory ("GST"). He applied the associated approach, structure measure and model-making method to include the grey system which is located between the block system and the white system, in order to integrate the indefinite research data to become useful research data which achieve the research purposes of managerial control, decision-making, and forecasting. The main goal of the GST is to calculate the level of relationship between each influenced factor in order to handle the patterns of uncertain research problems or circumstances. The most creative idea of GST which is distinct with traditional measure statistics is to use the trend-level among uncertain and incomplete information of each influenced factor to quantify the level of relationship in order to assess the dependence or independence relationship between each influenced factor in equations (2), (3) and (4).

$$x_i^* = \frac{x_i^{(0)}(k) - \min x_i^{(0)}(k)}{\max x_i^{(0)}(k) - \min x_i^{(0)}(k)}$$

(2)
The analytical goal belongs cost goal and satisfies the minimized analytical goal (the Smaller The Better, STB):

$$x_i^* = \frac{\min x_i^{(0)}(k) - x_i^{(0)}(k)}{\max x_i^{(0)}(k) - \min x_i^{(0)}(k)}$$

(3)
The analytical goal belongs specific goal (Nominal The Best):

$$x_i^* = 1 - \frac{\left| x_i^{(0)}(k) - OB \right|}{\max \left\{ \max \left[x_i^{(0)}(k) \right] - OB, OB - \min \left[x_i^{(0)}(k) \right] \right\}}$$

(4)

s.t. $x_i^{(0)}(k)$ presents original data

x_i^* represents date after grey relation system analysis

$\min x_i^{(0)}(k)$ represents the minimum of original data

$\max x_i^{(0)}(k)$ represents the maximum of original data

OB represents the standards of the original data

In the hierarchical relations in the last level, each potential supplier has to fit match each assessable sub-criterion matched in each evaluated criterion through pair wise compared criteria of each sub-criteria following (Hsieh, 2011). Hence, each expert was going to give the weights $(W_1, W_2, ..., W_n)$ of each pattern, criteria, and sub-criteria and based on the concept of two-triangles de-fuzzy, the total fuzzy assessable numbers are calculated by equation (5).

Total fuzzy assessable numbers = $\sqrt[n]{\prod_{i=1}^{n} W_i}$

(5)
In order to reflect the comparative score for the three types of corporate demand patterns, the equation (14) was applied to compute the comparative related priority weight w (eigenvector) in the matrix. Consequently, the appropriate relationship is selected by calculating the Comparatively Synergized Index ("CSI") which combines the "weighted product (Chen et al., 2004)" and the "similarity measure ("S【A,B】")." Further, in terms of defuzzification from the aspect of effective order, the S【A,B】 was utilized by carrying out the calculation of symmetrical triangular fuzzy numbers between two measured vectors ($A_1 = (c_1, a_1, b_1)$ and $A_2 = (c_2, a_2, b_2)$) (Yang et al., 2005).

$$S[V_1, V_2] = \begin{cases} 1 \\ \exp(-d^2/\alpha), \text{ if } V_1 \neq V_2 \end{cases}$$

where

$$d^2(A_1,A_2)=(a_1-a_2)^2=\left[\frac{((c_1+a_1)-(c_2+a_2))^2}{4}\right]+\left[\frac{((b_1+a_1)-(b_2+a_2))^2}{4}\right]$$

$$\alpha=\frac{(D^*+D_*)}{2}+\frac{(|c_1-c_2|+|b_1-b_2|)}{8},$$

$$D^*=\frac{|(a_1+b_1)-(a_2+b_2)|}{2},\quad D_*=\frac{|(a_1+c_1)-(a_2+c_2)|}{2}$$

(6)

Recently, the fuzzy set theory and grey system theory were used in assessing performances in managerial and strategic research fields. The literature review of this research concentrated on the major labor theories and the four methodologies by combining these measurements to facilitate the sub-criteria in order to select the best potential innovative strategy in a hypercompetitive Chinese environment.

Empirical Analysis

In order to clearly present the empirical assessment processes, there were four evaluated steps described as follows:

First Step: Factor Analysis.

In Table 2, based on the calculation of the FA assessable approach, the results of the Kaiser-Meyer-Olkin ("KMO") shows 0.751 which is greater than 0.7 and significance is 0.0064 which is less than 0.05. These measured results represent the 138 valid collection-data and can be evaluated by the FA assessable approach.

Further, Table 2 presents that the communalities results which points out the relationship of communalities among the assessable main factors (assume the communality is 100% =1) with other factors and that these twenty-one sub-criteria are positively related with four theories under the best innovative strategy because the number of independent variable of communalities are positively higher than zero which means the other twenty-one sub-criteria (independent variables) all present very high communality. Hence, Table 3 explores the relationship and reflection between each factor and the other variables and these sub-criteria are categorized into two main factors.

Second Step: ANP approach.

The ANP approach is applied in the empirical analysis to assess the best innovative strategy with the higher

compensation in a hypercompetitive Chinese manufacturing environment for Taiwanese companies by considering transitivity and consistency of selection among the best potential relations. The survey scale of expert's opinion is from 1 to 5 which represents the degree of importance between two comparative factors among pattern, criteria and sub-criteria. The criteria pairwise comparison matrix for the criteria of assessment is presented in Table 4. Further, the priority vector w (eigenvector) between each assessable criterion based on these criteria of assessment are presented in Table 5 which followed the pairwise compared calculations of Table 4.

For evaluation of the pairwise compared priority weight in the influence between three patterns of employee's demand from the three assessable criteria is expressed in Table 6. Further, in novel interdependence of the ANP approach, the overall priority weight vectors w (eigenvector) between each patterns of corporation's demand from each evaluation assessable criterion is addressed in Table 7.

The next step is to organize the priority weight vectors w (eigenvector) of a pairwise matrix and pairwise compared matrix to form the original supermatix in Table 8 which shows the influence interdependence between each characteristic and criterion at the same hierarchical cluster.

The highest priority weights w (eigenvector) of 0.4762, 0.2536 and 0.2702 between three patterns of employee's demand and the related priority weight of three assessable criteria from A compared pairwise matrix which means the highest influenced relationship between physical desire (assessable criteria). Based on the ANP model processing, the corresponding hierarchical relations in the supermatrix is to set up a value of zero and the supermatrix has to be extendedly converged to the comparison values (Ancarani and Shankar, 2004) in the long term as expressed in Table 9. The next analytical processing is to compare the hierarchical relations of pairwise sub-criteria in each assessable criterion, because in our assumption, the assessable criteria and the sub-criteria are not interdependent in the sub-criteria level. A familiar pairwise compared processing is running in each two attribute in the one assessable criterion; for example, the three patterns pairwise comparison matrix for the assessable criterion. Table 10 expresses the pairwise evaluation matrix of candidate of innovative strategies for the assessable sub-criteria of Job Achievement (JA).

In the hierarchical relations in the last level, each potential innovative strategies has to fit match each assessable sub-criterion matched in each evaluated criterion through pairwise compared performance of each relation. In order to reflect the comparative score for three kinds of relations, the equation (9) is applied to compute the comparative related priority weight w (eigenvector) in

Table 2: Factor analysis of KMO and Bartlett's test of all independent variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.751
Bartlett's Test of Sphericity	61.4422	230.201
	df	66
	Sig.	.0064

Table 3: Factor analysis among independent variable of communalities

Innovative Interface Technologies	Initial	Extraction
JA	1	0.738
WC	1	0.512
JC	1	0.671
CA	1	0.722
CC	1	0.517
JS	1	0.858
FS	1	0.757
JD	1	0.668
PE	1	0.703
SR	1	0.611
TG	1	0.759
PG	1	0.798
WB	1	0.821
PC	1	0.715
JE	1	0.652
JR	1	0.795
PB	1	0.659
EA	1	0.679
WG	1	0.761
OB	1	0.684
TO	1	0.615

Table 4: The criteria pairwise matrix for the Criteria of assessment

Existence Need	Physiological Need	Safety Need	Love/belonging Need	Esteem Need	Self-actualization Need	Priority Weights w
Physiological Need	1	2	1	1	3	0.2564
Safety Need	1/2	1	3	2	4	0.2953
Love/belonging Need	1	1/3	1	2	3	0.2068
Esteem Need	1	1/2	1/2	1	4	0.1791
Self-actualization Need	1/3	1/4	1/3	1/4	1	0.0624

C.I.= 0.0893 , C.R.= 0.0993

the matrix. Consequently, the appropriate relationship is selected by calculating the CSI (D_i) (Yang et al., 2005) which is defined by:

$$D_i = \sum_{j=1}^{s} \sum_{k=1}^{kj} P_j T_{kj} R_{ikj} \qquad (9)$$

Where the importance of related priority, D_i, is weight w (eigenvector) for assessable criterion j; T_{kj} is the importance of related priority weight w (eigenvector) for assessable attribute k of criterion j and R_{ikj} is the

Table 5: A. compared pairwise matrix of the related priority weight of the four criteria

A. pairwise compared matrix	Existence Need	Relation Need	Growth Need
Physiological Need	0.2564	0.2595	0.3577
Safety Need	0.2953	0.257	0.1892
Love/belonging Need	0.2068	0.2321	0.1899
Esteem Need	0.1791	0.148	0.1628
Self-actualization Need	0.0624	0.1034	0.1005

Table 6: A. pairwise matrix of the related priority weight of the three patterns

Physical Desire	Existence Need	Relation Need	Growth Need	Priority Weights w
Existence Need	1	2	1	0.4111
Relation Need	1/2	1	1	0.2611
Growth Need	1	1	1	0.3278

C.I.= 0.0268, C.R.= 0.0463

Table 7: B. compared pairwise matrix of the related priority weight of three patterns

B. pairwise Compared matrix	Physiological Need	Safety Need	Love/belonging Need	Esteem Need	Self-actualization Need
Physical Desire	0.4111	0.5485	0.4111	0.5485	0.4932
Mental Desire	0.2611	0.2106	0.2611	0.2409	0.3682
Spiritual Desire	0.3278	0.2409	0.3278	0.2106	0.1386

Table 8: The original supermatrix integrated by matrices A. and B.

	Physical Desire	Mental Desire	Spiritual Desire	Physiological Need	Safety Need	Love/belon ging Need	Esteem Need	Self-actualization Need
Physical Desire	0	0	0	0.4111	0.5485	0.4111	0.5485	0.4932
Mental Desire	0	0	0	0.2611	0.2106	0.2611	0.2409	0.3682
Spiritual Desire	0	0	0	0.3278	0.2409	0.3278	0.2106	0.1386
Physiological Need	0.2564	0.2595	0.3577	0	0	0	0	0
Safety Need	0.2953	0.2570	0.1892	0	0	0	0	0
Love/belonging Need	0.2068	0.2321	0.1899	0	0	0	0	0
Esteem Need	0.1791	0.1480	0.1628	0	0	0	0	0
Self-actualization Need	0.0624	0.1034	0.1005	0	0	0	0	0

important potential relation i on the attribute k of criterion j. Additionally, based on the equation (9) processing manipulation, the ultimate evaluated step is to combine the overall outcome of complete importance of related priority weights *w* (eigenvector) as presented in Table 11 by utilizing equation (9). Consequently, Table 11 reflects the three relations in the CSI. The highest evaluated score of the Comparative Labor Index ("CLI") 0.2829 was the relation of the "Change original business at the raising compensation policy (CBRCP)" through the estimated analysis of combination of FA and ANP assessable approach.

Third Step: Fuzzy ANP approach.

However, the results under the ANP evaluation indicate that the original business with a raising compensation policy (CBRCP) is the best employment policy for enterprises impacted by the domino effect of the labor revolution currently transpiring in the hypercompetitive Chinese manufacturing market. Nevertheless, in order to clearly penetrate linguistic amphiboly and to promote degree of satisfaction, the fuzzy theory is utilized to deeply survey the ulterior results of the questionnaires. Figure 6 presents the vectors of the CSI and numbers of

Table 9: The long-extended converged "supermatrix"

	Physical Desire	Mental Desire	Spiritual Desire	Physiological Need	Safety Need	Love/belonging Need	Esteem Need	Self-actualization Need
Physical Desire	0	0	0	0.4762	0.4762	0.4762	0.4762	0.4762
Mental Desire	0	0	0	0.2536	0.2536	0.2536	0.2536	0.2536
Spiritual Desire	0	0	0	0.2702	0.2702	0.2702	0.2702	0.2702
Physiological Need	0.2845	0.2845	0.2845	0	0	0	0	0
Safety Need	0.257	0.257	0.257	0	0	0	0	0
Love/belonging Need	0.2086	0.2086	0.2086	0	0	0	0	0
Esteem Need	0.1668	0.1668	0.1668	0	0	0	0	0
Self-actualization Need	0.0831	0.0831	0.0831	0	0	0	0	0

Table 10: The patterns pairwise matrix for the sub-assessable criterion of Job achievement

Job Achievement (JA)	OBSCP	OBRCP	CBSCP	CBRCP	Priority Weights w
OBSCP	1	1/2	1/2	1/2	0.137
OBRCP	2	1	1/2	1/2	0.1955
CBSCP	2	2	1	3	0.4195
CBRCP	2	2	1/3	1	0.2481

C.I.= 0.0718, C.R.= 0.0798

similarity measure of three relations, based on function equation (6) of similarity measure (S【A,B】) (Yang et al., 2005) of defuzzification processes and the overall outcome of complete importance of related priority weights *w* (eigenvector) of Figure 6.

As a result of the defuzzification assessing processes, the highest vector of the CSI is (0.1332, 0.1417, 0.166) in "CBRCP" and the highest of number of similarity measure is (1) in "CBRCP" as well. Oppositely, the majority of most experts' opinion considered that "CBRCP" is the best performed consolidated employment policy under the potential innovative strategy for Taiwanese manufacturers which are running businesses in China, that is completely equivalent to the results of evaluated scores of ANP (Lodahl and Kejner, 1965). Hence, through the amendment of fuzzification, the evaluated score was closer to the comments of experts.

Forth Step: GRA approach.

Further, in order to distinctly approach the linguistic experts' comment and to comparatively emend evaluated scores, this research not only utilized the five-level quantified figures of evaluation scale between languages of interviewees of pairwise in assessment of Murata et al., (1997), as expressed in table 12 but also estimate the grey relation approach (GRA) (Wang, 1992) by applying the equation (7) as presented in Figure 7.

Equation (7) is utilized to satisfy the following analytical research situations: the analytical efficient goal, the maximized analytical goal and the minimized analytical goal; furthermore, to calculate the total score of these three kinds of relations, the organized grey relation coefficient results from the calculation after transforming the qualitative data of survey interviewees' opinions to the quantitative data. Finally, the identification of research goals, the identified coefficient (δ) is settled as 0.5. The grey relation is the equal weights among analytical influenced, and therefore, the equation (15) was utilized for the five times of usage: first usage time for calculating the weights of grey relation coefficients between three assessable patterns, second usage time for computing the weights of grey relation coefficients between three assessable criteria, third usage time for count up of the weights of grey relation coefficients between twenty one sub-criteria which matched in two criteria group, forth usage time for figuring the weights of grey relation coefficients for the current five theories and finally, in fifth usage time, in order to avoid the errors, the aggregate the weights of grey relation coefficients is divided for the sorted score of the CSI of three relations as expressed in Figure 7. Figure 7 presents the calculating processes and consequences: the GRA- Labor Comparative Index CSI of "CBRCP" is 0.3874 which is the highest score of four kinds of relations order to satisfy the employees' desires.

Conclusion

In the hypercompetitive manufacturing business environment in China, Taiwanese manufacturers have

Table 11: Employee's demand comparative index computed for three kinds of potential relations under the lowest operational expenditure by ANP

Criteria	Weight-ANP	Sub-criteria	Weight-FA	OBSCP		OBRCP		CBSCP		CBRCP	
				Weight	Evaluated Score	Weight	Evaluated Score	Weight	Evaluated Score	Weight	Evaluated Score
Hygiene Factor Indicators	0.0731*	JA	0.738	0.2481	0.0134	0.1955	0.0105	0.137	0.0074	0.4195	0.0226
		JC	0.671	0.2107	0.0103	0.2464	0.0121	0.2464	0.0121	0.2964	0.0145
		JD	0.668	0.2395	0.0117	0.2538	0.0124	0.295	0.0144	0.2117	0.0103
		JE	0.652	0.1279	0.0061	0.3326	0.0159	0.275	0.0131	0.2645	0.0126
		JR	0.795	0.1242	0.0072	0.2336	0.0136	0.2777	0.0161	0.3645	0.0212
		JS	0.858	0.2472	0.0155	0.1972	0.0124	0.2111	0.0132	0.3444	0.0216
		WB	0.821	0.0824	0.0049	0.285	0.0171	0.4994	0.03	0.1331	0.0080
		WC	0.512	0.1307	0.0049	0.1685	0.0063	0.4811	0.0180	0.2197	0.0082
		PB	0.659	0.3963	0.0191	0.1937	0.0093	0.1709	0.0082	0.2391	0.0115
		OB	0.684	0.2817	0.0141	0.246	0.0123	0.1766	0.0088	0.2956	0.0148
		PC	0.715	0.2887	0.0151	0.247	0.0129	0.1756	0.0092	0.2887	0.0151
Motivation Factor Indicators	0.0029**	CA	0.722	0.2446	0.0005	0.2804	0.0006	0.1589	0.0003	0.3161	0.0007
		CC	0.517	0.2804	0.0004	0.2804	0.0004	0.1277	0.0002	0.3116	0.0005
		SR	0.611	0.2893	0.0005	0.2213	0.0004	0.1724	0.0003	0.3170	0.0006
		FS	0.757	0.2676	0.0006	0.1416	0.0003	0.2398	0.0005	0.3509	0.0008
		PE	0.703	0.2777	0.0006	0.2336	0.0005	0.1242	0.0003	0.3645	0.0007
		EA	0.679	0.169	0.0003	0.2881	0.0006	0.3381	0.0007	0.2048	0.0004
		PG	0.798	0.2538	0.0006	0.2395	0.0006	0.295	0.0007	0.2117	0.0005
		TG	0.759	0.1589	0.0003	0.3161	0.0007	0.2446	0.0005	0.2804	0.0006
		TO	0.615	0.2927	0.0005	0.27	0.0005	0.0991	0.0002	0.3382	0.0006
		WG	0.761	0.3234	0.0007	0.2734	0.0006	0.1049	0.0002	0.2984	0.0007
Comparative Labor Index (Standardized)					0.2159		0.2375		0.2637		0.2829

*Based on the Maslow's need theory and two-factor theory, the weight of hygiene factor indicators is equal to the weight of supermatrix (0.2846*0.2569)

** Based on the Maslow's need theory and two-factor theory, the weight of hygiene factor indicators is equal to the weight of supermatrix (0.2086*0.1668*0.0831)

Criteria	Weight -ANP	Sub-criteria	Weight -FA	OBSCP		OBRCP		CBSCP		CBRCP	
				Weight	Evaluated Score - FANP	Weight	Evaluated Score - FANP	Weight	Evaluated Score - FANP	Weight	Evaluated Score - FANP
Hygiene Factor Indicators	0.0731	JA	0.738	0.2481	(0.008,0.0103,0.0107)	0.1955	(0.0063,0.0081,0.0084)	0.137	(0.0059,0.0063,0.0074)	0.4195	(0.0181,0.0191,0.0226)
		JC	0.671	0.2107	(0.0083,0.0084,0.0103)	0.2464	(0.0097,0.0099,0.0121)	0.2464	(0.0097,0.0105,0.0121)	0.2964	(0.0116,0.0129,0.0145)
		JD	0.668	0.2395	(0.0094,0.0095,0.0117)	0.2538	(0.0099,0.01,0.0124)	0.295	(0.0115,0.0119,0.0144)	0.2117	(0.0083,0.0086,0.0103)
		JE	0.652	0.1279	(0.0037,0.0046,0.0049)	0.3326	(0.0095,0.0119,0.0127)	0.275	(0.0105,0.0107,0.0131)	0.2645	(0.0101,0.0103,0.0126)
		JR	0.795	0.1242	(0.0043,0.0055,0.0058)	0.2336	(0.0081,0.0104,0.0109)	0.2777	(0.0129,0.0131,0.0161)	0.3645	(0.0169,0.0176,0.0212)
		JS	0.858	0.2472	(0.0124,0.0125,0.0155)	0.1972	(0.0099,0.01,0.0124)	0.2111	(0.0106,0.0111,0.0132)	0.3444	(0.0173,0.0208,0.0216)
		WB	0.821	0.0824	(0.003,0.0038,0.004)	0.285	(0.0103,0.0131,0.0137)	0.4994	(0.024,0.0256,0.03)	0.1331	(0.0064,0.0065,0.008)
		WC	0.512	0.1307	(0.0029,0.0034,0.0039)	0.1685	(0.0038,0.0044,0.005)	0.4811	(0.0108,0.0131,0.0144)	0.2197	(0.0066,0.0067,0.0082)
		PB	0.659	0.3963	(0.0115,0.0149,0.0153)	0.1937	(0.0056,0.0073,0.0075)	0.1709	(0.0066,0.0069,0.0082)	0.2391	(0.0092,0.0098,0.0115)
		OB	0.684	0.2817	(0.0113,0.0114,0.0141)	0.246	(0.0098,0.0099,0.0123)	0.1766	(0.0071,0.0074,0.0088)	0.2956	(0.0118,0.0119,0.0148)
		PC	0.715	0.2887	(0.0091,0.0099,0.0121)	0.247	(0.0077,0.0085,0.0103)	0.1756	(0.0073,0.0074,0.0092)	0.2887	(0.0121,0.0124,0.0151)
Motivation Factor Indicators	0.0029	CA	0.722	0.2446	(0.0003,0.0003,0.0004)	0.2804	(0.0004,0.0004,0.0005)	0.1589	(0.0003,0.0003,0.0003)	0.3161	(0.0005,0.0005,0.0007)
		CC	0.517	0.2804	(0.0003,0.0003,0.0003)	0.2804	(0.0003,0.0003,0.0003)	0.1277	(0.0001,0.0001,0.0002)	0.3116	(0.0004,0.0004,0.0005)
		SR	0.611	0.2893	(0.0003,0.0004,0.0004)	0.2213	(0.0002,0.0003,0.0003)	0.1724	(0.0002,0.0002,0.0003)	0.317	(0.0004,0.0005,0.0006)
		FS	0.757	0.2676	(0.0004,0.0004,0.0005)	0.1416	(0.0002,0.0002,0.0002)	0.2398	(0.0003,0.0004,0.0004)	0.3509	(0.0006,0.0007,0.0008)
		PE	0.703	0.2777	(0.0003,0.0004,0.0005)	0.2336	(0.0003,0.0004,0.0004)	0.1242	(0.0002,0.0002,0.0003)	0.3645	(0.0006,0.0006,0.0007)
		EA	0.679	0.169	(0.0002,0.0002,0.0003)	0.2881	(0.0003,0.0004,0.0005)	0.3381	(0.0004,0.0004,0.0005)	0.2048	(0.0003,0.0003,0.0004)
		PG	0.798	0.2538	(0.0005,0.0005,0.0006)	0.2395	(0.0004,0.0004,0.0006)	0.295	(0.0005,0.0005,0.0007)	0.2117	(0.0004,0.0004,0.0005)
		TG	0.759	0.1589	(0.0002,0.0003,0.0003)	0.3161	(0.0004,0.0005,0.0006)	0.2446	(0.0004,0.0005,0.0005)	0.2804	(0.0005,0.0005,0.0006)
		TO	0.615	0.2927	(0.0003,0.0004,0.0004)	0.27	(0.0003,0.0004,0.0004)	0.0991	(0.0001,0.0002,0.0002)	0.3382	(0.0005,0.0005,0.0006)
		WG	0.761	0.3234	(0.0004,0.0006,0.0006)	0.2734	(0.0004,0.0005,0.0005)	0.1049	(0.0002,0.0002,0.0002)	0.2984	(0.0005,0.0006,0.0007)
Vectors of synergized investment comparative index					(0.0869,0.098,0.1124)		(0.0938,0.1072,0.1218)		(0.1197,0.127,0.1506)		(0.1332,0.1417,0.1665)
Numbers of similarity measure *** (Standardization)					0.951		0.97		0.989		1

*Based on the extension principle of defuzzy, the fuzzy assessable numbers are measured by the function equation (9) and then, standardization.

***Based on the defuzzy concept of Yang, Hung and chang-chien (2005) The numbers of similarity measure (S〔A,B〕)are calculated by the function equation (6) as well as presented by calculating the standardization.

Figure 6: Employee's demand comparative index computed by FANP

Table 12: Grey set system for level of Important

Level of Importance (Language Powers)	equal	Little importance	Important	Very Important	Extreme Importance
Figure of grey set system	0.091	0.283	0.5	0.717	0.919

Criteria	Weight -ANP	Sub-criteria	Weight-FA	OBSCP Weight	OBSCP PD*	OBSCP MD**	OBSCP SD***	OBRCP Weight	OBRCP PD*	OBRCP MD**	OBRCP SD***	CBSCP Weight	CBSCP PD*	CBSCP MD**	CBSCP SD***	CBRCP Weight	CBRCP PD*	CBRCP MD**	CBRCP SD***
Hygiene Factor Indicators	0.0731	JA	0.738	0.2481	0.0047	0.0067	0.0055	0.1955	0.0037	0.0053	0.0043	0.137	0.0026	0.0037	0.003	0.4195	0.0080	0.0113	0.0093
		JC	0.671	0.2107	0.0037	0.0052	0.0042	0.2464	0.0043	0.0060	0.005	0.2464	0.0043	0.006	0.005	0.2964	0.0052	0.0073	0.006
		JD	0.668	0.2395	0.0041	0.0058	0.0048	0.2538	0.0044	0.0062	0.0051	0.295	0.0051	0.00720	0.0059	0.2117	0.0037	0.00520	0.0042
		JE	0.652	0.1279	0.0022	0.003	0.0025	0.3326	0.0056	0.0079	0.0065	0.275	0.0047	0.00660	0.0054	0.2645	0.0045	0.00630	0.0052
		JR	0.795	0.1242	0.0026	0.0036	0.003	0.2336	0.0048	0.0068	0.0056	0.2777	0.0057	0.00810	0.0066	0.3645	0.0075	0.01060	0.0087
		JS	0.858	0.2472	0.0055	0.0078	0.0064	0.1972	0.0044	0.0062	0.0051	0.2111	0.0047	0.00660	0.0054	0.3444	0.0077	0.01080	0.0089
		WB	0.821	0.0824	0.0018	0.0025	0.002	0.285	0.0061	0.0086	0.007	0.4994	0.0106	0.015	0.0123	0.1331	0.0028	0.004	0.0033
		WC	0.512	0.1307	0.0017	0.0024	0.002	0.1685	0.0022	0.0032	0.0026	0.4811	0.0064	0.009	0.0074	0.2197	0.0029	0.0041	0.0034
Motivation Factor Indicators		PB	0.659	0.3963	0.0068	0.0095	0.0078	0.1937	0.0033	0.0047	0.0038	0.1709	0.0029	0.00410	0.0034	0.2391	0.0041	0.00580	0.0047
		OB	0.684	0.2817	0.005	0.007	0.0058	0.246	0.0044	0.0062	0.0051	0.1766	0.0031	0.00440	0.0036	0.2956	0.0052	0.00740	0.0061
		PC	0.715	0.2887	0.0054	0.0075	0.0062	0.247	0.0046	0.0065	0.0053	0.1756	0.0033	0.00460	0.0038	0.2887	0.0054	0.00750	0.0062
	0.0029	CA	0.722	0.2446	0.0002	0.0003	0.0002	0.2804	0.0002	0.0003	0.0002	0.1589	0.0001	0.00020	0.0001	0.3161	0.0002	0.00030	0.0003
		CC	0.517	0.2804	0.0001	0.0002	0.0002	0.2804	0.0001	0.0002	0.0002	0.1277	0.0001	0.00010	0.0001	0.3116	0.0002	0.00020	0.0002
		SR	0.611	0.2893	0.0002	0.0003	0.0002	0.2213	0.0001	0.0002	0.0002	0.1724	0.0001	0.00020	0.0001	0.317	0.0002	0.00030	0.0002
		FS	0.757	0.2676	0.0002	0.0003	0.0002	0.1416	0.0001	0.0002	0.0001	0.2398	0.0002	0.00030	0.0002	0.3509	0.0003	0.00040	0.0003
		PE	0.703	0.2777	0.0002	0.0003	0.0002	0.2336	0.0002	0.0002	0.0002	0.1242	0.0001	0.00010	0.0001	0.3645	0.0003	0.00040	0.0003
		EA	0.679	0.1690	0.0001	0.0002	0.0001	0.2881	0.0002	0.0003	0.0002	0.3381	0.0002	0.00030	0.0003	0.2048	0.0001	0.00020	0.0002
		PG	0.798	0.2538	0.0002	0.0003	0.0002	0.2395	0.0002	0.0003	0.0002	0.2950	0.0002	0.00030	0.0003	0.2117	0.0002	0.00020	0.0002
		TG	0.759	0.1589	0.0001	0.0002	0.0001	0.3161	0.0002	0.0003	0.0003	0.2446	0.0002	0.00030	0.0002	0.2804	0.0002	0.00030	0.0003
		TO	0.615	0.2927	0.0002	0.0003	0.0002	0.27	0.0002	0.0002	0.0002	0.0991	0.0001	0.00010	0.0001	0.3382	0.0002	0.00030	0.0002
		WG	0.761	0.3234	0.0003	0.0004	0.0003	0.2734	0.0002	0.0003	0.0002	0.1049	0.0001	0.00010	0.0001	0.2984	0.0002	0.00030	0.0003
GRA - Comparative Labor Index (GRA)*** (Standardization)				0.2756				0.3036				0.334				0.3874			

* PD is the Physical Desire
** MD is the Mental Desire
*** SD is the Spiritual Desire
***Based on the concept of GRA, the comparatively synergized index is estimated by function equation (2), (3) and (4).

Figure 7: Employee's demand comparative index computed for four kinds of potential innovative strategy by GRA

successfully manipulated resources not only to cut down manufacturing expenditures but also to create the most profits in order to strengthen their competitive advantages. This research may motivate Taiwanese manufacturers to undertake their best innovative strategy with the higher compensation levels. The contention of this research, therefore, not only focuses on the original central concept of five theories but also concentrates on the current laborers' demands during the selection of the best potential innovative strategy by utilizing the novel MCDM methodology. Furthermore, there are four main assessable hierarchies which cover key-points of assessable patterns, criteria, sub-criteria and selected candidates, for the best investment strategy in order to
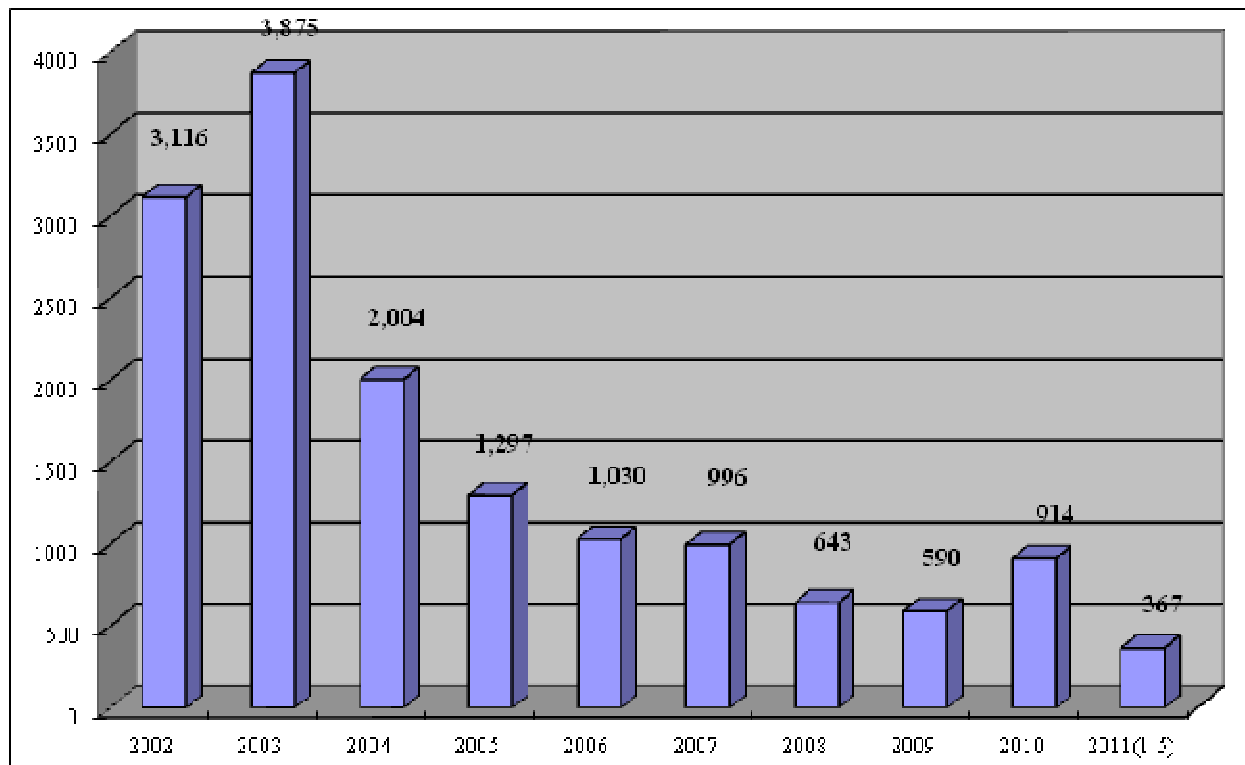
Figure 8: Relationship for characteristic, criteria, sub-criteria and selected candidates

confront the challenges from the domino effect of the labor revolution in the hypercompetitive Chinese manufacturing industry (Lorsch, 1974).

The finding in this research is that the overall evaluated results indicate "change original business at the raising compensation policy (CBRCP)" is the best choice for Taiwanese manufacturers in future by utilizing FA-ANP (the Comparative Labor Index, 0.2829), FANP (0.1332, 0.1417, 0.166; the number of similarity measure, 1) and GRA (the GRA- Labor Comparative Index, 0.3874). Further, the desires of Chinese laborers are reflected in the results from the collection of 138 completed questionnaires and from the opinions of twenty academic and survey experts which resulted in two essential conclusions in this research. The first most contributed conclusion is that the score of the investment comparative index of "CBSCP" is higher than "OBRCP" that means many of the Taiwanese manufacturing enterprises are considering shifting or have moved their manufacturing factories from the developed coastal Chinese cities to the developing interior subordinate cities or outside of China to the undeveloped low-pay countries in the Southeastern Asia region such as Vietnam, Laos, Myanmar, and so on. However, this employment revolution completely conforms to the economic development policies of the Chinese government because it increases the average level of employment compensation and develops the interior subordinate cities in order to diminish the poverty

gap among cities. Empirically, in response, according to the 2011 annual reports of Taiwanese Mainland Affairs Council, the tendency of the cases approved by Taiwanese Ministry of Economic Affair, in China has expressed the descended condition from 3,116 in 2002 to 914 in 2010, especially there are the lowest in 2008 (643) and in 2009 (2009) as expressed in figure 8.

Discussing the feedback from the comments of the collected questionnaires in depth, the second conclusion is that the Chinese laborers have shifted their focus from solely on salary to other workplace factors such as employee benefits, work safety, location, and job satisfaction. Further, a significant number of the questionnaires from the laborers clearly pointed out an expressed desired to move back to their hometowns because of the lower cost of living but they wish to retain their current compensation levels. In addition, this employment revolution completely conforms to the economic development policies of the Chinese government because the Chinese government has endeavored to increase the average level of employment compensation and to develop the interior subordinate cities in order to diminish the poverty gap among cities. Nevertheless, throughout the relative literature reviews, in terms of macroeconomic consideration, these enterprises can choose to transfer the increment cost of compensation to the final customer in the form of higher prices for more profits but may affect the balance of the

world's inflation-control mechanism. For this reason, the employment reforms in China has not only resulted in a change in innovative strategy from Taiwanese manufacturers but has also led to a shake-up in the world-disinflation-control balance under the domino effect of the labor revolution.

In terms of research limitation, regardless of the collection-data that were utilized, the four main assessable approaches consisting of the FA, FA-ANP, Fuzzy FA-ANP and GRA assessable approaches, of the MCDM methodology were cross-employed to avoid uncertainty. Missing in the research is the more diversified collection-data from China's workers and more effective and efficient methodologies are supposed to be collected and cross-applied for the increment of research reliability and validity. In addition, on account of the research future direction, the next step beyond this research is to collect additional empirical macroeconomic data to develop a more comprehensive evaluation model that takes into consideration a more in-depth vertical measurement and horizontal assessment methodologies in order to develop added comprehensive and effective managerial strategies for surviving in this momentous, dynamically-changing and lower-profit Chinese manufacturing industry.

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