

Establishing talent management for company's succession planning through analytic network process: Application to an MNC semiconductor company in Taiwan

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ABSTRACT

This study is to design a leadership development program for a company's succession planning which will be important for its future competition. A semiconductor assembly and testing multinational corporation (MNC) in Taiwan was selected for interviews of its high level management to address the business strategy and challenge. Along with an investigation of the literature, this research works on the experiences and leadership competencies needed for those in leadership positions. The major consideration on designing leadership development program is to deal with many intangible factors, as well as dependent relationship among experiences and leadership competencies. Then ANP approach is applied to overcome both difficulties through pairwise comparisons by experts. A weight system of experiences and leadership competencies is then built for designing the leadership development program, as well as the decision basis of leadership selection. This model was approved by top management at the case company and being implemented to prove its validity.

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1. Introduction

Succession planning has the potential to become one of the major business disciplines in the coming decade. According to the most recent Conference Board CEO challenge – a global survey of more than 500 CEOs – talent-related issues continue to be one of the greatest concerns for business leaders [1]. Simultaneously, based on human resources and business plans, managing succession is a very critical long-term human resource (HR) management issue.

Succession planning has been defined in numerous ways over the years. In general, it is classified as the deliberate and systematic efforts to project leadership requirements, to identify a pool of high potential candidates, and to develop leadership competencies in those candidates through intentional learning experiences and selections of leaders from a pool of potential leaders [2]. Consequently, good succession planning does not just look at who is next in the line for a slot, but also targets people early in their careers and determines what kind of training and experiences they need in order to become effective leaders. The purpose of this study is to design a leadership development program for developing a company's future potentials as well as an assessment of development can be an important reference to decide or select who will be the successor of an important leadership position.

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Leadership development programs include both experiences and leadership competencies which project what the company's needs are, and they design a ranking importance of those needs. Put into practice, the main factors to measure the success of leader development is good performance of those who have been promoted or taken up a new assignment to succeed a leadership position. Collins indicates that outcomes of leadership development programs are defined in terms of organizational performance [3]. Therefore, performance is the priority to be considered for designing leadership development program.

This study has employed interviews with high level management and investigates research papers in the literature to work out the needed experiences and leadership competencies for leadership position holders. The study then implements the analytic network process (ANP) approach to evaluate the priorities as a basis for designing leadership development program. Rather than the analytic hierarchy process (AHP) approach, the ANP is applied herein to prioritize the importance of needed experiences and leadership competencies under the complex situation of interdependence and inner dependence among experiences and leadership competencies. This will be discussed further in the coming section.

2. Literature review

2.1. Succession planning: An organizational priority that touches the future

Succession planning is different from replacement planning, because it focuses on forecasting organizational needs. It is not based upon reactions to an unforeseen event, but rather it is based upon proactively securing the human resources needed to ensure the continuity and prosperity of an organization. Succession planning is about the identification and development of future leaders [1]. Therefore, an organization needs to identify, develop, and select successors who are the right candidates with the right skills at the right time for leadership positions.

Ibarra indicates there are several critical aspects necessary for effective succession planning in an organization as follows [4].

- (i) Leadership competency models that provide a blueprint for high performers.
- (ii) A functioning performance management system that measures individuals against the leadership competency models.
- (iii) An individual development planning process that helps narrow the present gap between current competencies and current performance and the future gap between future competencies and the potentials that are required.
- (iv) A measurement method that assesses how well the succession program is functioning over time – meaning that whenever there is a vacant leadership position, there are one or two suitable candidates within the organization who are prepared or qualified for a leadership position. Most people who have been promoted or have taken up a new assignment will perform well. Nevertheless, there are a few among them who are bound to fail in delivering the expected results [5].

Building leadership competency models is the key to a successful succession planning. Tropiano indicates that leadership competencies are identified, regularly reviewed, and updated. Potentials are assessed and developed against those competencies [2]. This study focuses on how to build the leadership competency model and use the ANP approach to prioritize the importance of leadership competencies. We then design the leadership development program for a high potential candidate's development. The following sections include a leadership competency model and ANP approach.

2.2. Leadership competency model

Many studies address what specific leadership competencies a future leader should possess. However, "what should be" the results of leadership development for a candidate? Collins analyzes 54 studies on leadership development research from 1984 to 2000 and concludes that organizational performance is the central focus of those leadership development programs [3]. The leadership competency model includes the needed experiences and leadership competencies. Experiences is considered to be an outward performance which could be visible or can easily measure the impact of organizational performance directly, while leadership competency is the intrinsic capability which drives the momentum that leads to the performance level on a daily basis. Additionally, both experiences and leadership competencies are important and needed in order to develop those future potential leaders. Simply speaking, the outcome of leadership development programs are defined in terms of organizational performance, which should be the driving force and energy behind the design and implementation of leadership development programs.

2.2.1. What are the needed experiences for leaders to perform well in their organizations?

This research conducted interview questions with top management of the case company (a semiconductor assembly & testing MNC in Taiwan) so as to find the criteria for promoting a high potential employee to a leadership position. The first is to emphasize how long the candidate is in a managerial position in order to prove management capability. Management capability is imperative for a leader, as it is a kind of learning process that can be nurtured and accumulated under daily management tasks. Therefore, managerial experience is important for incubating the management capability in a leader. An organization needs highly skilled and experienced leaders at all levels, as Bernthal and Wellins note that leaders are asked to play multiple roles, including strategist, coach, global thinker, change driver, and entrepreneur [6].

Secondly, it is said that an employee with good potential can outperform others no matter what the assignment is at any level of position. Good performance is a key criterion for considering a high potential leader in this paper's case company. Collins indicates that outcomes of leadership development programs are defined in terms of organizational performance [3].

Thirdly, leaders at all levels are asked to play multiple roles [6]. Amin et al. offer that strategic leadership is multifunctional, involving managing through others and assisting organizations in coping with change, which is increasingly exponential in today's globalized environment [7]. When examining the best business practices at companies such as Intel, British Petroleum (BP), Colgate, and Dow, a common theme is seen in ensuring whereby those in the leadership pipeline receive a broad education, both within the company and outside of it [1]. To accomplish this, high potential employees are moved around in an organization, in both functional and line management roles, so that they can acquire a broad base of experience which they can later draw upon.

Fourthly, diversity is increasingly recognized as one of the most significant challenges faced by all organizations today in this globalized environment. Harrison mentions that one of the greatest challenges faced by MNCs is developing expatriate managers who can function successfully within other cultures [8]. Such cross site experience (expatriate to different countries or to be assigned to different business units) is the key for success in leadership development, especially in MNCs such as the case company. There is a growing requirement for managers to have a global mindset to manage across regions [6]. Companies keep track of those who are suitable to take up cross-border appointments. Indeed, individuals who are interested in and available for overseas postings are at a distinct advantage in their career. It is even a prerequisite for taking on senior roles when joining the high potential pool in our case company.

These needed experiences can be summarized as followings:

- (i) Managerial experiences: experiences in management positions should be officially announced.
- (ii) Consistent good performance: yearly performance appraisal should be above the 75 percentile.
- (iii) Cross function experience: there are different function experiences with acceptable good performance.
- (iv) Cross site experience: it is defined as different locations, i.e. different countries are preferable.

2.2.2. *What should the leadership competencies be for leaders and their organizational performance?*

Most organizations recognize that effective leadership is one of the most powerful competitive advantages an organization can possess [3]. What are the leadership competencies that should be included in leadership development programs for high potentials (HiPos) which can be incubated on a full range of leadership capability so that they can perform well in their positions as expected? Based on the case company's situation, its leaders are asked to face and perform the following challenges. As a result, leadership competencies should be equipped accordingly.

2.2.3. *How to compete globally when competition is not restricted within a small area, but all over the world?*

In this globalization era, strategic leadership for a leader is very important. It is multifunctional, involving managing through others and helping organizations to cope with change in today's globalized environment [9]. Strategic leadership is the leader's ability to anticipate, envision, maintain flexibility and empower others to create strategic change as necessary. These provide us with direction that some competencies – i.e. inspiring commitment, strategy deployment, and readiness to learn and to adapt – are needed to compete all over the world.

Johnson and Richard mention that the recent business trend of globalization and increasing inter-group differences has turned attention to the management of demographic differences [10]. For example, managing diversity is a long-run investment, and an organization faces a level of adaptation and transformation equivalent to that encountered during deregulation or a major technological change. Globalization means there are many market opportunities, but a crisis could be encountered as well. Box and Darling point out the serious economic problems in the Far East in 1997 threatened the possibility of a worldwide economic recession. A company must have risk management capability and a proper strategy to survive in such an environment [11].

Diversity is increasingly recognized as one of the most significant challenges faced by all organizations today due to globalization. Leaders who are unable to maximize opportunities because of their limited cross-cultural skills, drive change to cope with uncertainty, integrate resources and manage conflict, and have a readiness to learn and to adapt will prevent their company from successfully fulfilling its strategic goals.

2.2.4. *How to survive in a complex and rapid changing environment?*

Highly developing Internet technology leads to a more complex and fast-changing environment. The situation becomes the fast will beat the slow rather than the larger takes advantage of the smaller. Change is inevitable, as Metz indicates that change driven by competitive forces drives changes in an organization's individual processes and systems. The challenge is for a leader to proactively anticipate and be responsive to new competitive realities in order to assure that the organization will compete and survive in a changing environment [12].

In response to increasingly complex environments, organizations seek new models and structures to navigate under environmental uncertainty. Kirkman et al. mention those models typically include both structural changes (e.g. team form of organizing) and process changes (e.g. flexible manufacturing systems) in pursuit of higher levels of organizational performance [13].

The fundamentals of competition have changed. Baird et al. indicate that quality is now a cost of entry rather than a point of differentiation. While advances in quality provide some competitive advantage in the short run, long-run superiority comes from the human element and managerial expertise [14]. Continuous change is a way of life for companies and their employees in today's fast-paced, competitive business world. Strohmeier mentions that the challenges faced by leaders who must transform their organization include eliminating layers of management, streamlining processes, empowering many employees and downsizing others, forming self-directed work teams, etc. [15].

2.2.5. How to build a learning organization to enhance a company's competitiveness?

A continuous-changing environment, uncertain business conditions, and competitors exist everywhere in today's business world. These situations oblige organizations to change their business model rather than use a stable or a single way to cope with today's business environment. Senge's seminal book "The Fifth Discipline" introduced the art and practice of the learning organization [16]. He points out that organizations need to adapt to their changing environments. Similarly to a human being, the organization has to learn continuously for its growth so as to compete and survive in its changing environment which includes the concept of work is changed. Bass compares being replaced by the unbundling of the tasks to that of a traditional job. Instead of an organization member having one permanent bundle of tasks to complete, the member will need to work alone or in teams on temporary tasks and in temporary teams [17]. In other words, change will coincide with change in an organization's needs. Some tasks may be outsourced and some may be shifted within the organization. The organization has to learn how to adapt to changes in the diversity of its work force and continuously accommodate to changing demands for social responsibility. Innovation is the key for competitiveness. Senge devotes his latest book to the importance of innovation in the corporation [16].

In addition, Hornsby and Kuratko mention the need has arisen in response to a number of pressing problems, including a rapidly growing number of new and sophisticated competitors. Flexibility shows the readiness to learn and to adapt [18]. Nordhaug indicates that when taking into account the increased demand for flexibility and readiness for change facing most contemporary organizations, we need to devote additional attention to non-task-specific competencies and their significance for efficiency, competitiveness, and career mobility [19]. This attention is paramount if the focus is to shift from needs for a static fit in organizations to needs for a dynamic adjustment to frequently changing external conditions.

Others who address how to develop leaders include the following. Cheloha and Stringer indicate that the most influential development action turns out to be the amount of decision making authority a person was given [20]. Anna et al. express that one very large and geographically dispersed organization may implement comprehensive coaching by using in-house resources. Executive coaching is a management development tool that has the potential to combine personal career development with organizational strategy and goals [21]. Campbell and Dardis mention that leadership is influencing people by providing purposeful direction and motivation which operates to accomplish the mission and improve the organization [22]. Stepping into the 21st century, Hopkins and Hopkins say that managers must try to manage members of a workforce that is becoming increasingly more diverse and begin leading them. To develop diverse leaders, they must successfully lead a diverse workforce [23]. Stavrou et al. indicate in succession planning that the personality characteristics of leaders who leave office (successes) and those who take over (successor) are of great interest [24]. Hunt compares and analyzes the leadership competency profiles of German, American, and Australian leaders, indicating that American and Australian managers place higher priorities on interpersonal and team-leadership competencies – such as the ability to negotiate effectively and the ability to motivate others – while German managers emphasize problem-solving ability [25].

In summary, there are fifteen leadership competencies, such as leading change, inspiring commitment, managing diversity, cost management, risk management, strategy deployment, creative thinking, demand top performance, flexibility, organizing, problem solving, decision making, project management, language skill, managing conflict, and negotiation. At the same time, there are five leadership competencies which recognized widely at the case company. Discuss and agree with top management at the case company, both groups of leadership competencies are integrated vis-à-vis as follows.

- (i) Leadership: leading change, inspiring commitment, and managing diversity.
- (ii) Operational management: cost management, risk management, and strategy deployment.
- (iii) Personal character: creative thinking, demand top performance, and flexibility (readiness to learn and to adapt).
- (iv) Getting-things-done (the execution power): organizing, problem solving, decision making, and project management.
- (v) Communication: language skill, managing conflict, and negotiation.

Boudreau mentions that people, intellectual capital, and talent are even more critical to organizational strategic success [26]. This observation is so common today that it almost goes without saying. Campbell and Dardis offer that effective leader development must focus on the type of person an individual is, "Be", the kinds of competencies he has, "Know", and the kinds of decisions he makes, "Do". It takes a long time to incubate a leader to succeed at a leadership position [22]. Thus, the organization has to prepare at an earlier stage for its leaders' development to avoid rushing to fill in open positions, meaning that many leaders are unprepared when they start their new jobs.

2.3. Using ANP rather than AHP in this study

Selecting a proper method for designing leadership development program is a type of Multi-Criteria Decision Model (MCDM) problem. Conceptually, MCDM techniques can help decision makers (DMs) distinguish the kernel of a complicated

problem by identifying different criteria on a categorized basis, thus compromising group conflicts and achieving a multidimensional decision [27]. This study treats such a problem, because complicated relationships exist between criteria and sub-criteria when prioritizing them. AHP and ANP are better approaches among those MCDM methods.

AHP is a well-known technique that decomposes a decision problem into several levels in a hierarchical manner. An AHP model assumes a unidirectional, hierarchical relationship among decision levels [28]. In AHP the top element of the hierarchy represents the overall goal for the decision model. The hierarchy decomposes criteria until a level of manageable decision is met. In other words, the AHP is designed to model real world problems to handle multi-objective, multi-criteria and multi-actor decisions for any number of alternatives. An advantage of the AHP over other MCDM is the ability to incorporate quantitative values as well as qualitative information into the decision process [29].

The seven pillars of the AHP serve as a starting point for the ANP. The ANP provides a general framework to deal with decisions without making assumptions about the independence of higher level elements from lower level elements and about the independence of the elements within a level [30]. The ANP allows for more complex relationships among the decision levels and attributes. The ANP consists of the coupling of two parts. First, it consists of a control hierarchy or a network of criteria and sub-criteria that control the interactions. Second, it is a network of influences among the elements and clusters. The network varies from criterion to criterion and a different super-matrix of limiting influence is computed for each control criterion. Finally, each of these super-matrices is weighted by the priority of its control criterion and the results are synthesized through an addition for all the control criteria [31].

Taslicali and Ercan compare the ANP and AHP and their advantages and summarize them as follows. First, the AHP requires a strict hierarchical structure and relationship among factors and this requirement does not allow for the possibility of having a feedback relationship among a group of factors, or for interdependent relationships within a cluster of factors [32]. Instead of a hierarchy, the ANP approach is a network with dependence and feedback. Saaty indicates that ANP captures the outcome of dependence and feedback within and between clusters of elements. The AHP with its dependence assumptions on clusters and elements is a special case of the ANP [31].

The ANP is more powerful than the AHP in decision support under intricate situations. For example, in information strategy selection problems, if the objectives of information strategy application have been identified, then the decision on the optimal candidate projects can be made by simply applying the AHP to the problem. Nevertheless, in a changing environment with uncertainty and dynamics, the decision objectives cannot be easily identified, because they correlate with other elements that also cannot be clearly identified. In this case, ANP comes to the rescue. The ANP modeling process provides a way to clear all the relationships among variables, decreasing significantly the breach between model and reality.

In conclusion, ANP allows for the capability to model more complex and dynamic environments, which are influenced by ever-changing external forces. The ANP approach is capable of handling interdependence among elements by obtaining the composite weights through the development of a “super-matrix”. The super-matrix development includes a four-step approach as follows and will be further discussed in coming sections [29]. The first is model construction and problem structuring in order to clarify the problem and to find the relationship between criteria and sub-criteria; the second is the pairwise comparison matrices of interdependent purpose to make a comparison among various components and attributes; the third is the super-matrix formation purpose to resolve the effects of interdependence that exist between the element of the system; and the fourth is the priority weights of the criteria and sub-criteria purpose to determine the priority weights of determinants using results of the limiting super-matrix of the ANP model.

3. Methodology

The purpose of this study is to build one system for a succession planning, especially to include a leadership development program as well as a leadership position holder selection mechanism. The framework of this study is shown as Fig. 1. First, we investigate and summarize several research papers and interview top management at the case company to collect leadership competencies and experiences needed for a leader. Second, a questionnaire is designed to compare experiences and leadership competencies using a 1 to 9 scale as following by Saaty [31], and the ANP approach is then employed to prioritize those competencies and experiences. Third, we weight experiences and leadership competencies to design a leadership development program for a potential HiPo's development and the results of the execution of this leadership development program can be used as a basis for successor selection of a leadership position.

3.1. Summary of top management interviews

A leadership competency model is the key to success for succession planning. What should be the leadership competencies? How does one successfully run a business which is more crucial than ever in today's environment? A leader faces a more globalized, more complex, more dynamic, fast-changing, and diversified environment. Hence, this study emphasizes the relationship between the environment and competence, meaning what leadership competencies and experiences are needed for a leader to outperform in an organization. This study interviewed with management teams at the case company to summary as four leadership experiences and five leadership competencies. There are four experiences as followings: managerial experience, consistent good performance, cross function experience, and cross site experience. There are five leadership competencies: leadership, operational management, personal character, getting-things-done, and

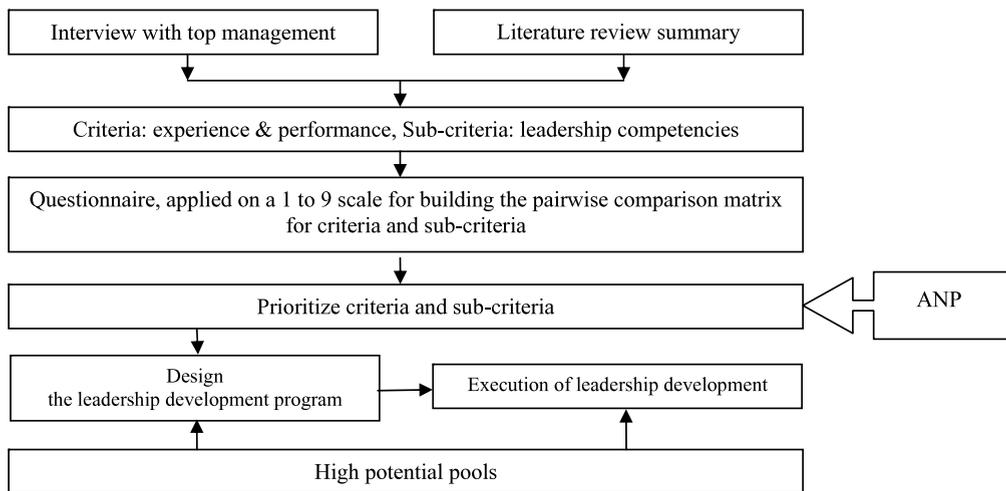


Fig. 1. The framework of the study.

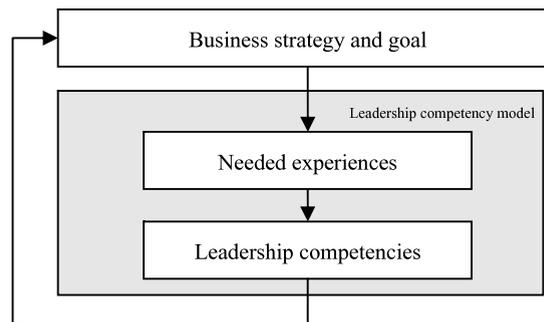


Fig. 2. The relationship structure of the leadership development program.

communication. Each of the leadership competencies include 3 sub-leadership competencies which summarized from literature review, with 15 items in total. The framework of the study should be as follows the Fig. 1.

Saaty suggests a scale of 1 to 9 when comparing two elements, with a score of 1 representing indifference between the two elements and 9 representing the overwhelming dominance of that element over the other [31]. To fit leadership competence into a company culture and its environment needs, this 9-scale questionnaire is designed and filled in by top management of the case company. This information is used for building a pairwise comparison matrix. There are 83 pairwise comparison matrices built at this stage.

3.2. Prioritization of experience and leadership competency

The prioritization of leadership competency model in term of leadership development need is the centered of designing leadership development program. As mentioned in previous section, leadership competency model includes experience and leadership competency. In practical, experience is the learning process of executing business strategy and goal, while leadership competency is the supporting ability for resulting performance. Therefore, business strategy and goal will dominate the priority of experience, as well as the priority of leadership competency is determined by experience. On the other hand, the formulation of business strategy and goal should be based on leadership competency which to promise their execution and performance. Fig. 2 shows the relationship in between.

3.3. An application of ANP approach

The leadership competency model includes both needed experiences and leadership competencies. Experience has four dimensions of consideration: management experience, consistent good performance, cross site experience, and cross function experience. There are 5 categories for leadership competence and each of them includes 3 detailed descriptions: leadership (leading change, inspiring commitment, managing diversity), operational management (cost management, risk management, strategy deployment), personal character (creative thinking, demand top performance, flexibility), getting-things-done (organizing, problem & decision making, project management), and communication (language, managing conflict, negotiation).

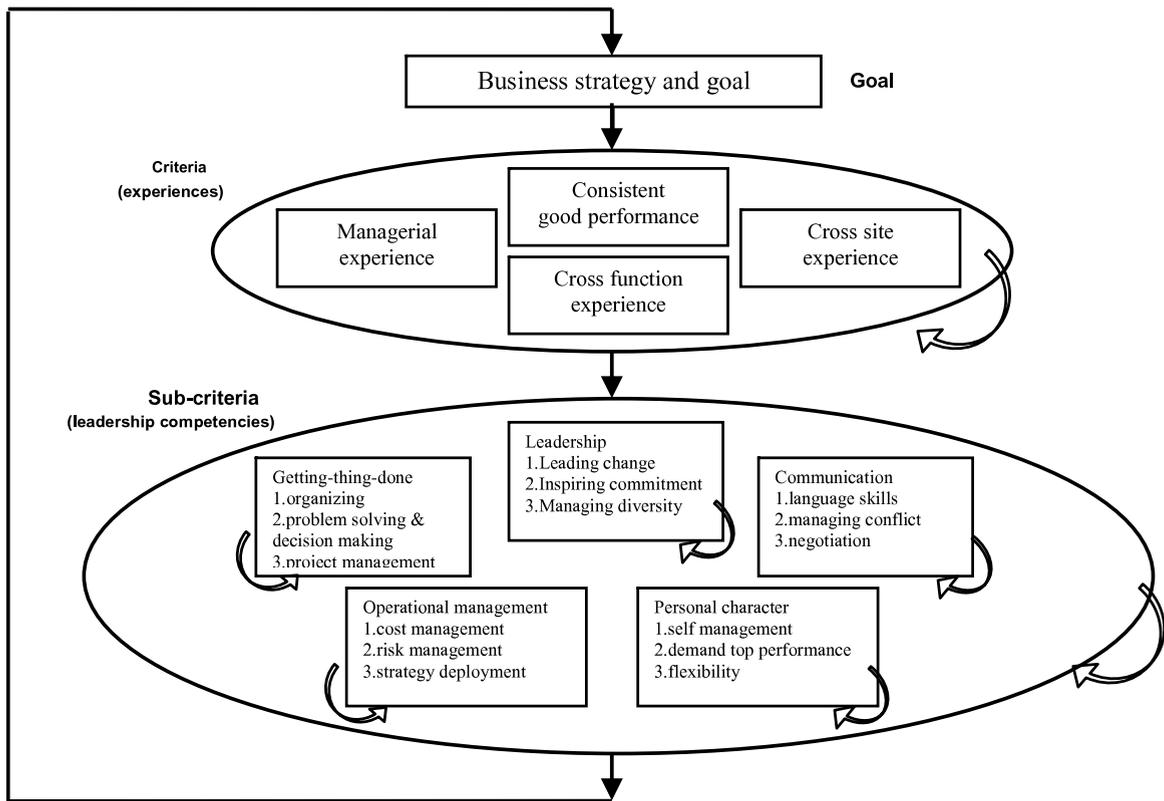


Fig. 3. Structure model of the leadership development program based on ANP.

There exists interdependencies among experiences and leadership competencies. Thus, the ANP approach is applied to prioritize the leadership competencies and experiences in order to design a leadership development program. The proposed procedure is illustrated as the following four steps:

Step 1: The structure of the problem. There are inner dependencies within criteria and sub-criteria without considerations on the feedback mechanism between criteria and sub-criteria. At the same time, sub-criteria is separated from five categories as previous mentioned that exist inner dependence within themselves. As seen in Fig. 3, there is a connection from the bottom level of sub-criteria to its goal, and inner dependence for criteria, sub-criteria, each category of sub-criteria – a form of network known as holarchy is formed.

Step 2: Pairwise comparisons for interdependency. This step makes comparisons among criteria and sub-criteria. It is the same evaluation method with AHP, which is a scale of 1 to 9 when comparing two components, with a score of 1 representing indifference between the two components and 9 being overwhelming dominance of the component under consideration (row component) over the comparison component (column component) [31]. When scoring is conducted for a pair, a reciprocal value is automatically assigned to the reverse comparison within the matrix. Several pairwise comparisons are made as follows.

- (i) One matrix represents the impact of the goal on criteria.
- (ii) One matrix represents the interdependence of the criteria.
- (iii) Twenty matrices represent the impact of criteria on sub-criteria.
- (iv) Sixty matrices represent the interdependence of the sub-criteria.
- (v) One matrix represents the impact of sub-criteria on goal.

Step 3: The formation of super-matrices. The super-matrix is a partitioned matrix, where each sub-matrix is composed of a set of relationships between two levels in the graphical model. There are three types of relationships may be encountered in this model (Fig. 3):

- (i) interdependence of a level of components on itself (criteria or sub-criteria)
- (ii) hierarchy structure between components (criteria and sub-criteria)
- (iii) the bottom level is connected to its top level of criteria and has no single element goal in a hierarchy.

A holarchy in the super-matrix in Fig. 4 [31] can be represented by a single column vector W_1 for the priorities of the criteria in terms of an overall goal. Here, W_2 represents the interdependence matrix of criteria. The weights of the sub-criteria with respect to the criteria are represented by the matrix W_3 . Similar to W_2 , W_4 represents the interdependence matrix of sub-criteria, where W_5 is a matrix that represents the weights of the overall goal with respect to the sub-criteria.

$$W = \begin{matrix} & & \text{Goal} & \text{Criteria} & \text{Sub-criteria} \\ \text{Goal} & \left(\begin{matrix} 0 & 0 & W_5 \\ \text{Criteria} & W_1 & W_2 & 0 \\ \text{Sub-criteria} & 0 & W_3 & W_4 \end{matrix} \right) \end{matrix}$$

Fig. 4. The unweighted super-matrix of a holarchy.

The initial super-matrix (unweighted matrix) is formed by priority vectors for which the cells get two values: priority vectors and zero. In the matrix, priority vectors exist in a cell where interdependent factors intersect. The zero value cells consist of non-relationship factors [33]. Table 1 shows the super-matrix of the proposed model. The weighted matrix is obtained through normalizing of the initial matrix called weighted super-matrix. Table 2 illustrates the value after convergence.

Step 4: Prioritization of weights for the criteria and sub-criteria. The selection of the best alternative depends on the outcome of the desirability index. Tables 3 and 4 show respectively the desirability indices for the criteria (experiences) and sub-criteria (leadership competencies). The score of criteria and sub-criteria, which is represented by raw values, is from the limited super-matrix in Table 2. To get normal values, raw values are summed up and every row in the raw column is divided by the sum. To obtain ideal values, every value in the raw value column is divided by the greatest value of the column.

4. Data analysis and discussion

The framework that was used in this study serves as a tool for designing leadership development program. The criteria and sub-criteria that are used in the model focus on building one leadership development program for a succession planning. This model is capable of taking into consideration multiple dimensions of information into the analysis and evaluation. The framework represents the possible relationships in this model, for example: interdependence among experiences and leadership competencies, inner dependence within experiences and leadership competencies. Additionally, developing a leadership development program is a strategic issue incorporating human preferences into the decision making process, with the ANP approach enabling the decision maker to overcome strategic decisions.

4.1. Leadership development program – provides enriched experiences for a HiPo

The importance of experience and leadership competency should be taken into consideration in designing leadership development program. The importance can be derived from the ANP analysis. The ANP analysis results indicate that the most important is the Cross Function Experience with a relative important value of 0.5028, which is far more important than the others. Consistent Good Performance with a relative weight of 0.1932 is ranked second, followed by Cross Site Experience with a relative weight of 0.1565. Managerial Experience is the least important with a relative weight of 0.1474 according to the ANP analysis.

The cross function experience is the most important determinant for selecting the successor in a leadership position. Undoubtedly, it is in line with reality at the case company. The top management at the case company believes that multifunction experiences extend the view in making appropriate decisions in today's complex business model. It is not restricted in too much professionalism that suffers from the leadership change and it shows easy communication by not sticking to any particular viewpoint in the firm. As far as a leader is concerned, those are the key success factors in making good organizational performance.

The following two types of experiences, good performance and managerial experienced, are must criteria for identifying HiPos. As mentioned previously, there are three must factors to identify potential talent in the case company: good performance, potentiality, and at least already in a managerial position. The HiPos are reviewed on a yearly basis, meaning that someone could be dropped from this pool if his/her performance is below the expected level. Both criteria are very significant as well. Nevertheless, in the common requirements in HiPos, they are second next to the first criterion of the cross function experience.

The case company is a manufacturing MNC and it focuses more on the site operational performance and companywide total results. The purpose of cross site experience is to develop those HiPos who have the capability to take on companywide assignments all over the world. Although overseas experience is a good way to incubate leadership capability, it is not the priority for considering a leadership position holder selected at the case company. It is proven in our case that current leadership position holders in the case company have few cross site experiences before they succeeded in their current positions.

The above issue is worth to be noted. The current leadership position holders have few cross function experiences before they took on their current position. Most of them experienced less than two functions. This phenomenon shows that leadership position holders have a hard time handling complex cases, especially in diverse and fast-changing business conditions. It is determined within the top management at the case company that how experiences function for a HiPo's development should be defined for every leadership position before succeeding at this position. Cross function experience is the main determinant factor for selecting the leadership position holder.

Table 1
The unweighted super-matrix of the proposed model.

Goal	ME	CGP	CSE	CFE	LS1	LS2	LS3	OM1	OM2	OM3	PC1	PC2	PC3	GTD1	GTD2	GTD3	CO1	CO2	CO3
Goal	0	0	0	0	0.118	0.066	0.045	0.059	0.023	0.074	0.079	0.067	0.108	0.075	0.051	0.024	0.123	0.063	0.025
ME	0.135	0.400	0.100	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CGP	0.169	0.300	0.300	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CSE	0.157	0.100	0.500	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CFE	0.538	0.200	0.150	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LS1	0	0.547	0.540	0.196	0.600	0.400	0.450	0.392	0.276	0.309	0.548	0.315	0.263	0.548	0.493	0.308	0.128	0.355	0.558
LS2	0	0.263	0.163	0.311	0.250	0.400	0.200	0.531	0.128	0.582	0.194	0.603	0.190	0.121	0.153	0.546	0.595	0.181	0.320
LS3	0	0.190	0.297	0.582	0.493	0.200	0.350	0.077	0.595	0.109	0.258	0.082	0.547	0.332	0.354	0.145	0.276	0.463	0.122
OM1	0	0.544	0.577	0.275	0.544	0.312	0.232	0.500	0.350	0.350	0.528	0.472	0.524	0.172	0.460	0.218	0.190	0.505	0.648
OM2	0	0.175	0.105	0.227	0.175	0.132	0.499	0.200	0.350	0.200	0.237	0.080	0.134	0.240	0.319	0.661	0.288	0.179	0.122
OM3	0	0.281	0.318	0.499	0.281	0.371	0.556	0.300	0.300	0.450	0.236	0.448	0.342	0.587	0.221	0.120	0.523	0.317	0.230
PC1	0	0.333	0.175	0.359	0.507	0.122	0.347	0.249	0.461	0.156	0.400	0.300	0.250	0.163	0.545	0.259	0.424	0.171	0.455
PC2	0	0.140	0.544	0.329	0.161	0.648	0.199	0.581	0.143	0.551	0.200	0.300	0.150	0.297	0.182	0.601	0.137	0.319	0.199
PC3	0	0.528	0.281	0.512	0.480	0.230	0.455	0.170	0.397	0.293	0.400	0.400	0.600	0.540	0.273	0.140	0.439	0.510	0.347
GTD1	0	0.484	0.505	0.319	0.540	0.333	0.540	0.168	0.307	0.526	0.197	0.156	0.578	0.500	0.400	0.400	0.302	0.320	0.169
GTD2	0	0.349	0.317	0.460	0.297	0.371	0.354	0.484	0.507	0.263	0.524	0.551	0.263	0.350	0.450	0.300	0.236	0.166	0.443
GTD3	0	0.168	0.179	0.221	0.163	0.142	0.163	0.349	0.186	0.211	0.279	0.293	0.159	0.150	0.150	0.300	0.462	0.515	0.387
CO1	0	0.260	0.439	0.614	0.166	0.232	0.455	0.254	0.180	0.460	0.210	0.439	0.210	0.238	0.132	0.181	0.600	0.350	0.350
CO2	0	0.404	0.362	0.268	0.320	0.446	0.337	0.404	0.332	0.319	0.302	0.238	0.488	0.447	0.312	0.463	0.250	0.400	0.300
CO3	0	0.335	0.199	0.117	0.515	0.322	0.468	0.342	0.489	0.221	0.488	0.323	0.302	0.315	0.556	0.355	0.150	0.250	0.350

Table 3

Results of the proposed model for criteria (experiences).

Criteria	Ideal	Normal	Raw	Rank
Managerial experience	0.2932	0.1474	0.0019	4
Consistent good performance	0.3843	0.1932	0.0025	2
Cross site experience	0.3113	0.1565	0.0020	3
Cross function experience	1.0000	0.5028	0.0065	1

Table 4

Results of the proposed model for sub-criteria (leadership competencies).

Sub-criteria	Ideal	Normal	Raw	Rank
L1: leading change	1.1124	0.0805	0.0781	2
L2: inspiring commitment	0.9155	0.0662	0.0643	9
L3: managing diversity	0.7369	0.0533	0.0518	14
OM1: cost management	1.1271	0.0815	0.0792	1
OM2: risk management	0.6583	0.0476	0.0462	15
OM3: strategy deployment	0.9793	0.0708	0.0688	7
PC1: creative thinking	0.8777	0.0635	0.0617	10
PC2: demand top performance	0.8733	0.0632	0.0614	11
PC3: flexibility, readiness to learn and to adapt	1.0137	0.0733	0.0712	4
GTD1: organizing	1.0000	0.0723	0.0703	6
GTD2: problem solving & decision making	1.0211	0.0739	0.0717	3
GTD3: project management	0.7437	0.0538	0.0522	13
CO1: language skill	0.8265	0.0598	0.0581	12
CO2: managing conflict	1.0016	0.0725	0.0704	5
CO3: negotiation	0.9367	0.0678	0.0658	8

4.2. Leadership development program – incubates leadership capability for HiPos

According to the findings of the model as shown in Tables 3 and 4, if we use “rank” as an indicator to compare the importance of 5 categories, then it shows that the one with a lower score is the more important one. The getting-things-done category is the priority among the 5 categories, with 22 in total, followed by operational management (24 in total), and a total rank of 25 for leadership, personal character, and communication. This reveals that execution power is the focus of the case company and it is believed that instilling the capability of getting-things-done and operational management into an organization can fully carry out organizational performance.

If there is a narrow view to a leadership competence individual, the top-5 priorities of leadership competencies reveal the importance of cost management (0.0815), leading change (0.0805), problem solving & decision making (0.0739), flexibility (0.0733), and managing conflict (0.0725), followed by organizing, strategy deployment, negotiation, inspiring commitment, creative thinking, demand top performance, language skill, project management, managing diversity, and risk management.

The case company’s measurement of its operational performance is mainly based upon cost control and management to generate profit. Taiwan is a labor intensive country and has to compete with its neighboring countries like Thailand, Vietnam, the Philippines, and mainland China. If the labor cost is too high in Taiwan, then the case company will move facilities out of Taiwan. Cost management capability, which includes both cost control and cost retrenchment, is hence crucial for the case company to rank it as the first priority which leaders should develop well.

Actually, these top-5 competencies are crucial for those assigned to new positions so as to maintain and enhance organizational performance. Thinking of when an employee moves to a new function, cost is the first thing taken into account and should be well managed as the case company is a cost-oriented company. On the other hand, problem solving and decision making are skills that every leader should possess, especially to a newly assigned position which could present different types of challenges not seen before in old positions. One should learn fast, be flexible to adapt new things, and make oneself melt into a new organization in as short amount of time as possible. Without a doubt, good interpersonal skills can help release tension from conflicts which may arise between new and old functions. The above statements explain that leadership competencies can support and assist in cross function development for HiPos.

The other competencies are important as well for one leader to develop. The implementation of a designed leadership development program can be used for the approaches below to incubate and identify HiPos in order to make sure they deliver good results. These have been implemented by the case company already.

- (i) Growing by assignment. A HiPo takes charge of one specific task or is assigned to a new position to enrich development needs.
- (ii) Growing via experience of a short assignment. This means the task can be finished in a shorter time. The purpose of this task is to experience (learn or observe) one function or skill rather than to be an expert of this field. Organizations use this approach to extend HiPos’ scope and to accelerate their knowledge development within the organization.

- (iii) Growing by designing on-line/off-line training. The organization should provide many courses for HiPos' training. Those courses strengthen HiPos' capability for performing well once promoted to a higher position or when taking up a new assignment.
- (iv) Coaching for growth. A coaching program can be separated into two parts: coaching in daily work and coaching for future career development. A HiPo's direct supervisor should coach him in daily work. Higher management, beside the direct supervisor, should be assigned and help set up/design his future career development.

A leadership competence model is the key to a succession planning. It provides profiles of ideal performers at present and in the future and also provides a way to align how people are selected and how people are developed along with the organization's strategic objectives. A company should recognize what is needed today and be flexible about what it needs under an ever-changing business climate especially in a technology-driven organization. Company's potentials are assessed and developed against this leadership competence model and its outcome is then defined in term of organizational performance. This is one of the main thought of succession planning.

5. Conclusion and future study

This study has applied the ANP approach to design a leadership development program, as well as for selecting the successor for a leadership position. A leadership development program is the key to effective succession planning, which defines capabilities and enables organizations to close the gap between strategic intent and current performance by guiding learning and pushing development for identified potentials. The advantage of this model is that the ANP approach constructs a multi-criteria decision model for weighing the importance of experiences and leadership competencies due to its ability to overcome the complex situation of the interdependencies between the former and the latter, and any inner dependence within themselves. The analysis using ANP is relatively cumbersome as the present work requires 83 pairwise comparison matrices. To arrive at the relationship among enablers requires a long and exhaustive discussion with management team members from the case company. The top management of the case company then approved to apply this systematic approach for designing their leadership development program and proved the workability of this model at the case company.

The proposed ANP model mainly focuses on linear hierarchy, but the network relationship herein is regardless of the feedback process from sub-criteria (leadership competencies) back to criteria (experiences) in the proposed model. If the alternative set (candidates for a leadership position) is added in the review loop, the model will include a feedback system between criteria and sub-criteria, criteria and alternatives, and sub-criteria and alternatives. This work will formulate a complete decision making process for leadership position holder selection. It is expected that the model will be much more complex and sizable than that used in this study. Therefore, one may utilize a two-phase decision making process [27] to effectively manage real world problems. It is expected as well that top management can make better decisions for leadership position holder selection.

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