



การพัฒนารูปแบบศักยภาพผู้บริหารเพื่อเข้าสู่ตำแหน่งกรรมการบริษัทร่วมทุนในอุตสาหกรรมพลังงานข้ามชาติในยุคดิจิทัล

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สาขาวิชาการพัฒนารัฐกิจอุตสาหกรรมและทรัพยากรมนุษย์ คณะพัฒนารัฐกิจและอุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ

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รับเมื่อ 7 กรกฎาคม 2564 แก้ไขเมื่อ 3 สิงหาคม 2564 ตอรับเมื่อ 6 สิงหาคม 2564 เผยแพร่ออนไลน์ 17 กรกฎาคม 2566

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บทคัดย่อ

วัตถุประสงค์ของการวิจัยคือ 1) เพื่อค้นหาองค์ประกอบหลักและองค์ประกอบย่อยของรูปแบบศักยภาพผู้บริหารเพื่อเข้าสู่ตำแหน่งกรรมการบริษัทร่วมทุนในอุตสาหกรรมพลังงานข้ามชาติในยุคดิจิทัล 2) เพื่อสังเคราะห์รูปแบบการพัฒนาศักยภาพผู้บริหารฯ และ 3) เพื่อพัฒนาคู่มือแนวทางการพัฒนาศักยภาพผู้บริหารฯ โดยใช้กระบวนการค้นแบบรังสรรค์และปฏิบัตินิยม ระเบียบวิธีวิจัยอนาคตการณแบบผสมด้วยเทคนิคเดลฟายเชิงนโยบาย เริ่มจากการศึกษาเอกสารและงานวิจัยที่เกี่ยวข้องเพื่อนำมาสร้างเป็นเครื่องมือเก็บรวบรวมข้อมูลจากผู้เชี่ยวชาญซึ่งเป็นกรรมการบริษัทในอุตสาหกรรมพลังงานรวม 18 ท่าน ในการทำเดลฟายรอบแรกแล้ววิเคราะห์ด้วยวิธีวิเคราะห์ข้อมูลเชิงคุณภาพเพื่อนำไปสร้างเป็นแบบสอบถามความคิดเห็นผู้เชี่ยวชาญเพื่อยืนยันความคิดเห็นและหาความสอดคล้องกันของข้อมูลในระหว่างการทำเดลฟายในรอบที่ 2 เป็นต้นไป จนได้ค่าความสอดคล้องกันตามเกณฑ์เทคนิคเดลฟาย ($IQR < 1.5$, $CV < 0.5$) จากนั้นจึงนำองค์ประกอบทั้งหมดที่ได้รับฉันทามติมาสังเคราะห์เป็นรูปแบบการพัฒนาศักยภาพผู้บริหารฯเชิงแผนภาพ และพัฒนาเป็นคู่มือขึ้น รูปแบบนี้ได้รับการเห็นชอบจากกระบวนการการสนทนากลุ่มย่อยด้วยมติเอกฉันท์ว่ามีความเชื่อถือได้และมีประโยชน์ในการนำไปประยุกต์ใช้ ผลวิจัยพบว่า: รูปแบบศักยภาพผู้บริหารฯประกอบด้วยองค์ประกอบหลักทั้ง 4 ด้าน คือ ศักยภาพด้านการวางยุทธศาสตร์ธุรกิจและอุตสาหกรรม (มี 8 องค์ประกอบย่อย) ศักยภาพด้านการสื่อสาร (มี 5 องค์ประกอบย่อย) ศักยภาพด้านความสัมพันธ์กับผู้อื่น (มี 7 องค์ประกอบย่อย) และศักยภาพด้านการแก้ไขปัญหาและสถานการณ์ (มี 8 องค์ประกอบย่อย) นอกจากนี้คู่มือที่ผู้วิจัยได้พัฒนาขึ้นนี้ได้ผ่านการประเมินโดยผู้ทรงคุณวุฒิด้วยมติเอกฉันท์ว่ามีความเหมาะสมและสามารถนำไปใช้ในการพัฒนาศักยภาพผู้บริหารฯได้อย่างมีประสิทธิภาพ

คำสำคัญ: ศักยภาพผู้บริหาร กรรมการบริษัทร่วมทุนในอุตสาหกรรมพลังงานข้ามชาติ

การอ้างอิงบทความ: รศยา เขียววรรณ, สุภัททา ปิณฑะแพทย์ และ ธีรวิมล บุญโยโสภณ, “การพัฒนารูปแบบศักยภาพผู้บริหารเพื่อเข้าสู่ตำแหน่งกรรมการบริษัทร่วมทุนในอุตสาหกรรมพลังงานข้ามชาติในยุคดิจิทัล,” *วารสารวิชาการพระจอมเกล้าพระนครเหนือ*, ปีที่ 33, ฉบับที่ 3, หน้า 1-10, เลขที่บทความ 233-235210, ก.ค.-ก.ย. 2566.



The Executive Development Model for the Entry into Director's Position of the Trans-international Joint Venture Energy Industrial Company in the Age of Digitalization

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Received 7 July 2021; Revised 3 August 2021; Accepted 6 August 2021; Published online: 17 July 2023

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Abstract

The objectives of this research are 1) to discover the factors and components of the executive model development for the entry into director's position of the trans-international joint venture energy industrial company in the age of digitalization; 2) to create a new executive potential development model; and 3) to develop the Model's Guidance Material. Conducting the study within the pragmatic paradigm, the research was carried out by using mixed future research methodology with the Policy Delphi technique. The procedure started from literature review to create data collection instruments, i.e. guidelines for the Interviewees constituting 18 experts serving as energy-related industry's directors. The collected data from the first round of the Policy Delphi technique's interview was analyzed by using the qualitative data analysis method. The analyzed data was confirmed by the same expert panel for the level of consensus from the 2nd round Delphi onwards. Finally, the level of consensus for all 4 factors and 28 components were met with the Delphi technique criteria. The Synthesized Schematic Model was unanimously accepted for its credibility and usefulness by the 13 expert panel members during the focus group discussion session. According to the research findings, the executive potential development model is comprised of the 4 essential competencies with their respective subcomponents. They are: Competencies and skills in business and industry strategic planning (8 subcomponents); communication (5 subcomponents); stakeholder relationship management (7 subcomponents), in conjunction with problem solving and situation-diagnosis skills (8 subcomponents). The developed guidance manual received unanimous approval of all experts regarding its suitability and feasibility for future implementation to enhance executives' potential skills and abilities.

Keywords: The Executive Potential, Trans-international joint Venture Energy Industrial Company's Director

Please cite this article as: R. Teinwan, S. Pinthapataya and T. Boonyasopon, "The Executive development model for the entry into director's position of the trans-international joint venture energy industrial company in the age of digitalization," *The Journal of KMUTNB*, vol. 33, no. 3, pp. 1-10, ID. 233-235210, Jul.-Sep. 2023.

1. Introduction

The International Monetary Fund (IMF) has reported on the continuous growth of the global economics since 2010 [1], especially among the emerging and developing economic countries. As a consequence of this growth, the increasing of the global energy demand has become highlighted. Meanwhile, the conventional energy supply e.g. fossil fuel, gas to accommodate the increasing of the energy demand is decreasing and causing drastic impact to the climate and the global environment inevitably [2].

Since 2000, The United Nations has launched the Sustainable Development Goals (SDGs) [3] with its 17 goals. The energy sector related goals are the affordable clean energy and the climate action. To achieve these goals, the conventional energy business and industry must be changed and reformed. The reformation requires huge funding and investment. Therefore, most of the new era energy industrial company business models have become the synergy of the joint venture energy company, particularly the model of the trans-international joint venture company [4]. The demographic and political structure of the Asian Economic Community (AEC) member countries is the most suitable region for the trans-international joint venture energy industrial company investment, considered by its ease of doing business and the energy resources availability [5], [6].

One of the company's key success factors, especially the trans-international joint venture energy industrial company, is the efficiency and effectiveness of the company's board of director performance [7], [8]. A joint venture company

director is normally nominated by the parent's company. Hence, the executive development to the nominated executive prior to entering into the company director's position would significantly elevate the director's potential (K-S-A) to perform his/her duties and responsibilities efficiently and effectively [9]. Consequentially, he/she will be able to direct the company to achieve the investor, company and industrial objectives.

The research questions could be defined as;

1) What are the factors and their components which are needed as parts of the executive potential development model to elevate their potential to be able to perform the director's roles and responsibilities efficiently and effectively.

2) What kind of the different processes are needed for the executive potential development.

2. Materials and Methods

2.1 Materials

The research was designed to be a futures research which must govern to the tri-points studies [10] which are; to study the past events from the past research and case studies, to study and observe the present empirical events and to study the future events by analyzing the trends and foresight for the future. The data was collected from the concerned literature, the past research papers review and the key informants interviewing by using the prepared interview and observation forms including with the survey questionnaires as the research tools. The tools were reviewed and verified by the Delphi experience researchers.



2.2 Methods

The research was carried out with the constructivism and pragmatism research paradigm [11], mixed method futures research methodology by using policy Delphi technique [12]. The 1st round Delphi was to collect the qualitative data from 18 purposive sampling group members (key informants) individually by using the semi-constructed interview technique with the open-ended interview questionnaire followed by the qualitative data analysis. The analyzed data from the 1st round Delphi were organized and constructed to be the five Likert's rating scale questionnaire for the 2nd round Delphi onwards. Once any factor or component data is met with the Delphi criteria (IQR. < 1.5 [13] and CV. < 0.5 [14]), the data would be considered to get the consensus level for being a significant parameter and becoming a part of the model's factors and components accordingly.

2.3 Qualitative data analysis

The contents of the interviewed data were analyzed with the inductive analysis method by using the data organizing and thematizing technique [15] to eliminate the duplicate and non-related data. Finally, the remaining data was filtered using the data triangulation technique [16] by considering to their content and data source for their consistency.

2.4 Quantitative data statistical analysis

The collected quantitative expert opinion data from the 2nd round Delphi onwards was analyzed by using the descriptive statistic to verify each data IQR., CV. and the median for the data consensus consideration. The boxplot and the outlier data

which is found from the 2nd round Delphi and the 3rd round Delphi are illustrated hereunder in Figure 1 and 2 consecutively.

2.5 Model Synthesizing

All of the consensus data which had been accepted by the expert panel comments for being a part of the processes, factors or components of the executive potential development model would be collected and synthesized to become a part of processes, factors and components in the schematic potential development model [17] as shown in Figure 3.

2.6 Model's Guidance Material development

The Model's Guidance Material with the example of coaching and development guidance and methods for each potential factor and component was developed by using the principle of andragogy development [18].

3. Results and Discussion

The outcomes of this research could be considered in 3 parts which are;

3.1 The Executive potential development process has to be organized with two consecutive development steps which are;

1) The systematic development process (P1) to develop the executive competency by taking a certified training course from the organization which is recognized by the concerned authority.

2) The Individual Coaching for the Effectiveness (ICE) Program [19] or Individual Development Plan (IDP) Program [20] to develop the executive potential by the andragogy training [18] and coaching

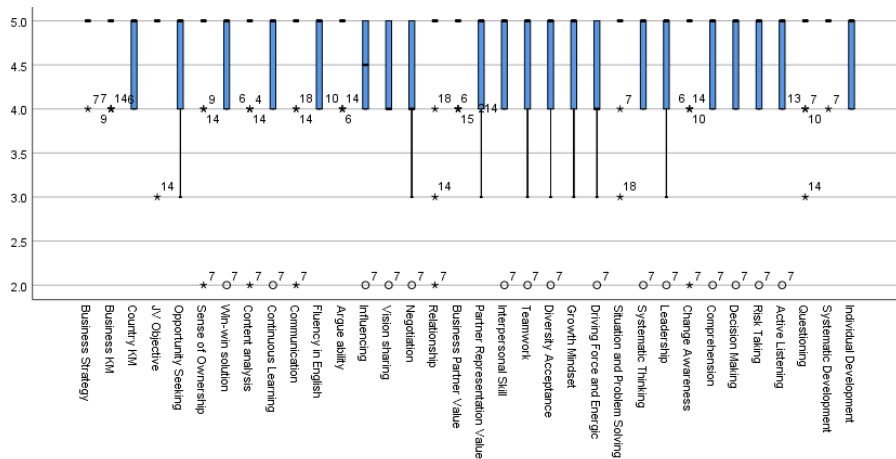


Figure 1 The 2nd round Delphi data distribution in boxplot format with the outlier data.

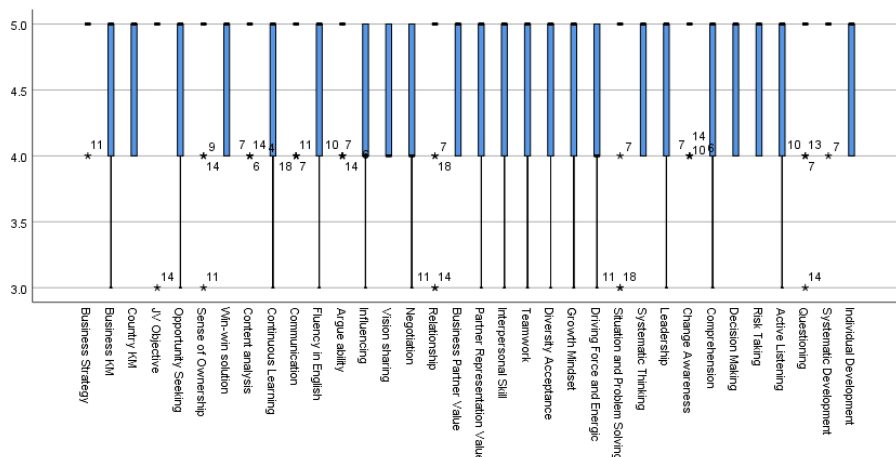


Figure 2 The 3rd round Delphi data distribution in boxplot format with the outlier data.

(supporting) program process (P2). The development program shall be designed to develop any lacking or missing potential factors and components stated in the model as agreed by the HR function and the executive who is going to take the program.

3.2 After three rounds of the Delphi having been completed

The following 4 executive potential factors and their 28 components (K-S-A) were found with the

consensus agreement during the 2nd round Delphi and confirmed by the 3rd round Delphi (Table-1) from the panel of 18 energy company director's experts as follows;

1) The potential of business and industry strategic planning (F1) which is comprised of 8 potential components are as follows;

- 1.1) Business and industrial knowledge (F1_C1)
- 1.2) Country knowledge (F1_C2)
- 1.3) Joint-venture objectives (F1_C3)

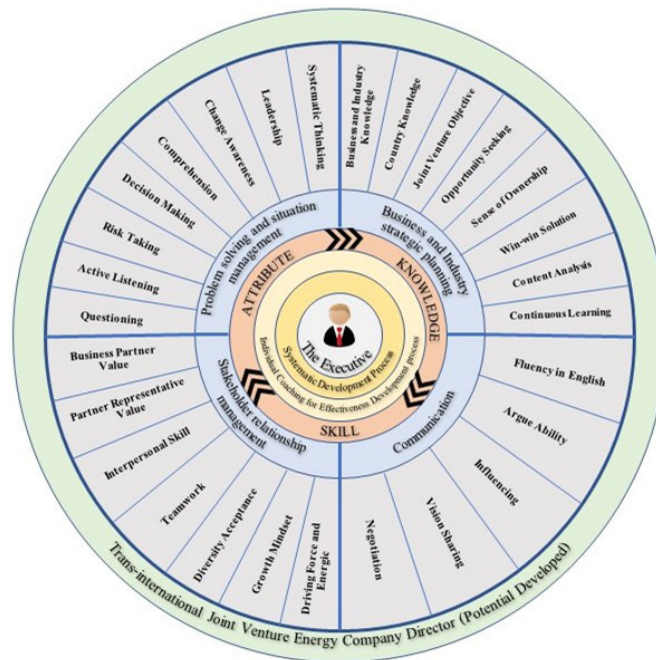


Figure 3 The Executive Development Model for the entry into director's position of the Trans-international Joint Venture Energy Industrial Company in the age of digitalization.

- 1.4) Opportunity seeking (F1_C4)
- 1.5) Sense of ownerships (F1_C5)
- 1.6) Win-win solution (F1_C6)
- 1.7) Content analysis (F1_C7)
- 1.8) Continuous learning (F1_C8)
- 2) The potential of communication (F2) which is comprised of 5 potential components are as follows;
 - 2.1) Fluency in English (F2_C1)
 - 2.2) Comment and Argue ability (F2_C2)
 - 2.3) Influencing (F3_C3)
 - 2.4) Presentation and Vision sharing (F2_C4)
 - 2.5) Negotiation (F2_C5)
- 3) The potential of stakeholder relationship management (F3) which is comprised of 7 potential components are as follows;
 - 3.1) Business partner value (F3_C1)
 - 3.2) Partner representative value (F3_C2)
 - 3.3) Interpersonal (F3_C3)
 - 3.4) Teamwork (F3_C4)
 - 3.5) Diversity acceptance (F3_C5)
 - 3.6) Growth mindset and Positive attitude (F3_C6)
 - 3.7) Driving force and energetic (F3_C7)
- 4) The potential of problem solving and situation management (F4) which is comprised of 8 potential components are as follows;
 - 4.1) Systematic and Critical thinking (F4_C1)
 - 4.2) Leaderships (F4_C2)
 - 4.3) Change awareness (F4_C3)
 - 4.4) Comprehension (F4_C4)
 - 4.5) Decision making (F4_C5)
 - 4.6) Risk taking (F4_C6)
 - 4.7) Active listening (F4_C7)
 - 4.8) Questioning (F4_C8)

Table 1 The outcome of the 2nd round Delphi and the 3rd round Delphi quantitative data analysis and the Delphi criteria consideration

Data Parameter	2nd round Delphi					3rd round Delphi					The Delphi criteria met
	Q1	Q2 (Median)	Q3	IQR.	CV.	Q1	Q2 (Median)	Q3	IQR.	CV.	
P1	5.00	5.00	5.00	0.00 ^{OL}	0.05	5.00	5.00	5.00	0.00 ^{OL}	0.05	Yes
P2	4.00	5.00	5.00	1.00	0.10	4.00	5.00	5.00	1.00	0.11	Yes
F1	5.00	5.00	5.00	0.00 ^{OL}	0.05	5.00	5.00	5.00	0.00 ^{OL}	0.05	Yes
F1_C1	4.75	5.00	5.00	0.25 ^{OL}	0.09	4.00	5.00	5.00	1.00	0.13	Yes
F1_C2	4.00	5.00	5.00	1.00	0.10	4.00	5.00	5.00	1.00	0.10	Yes
F1_C3	5.00	5.00	5.00	0.00 ^{OL}	0.10	5.00	5.00	5.00	0.00 ^{OL}	0.10	Yes
F1_C4	4.00	5.00	5.00	1.00	0.13	4.00	5.00	5.00	1.00	0.14	Yes
F1_C5	5.00	5.00	5.00	0.00 ^{OL}	0.16	5.00	5.00	5.00	0.00 ^{OL}	0.11	Yes
F1_C6	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.10	Yes
F1_C7	4.75	5.00	5.00	0.25 ^{OL}	0.16	4.75	5.00	5.00	0.25 ^{OL}	0.09	Yes
F1_C8	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.14	Yes
F2	5.00	5.00	5.00	0.00 ^{OL}	0.16	4.75	5.00	5.00	0.25 ^{OL}	0.09	Yes
F2_C1	4.00	5.00	5.00	1.00	0.10	4.00	5.00	5.00	1.00	0.10	Yes
F2_C2	5.00	5.00	5.00	0.00 ^{OL}	0.08	4.75	5.00	5.00	0.25 ^{OL}	0.09	Yes
F2_C3	4.00	4.50	5.00	1.00 ^{EOL}	0.18	4.00	4.50	5.00	1.00	0.14	Yes
F2_C4	4.00	4.00	5.00	1.00 ^{EOL}	0.18	4.00	4.00	5.00	1.00	0.11	Yes
F2_C5	4.00	4.50	5.00	1.00 ^{EOL}	0.21	4.00	4.00	5.00	1.00	0.16	Yes
F3	5.00	5.00	5.00	0.00 ^{OL}	0.18	5.00	5.00	5.00	0.00 ^{OL}	0.15	Yes
F3_C1	4.75	5.00	5.00	0.25 ^{OL}	0.09	4.00	5.00	5.00	1.00	0.10	Yes
F3_C2	4.00	5.00	5.00	1.00	0.13	4.00	5.00	5.00	1.00	0.15	Yes
F3_C3	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.14	Yes
F3_C4	4.00	5.00	5.00	1.00 ^{EOL}	0.21	4.00	5.00	5.00	1.00	0.16	Yes
F3_C5	4.00	5.00	5.00	1.00 ^{EOL}	0.19	4.00	5.00	5.00	1.00	0.13	Yes
F3_C6	4.00	5.00	5.00	1.00	0.13	4.00	5.00	5.00	1.00	0.13	Yes
F3_C7	3.75	4.00	5.00	1.25 ^{EOL}	0.22	4.00	4.00	5.00	1.00	0.18	Yes
F4	5.00	5.00	5.00	0.00 ^{OL}	0.11	5.00	5.00	5.00	0.00 ^{OL}	0.14	Yes
F4_C1	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.11	Yes
F4_C2	4.00	5.00	5.00	1.00 ^{EOL}	0.21	4.00	5.00	5.00	1.00	0.15	Yes
F4_C3	4.75	5.00	5.00	0.25 ^{OL}	0.16	4.75	5.00	5.00	0.25 ^{OL}	0.09	Yes
F4_C4	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.14	Yes
F4_C5	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.10	Yes
F4_C6	4.00	5.00	5.00	1.00 ^{EOL}	0.18	4.00	5.00	5.00	1.00	0.11	Yes
F4_C7	4.00	5.00	5.00	1.00 ^{EOL}	0.17	4.00	5.00	5.00	1.00	0.13	Yes
F4_C8	4.75	5.00	5.00	0.25 ^{OL}	0.12	4.75	5.00	5.00	0.25 ^{OL}	0.12	Yes

* Q1 = 1st quartile, Q2 = 2nd quartile or median, Q3 = 3rd quartile, IQR. = Interquartile Range (Q3-Q1), CV. = Co-efficient of variable.

^{OL} value is the parameter with the outlier (indicated by the asterisk symbol (*) in Figure 1 and 2)

^{EOL} value is the parameter with the extreme outlier (indicated by the circle symbol (O) in Figure 1 and 2)



3.3 The Executive Development Model

The executive development model which was synthesized from the processes, factors and components discovered from the research, was unanimously accepted by 13 experts panel during the focus group discussion for its credibility and usefulness. The Model's Guidance Material was also unanimously adopted by 6 HR and training experts for its effectiveness and utilitarianism.

The investigation for the outlier and extreme outlier found that; some of the expert panel members rated those data parameters with the understanding of those outlier and extreme outlier process, factor and component parameters should be the required potentials of the executive prior to be nominated for the director position. Nonetheless, upon realization the method of the model factors and components selection is flexible and the parameter is chosen considerately to be parts of the specific potential development program for each of the executive individually. Then, the extreme outliers were reviewed and were not found again during the 3rd round Delphi.

4. Conclusions

In conclusion, the executive potential development model for the entry into the director's position of the trans-international joint venture energy industrial company has to be comprised with two parts. The first part is the executive development process which are; systematic training process and ICE or IDP coaching process. The second part is the content of the ICE or IDP coaching program which must be flexible and suitable for each of the executives who are going to be developed individually.

The required potential development component in each factor; either Knowledge, Skill or Attribute (the rotatable ring), must be carefully identified and chosen under the closed co-operation between the individual executive and the HR concern for any potential gaps which have to be developed. After the factors and components from the executive development model have been identified and chosen, the ICE or IDP program's contents would be constructed for each individual executive. Finally, after the individual executive constructed potential development program has been achieved, the developed executive shall be ready for the entry into the director's position of the trans-international joint venture energy industrial company and shall be able to perform the director's roles and responsibilities effectively and efficiently.

The finding of the research found 2 development processes, 4 executive potential factors and 28 executive potential components. Nonetheless, the specific ICE or IDP for the executive potential development has just been introduced and accepted from this research to replace the conventional "one size fit all" training program. The 4 executive potential factors have been developed from the past knowledge during the research for better suitability. Meanwhile, 19 components are consistent to the existing executive development contents while another 9 components including with the Model's Guidance Material are the new body of knowledge which have just been found in this research.

5. Acknowledgement

The authors would like to pass the appreciation to all 18 key informants, all expert panel members,



moreover everyone who has contributed and kindly provided their valuable information, suggestions which include their trustful comments in order to enhance the rigorous, trustworthy and reliability of this research paper.

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