

**UNIVERSITI TEKNOLOGI MARA**

**TECHNICAL REPORT**

**THE APPLICATION OF INTUITIONISTIC FUZZY ANALYTIC  
HIERARCHY PROCESS (IF-AHP) IN SOLVING PERSONNEL  
SELECTION PROBLEM**

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# TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b> .....	<b>i</b>
<b>TABLE OF CONTENTS</b> .....	<b>ii</b>
<b>LIST OF TABLES</b> .....	<b>iii</b>
<b>LIST OF FIGURES</b> .....	<b>iv</b>
<b>ABSTRACT</b> .....	<b>v</b>
<b>CHAPTER 1: INTRODUCTION</b> .....	<b>1</b>
1.1 BACKGROUND OF THE STUDY .....	1
1.2 PROBLEM STATEMENT .....	2
1.3 OBJECTIVES OF THE STUDY .....	3
1.4 SIGNIFICANCE AND BENEFIT OF THE STUDY .....	4
1.5 SCOPE OF THE STUDY .....	4
1.6 LIMITATION OF THE STUDY .....	5
1.7 DEFINITION OF TERMS AND ABBREVIATIONS.....	6
<b>CHAPTER 2: LITERATURE REVIEW AND BACKGROUND OF THE THEORY</b> .....	<b>7</b>
2.1 MULTI-CRITERIA DECISION MAKING (MCDM).....	7
2.2 ANALYTIC HIERARCHY PROCESS (AHP).....	9
2.3 FUZZY ANALYTICS HIERARCHY PROCESS (F-AHP) .....	14
2.4 INTUITIONISTIC FUZZY ANALYTIC HIERARCHY PROCESS (IF-AHP).....	16
2.5 PERSONNEL SELECTION .....	17
2.6 SENSITIVITY ANALYSIS .....	20
2.7 CONCLUSION .....	20
<b>CHAPTER 3: METHODOLOGY AND IMPLEMENTATION</b> .....	<b>21</b>
3.1 CONCEPTUAL DIAGRAM OF IF-AHP METHOD .....	21
3.2 THE FRAMEWORK OF INTUITIONISTIC FUZZY ANALYTIC HIERARCHY PROCESS (IF-AHP) .....	22
3.3 THE IMPLEMENTATION OF INTUITIONISTIC FUZZY ANALYTIC HIERARCHY PROCESS (IF-AHP).....	26
<b>CHAPTER 4: RESULT AND DISCUSSION</b> .....	<b>34</b>
4.1 RANKING OF CRITERIA BASED ON IF-AHP METHOD AND EXPERT CHOICE .....	34
4.2 RANKING OF ALTERNATIVES BASED ON IF-AHP METHOD AND EXPERT CHOICE .....	37
4.3 SENSITIVITY ANALYSIS .....	39
<b>CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>42</b>
5.1 CONCLUSIONS .....	42
5.2 RECOMMENDATIONS.....	43
<b>REFERENCES</b> .....	<b>44</b>
<b>APPENDIX A: QUESTIONNAIRE</b> .....	<b>57</b>
<b>APPENDIX B: ETHICS APPROVAL BY UITM RESEARCH ETHICS COMMITTEE</b> .....	<b>68</b>

## LIST OF TABLES

Table 1.7.1: Definition of terms and abbreviations .....	6
Table 2.1.1: Application of MCDM method .....	9
Table 2.2.1: The fundamental scale .....	12
Table 2.2.2: The applications of AHP method .....	13
Table 2.3.1: The applications of F-AHP method .....	15
Table 2.4.1: The applications of IF-AHP method.....	17
Table 2.5.1: The criteria for personnel selection .....	18
Table 3.2.1: Linguistic variables for pairwise comparison.....	22
Table 3.2.2: Linguistic variables and the importance of decision makers.....	23
Table 3.2.3: Random Index (RI) .....	24
Table 3.3.1: Definition of criteria by DM.....	26
Table 3.3.2: Pairwise comparison matrix of criteria by $\lambda_1$ .....	28
Table 3.3.3: Aggregated Matrix of Criteria for $\lambda_1$ .....	30
Table 3.3.4: Final entropy weights for each criterion for $\lambda_1$ .....	31
Table 3.3.5: Ranking of the criteria .....	32
Table 3.3.6: Relative weight of the alternatives for $\lambda_1$ .....	33
Table 3.3.7: Weight and ranking of the alternatives .....	33
Table 4.1.1: Final result for each criterion for $\lambda_1$ .....	35
Table 4.2.1: Final result for each alternative for $\lambda_1$ .....	37
Table 4.3.1: Result of sensitivity analysis according to different priority weight.....	40

## ABSTRACT

This study is focused on the application of Intuitionistic Fuzzy Analytic Hierarchy Process (IF-AHP) in solving personnel selection problem. Personnel selection is a systematic procedure for hiring people for a specific job. This study discusses the problem of a company in choosing the best candidate for the position of Senior Technician. The objectives of this study are to apply the IF-AHP method in solving the personnel selection problem, and to conduct the sensitivity analysis of the IF-AHP model in measuring the consistency of the ranking of personnel in various scenarios. The IF-AHP method is implemented by selecting the best candidate for the position of Senior Technician in an electrical service company. This study considers six criteria which are education level ( $C_1$ ), profiling ( $C_2$ ), communication skill ( $C_3$ ), problem solving skill ( $C_4$ ), management skill ( $C_5$ ), and work experience ( $C_6$ ). There are seven alternatives to be ranked and chosen from. Sensitivity analysis is applied in this problem where twenty-six scenarios are considered, and different weights are assigned to the criteria. The IF-AHP method revealed that  $A_6$  is the best candidate while  $A_2$  is the least preferred candidate for the position of Senior Technician. The sensitivity analysis results are consistent since most of the criteria revealed that  $A_6$  is the best candidate while  $A_2$  is the least preferred candidate. To conclude, the IF-AHP method can handle the ambiguity of expert opinions and can increase the accuracy of the assessment in solving this personnel selection problem.