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THE ANALYSIS OF AUDITOR EMOTIONAL INTELLIGENCE USING THE RASCH MODEL

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ABSTRAK

Kemampuan emosional0sangat diperlukan seorang auditor dalam menjalankan tugasnya. Tujuan ini bertujuan untuk menganalisis dimensi kecerdasan emosional. Penelitian ini menggunakan pendekatan kuantitatif dengan melibatkan 105 auditor profesional di Makassar. Instrumen terdiri dari 25 item yang dikembangkan dari teori kecerdasan emosional Goleman. Analisis menggunakan model Rasch. Hasil penelitian menunjukkan bahwa lima dimensi kesadaran diri, manajemen diri, motivasi, kesadaran sosial (empati) dan manajemen hubungan merupakan faktor-faktor yang harus dimiliki oleh seorang auditor.

Kata-kata Kunci : *Kecerdasan Emosi, Auditor, Model Rasch*

ABSTRACT

Emotional ability is indispensable to an auditor in carrying out its duties. This goal aims to analyze the dimensions of emotional intelligence. This study used a quantitative approach involving 105 professional auditors in Makassar. The instrument consists of 25 items developed from Goleman's theory of emotional intelligence. Analysis uses a Rasch model. The results showed that five dimensions of Self-Awareness, Self-Management, Motivation, Social Awareness (empathy) and Relationship Management are factors that must be owned by an auditor.

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Keywords: *Emotional Intelligence, Auditor, Rasch Model*

INTRODUCTION

The success of a person is not only determined by intellectual intelligence (IQ), but emotional intelligence. Intellectual intelligence only accounts for 20% in determining the success of one's life and another 80% is determined by other factors. This factor is called Emotional Intelligence (EQ). Goleman (2001) stated that the role of IQ in success in the workforce only occupies the second position after emotional intelligence in determining the peak achievement in its work.

According to McClelland stated that innate academic ability and the prediction of higher education graduation do not predict how well a person's performance has worked or how high the success achieved in life (Goleman, 2001). Furthermore, McClelland stated that a set of special faculties such as empathy, self-discipline, and initiatives are able to distinguish successful people from those who are unremarkable.

People with good emotional intelligence are able to think clearly even in pressure, acting ethically, adhering to the principle (Goleman, 2001). Without emotional control or maturity it is very difficult for auditors to survive the frustration, stress, resolving conflicts that are already part or risk of the profession and assume responsibility as set out in the code of ethics as Auditor (Alwani, 2007). Alwani Research (2007) showed that emotional intelligence was positively influential in the performance of Auditors at public accountant offices. Jamilah's research, et al. (2007) suggests the personal Judgment of the auditor can be influenced by various factors, such as spiritual intelligence and emotional intelligence.

Emotional intelligence is the ability to recognize our own feelings and other people's feelings, self-motivating abilities, and the ability to manage emotions well on oneself and in relationship with others (Gardner, 2011). Cooper and Sawaf (1998), emotional intelligence is the ability to evangelize, understand and effectively apply the power and sharpness of emotions as a source of energy, information and influence. Emotional intelligence is the ability to recognize the feelings of yourself and others to motivate yourself and manage emotions well within ourselves and our relationships. Goleman (2001) divides the emotional intelligence that can affect one's success in working into 5 major terms of self-awareness, self-regulatory, motivation, empathy and social skills.

The level of emotion intelligence possessed by each individual is different, this is due to some impacts that affect it, as presented by Goleman (2006), there are three emotional intelligence impacts, 1) the ability to recognize others and Self-feeling, 2) being able to motivate yourself, 3) manage emotions well on yourself and in relationships with others. Next according to Goleman (2006), the function of emotional intelligence according to (Goleman, 2006): 1) The ability of a person to recognize his or her personal emotions so as to know the advantages and disadvantages; 2) People's ability to manage those emotions; 3) The ability of a person to motivate and give a boost to advance to oneself; 4) One's ability to get to know the emotions and personality of others; 5) The ability of a person to nurture relationships with other parties properly.

By understanding and knowing the functions and benefits of the five main areas of emotional intelligence, one is able to control the emotions of themselves

and others, distinguishing one's emotions with others and using the information to Guiding the process of thinking and behaving of person and fairness in decision-making objectively and independently.

LITERATUR REVIEW

Emotion is the perception of physical changes that occur in giving a response (response) to adjust an event. This definition aims to explain that the experience of emotions is a perception of reactions to interactions. Emotional intelligence is ability such as the ability to motivate oneself and survive frustration; controlling impulse and not exaggerating pleasure; regulate moods and keep stress load from paralyzing the ability to think; empathize and pray.

Cooper and Sawaf ((1997) suggest that the rapid development of emotional intelligence is supported by hundreds of research studies and management concepts that pay close attention to aspects of emotions, intuition, and strengths that relate to oneself and others around him. Some of the benefits generated by emotional intelligence are success factors in careers and organizations among others; (1) decision making, (2) leadership, (3) technical and strategic breakthroughs, (4) open and honest communication, (5) cooperation and trusting relationships, (6) consumer loyalty, (7) creativity and innovation.

Goleman (2001) divides the emotional intelligence that can affect one's success in working into 5 major areas: understand and know the functions and benefits of the five major regions of the emotional intelligence, one is able to control the emotions of themselves and others, distinguish one's emotions with others and use the information to guide the thought and behave process of a person and fairly in conducting objective decision-making and Independent.

Goleman (2001) divides the emotional intelligence that can affect one's success in working into 5 major things:

1. Self-Awareness

Self-Awareness is the ability of a person to know his or her feelings and their effects and Use it to make decisions for yourself, have realistic benchmarks or self-ability and have strong confidence and then associate it with the source of the cause.

2. Self-Management

Self-Management is the ability to handle his own emotions, expressing and controlling emotions, have sensitivity to the word of the heart, to be used in daily relationships and actions.

3. Motivation

Motivation is the ability to use a desire for every moment of encouragement and energy to achieve a better situation and to take the initiative and act effectively, able to endure Failure and frustration.

4. Social Awareness (empathy)

Empathy is the ability to feel what others are feeling, able to understand the perspective of others, and create a relationship of trust and be able to align themselves with different types of individuals.

5. Relationship Management

Relationship Management is the ability to handle emotions well when dealing with others and creating and maintaining relationships with others, can influence, lead, deliberation, Resolving disputes and working together on the team.

Factors That Influence Emotional Intelligence

Human development is greatly influenced by two factors, namely internal factors and external factors. Internal factors are individuals who have the potential and the ability to develop their potential, while external factors are the support of the surrounding environment to optimize more than a million potentials they have, especially emotional intelligence. According to Goleman said that emotional intelligence is also influenced by these two factors, including brain factors, family factors, and environmental factors. The factors that influence the formation of emotional intelligence are:

1. Brain factors

La Doux (2000) reveals how brain architecture gives a special place for the amygdala as a guardian of emotions, a guard who is able to hijack the brain. Amygdala is a specialist in emotional problems. When the amygdala is separated from other parts of the brain, the result is a very striking inability to grasp the emotional meaning of the beginning of an event, without the amygdala it seems that it loses all understanding of feelings, as well as any ability to feel feelings. The amygdala functions as a sort of storehouse of emotional memory.

2. Environmental factor

In this case the community environment and the population environment. The development of emotional intelligence can be improved through various forms of training including assertiveness training, empathy and many other forms of training.

Goleman (1995) that the factors that influence emotional intelligence include:

1. Physical.

Physically the most decisive or most influential part of a person's emotional intelligence is the emotional nerve anatomy. The part of the brain that is used for thinking is context (sometimes also called neo context). As a part of the brain that deals with emotions, namely the limbic system, but actually it is between these two parts that determine a person's emotional intelligence. 1) Context. This section is a folded portion of about 3 millimeters that encloses the cerebral hemisphere in the brain. Context plays an important role in understanding something in depth, analyzing why experiencing certain feelings and then doing something to overcome them. Special context of the prefrontal lobe, can act as a silencer switch that gives meaning to emotional situations before doing something. 2) Limbic system. This part is often referred to as brain emotions that are located deep in the cerebral hemisphere and are primarily responsible for the regulation of emotions and implants. The limbic system includes the hippocampus, where emotional learning takes place and where emotions are stored. In addition there is the amygdala which is seen as the center of emotional control in the brain.

2. Psychic.

Emotional intelligence, besides being influenced by individual personality, can also be nurtured and strengthened in individuals. Based on these descriptions it can be concluded that there are two factors that can affect one's emotional intelligence, namely physical and psychological. Physically located in the brain, namely the context and limbic system, psychologically it includes the family environment and non-family environment.

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RESEARCH METHOD

This research involves 105 corporate auditors in Makassar using instruments organized by aspects of the dimensions of emotional intelligence according to Goleman (2001). According to Goleman (2001), divide the emotions of four components, namely: self-awareness, self-management, motivation, empathy (social awareness), and good relations between each other (relationship Management).

The scale of this emotional intelligence uses five options of answer, i.e. strongly agree (SS), agree (S), neutral (N), disapprove (TS) and strongly disagree (STS). The scale value of each statement is obtained from the subject's answer stating support (Favorable) or not supporting (Unfavorable).

Table 1

Dimension of Emotional Intelligence

Dimension	Indicators	Item
Self-awareness	Emotional awareness	1
	Accurate self-assessment	2
	Self-confidence	3
Self-regulation	Self-Control	4
	Trustworthiness	5
	Conscientiousness	6
	Adaptability	7
	Innovation	8
Motivation	Achievement drive	9
	Commitment	10
	Initiative	11
	Optimism	12
Empathy	Understanding others	13
	Developing others	14
	Service orientation	15
	Leveraging diversity	16
	Political awareness	17
Social Skills	Influence	18
	Communication	19
	Conflict management	20
	Leadership	21
	Change catalyst	22
	Building bonds	23
	Collaboration & cooperation	24
	Team capabilities	25

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The data were analyzed using the Rasch model. Georg Rasch introduced the Rasch model in 1960. The model is prevalent because it is based on the item response theory (IRT), which describes the relationship between persons and test items. Furthermore, the Rasch model has also been used to analyze dichotomous data; the model was further evolved by Andrich to analyze rating-scale data. Masters also improved the Rasch model so that it could be used to evaluate a partial model. Lastly, Linacre introduced the facets model. Also, the Rasch model can analyze data from science and social science fields such as education, psychology, marketing, communication, and so forth (Boone, 2016). According to Engelhard & Stefanie (2013), the Rasch model is used to measure the items, respondents, and the relationship between the item and the respondent.

RESEARCH RESULTS AND DISCUSSION

Cronbach's Alpha

The Cronbach's alpha value identifies the reliability of an instrument. The value of Cronbach's alpha for this study is 0.85, which shows that the correlation between item and person are very good. Furthermore, the result indicates that it has high reliability and a high consistency for the raw score (instrument).

SUMMARY OF 105 MEASURED PERSON

	TOTAL SCORE	COUNT	MODEL MEASURE	INFIT ERROR	OUTFIT MNSQ	ZSTD	MNSQ	ZSTD
MEAN	98.1	25.0	1.48	.29	.98	-.2	1.01	-.1
S.D.	9.3	.0	.76	.03	.47	1.6	.43	1.5
MAX.	116.0	25.0	3.29	.40	2.48	3.7	2.15	3.4
MIN.	72.0	25.0	-.29	.24	.20	-4.2	.22	-4.0

REAL RMSE .31 TRUE SD .69 SEPARATION 2.18 Person RELIABILITY .83
MODEL RMSE .29 TRUE SD .70 SEPARATION 2.40 Person RELIABILITY .85
S.E. OF Person MEAN = .07

Person RAW SCORE-TO-MEASURE CORRELATION = .99
CRONBACH ALPHA (KR-20) Person RAW SCORE "TEST" RELIABILITY = .85

Figure 1: Instrument validation For Cronbach's Alpha

Source: Output Rasch Model (WinSteps)

Person Reliability

The person's reliability value is 0.83, indicating that the respondent is eligible to answer this study. Therefore, the abilities of the sample spread involved in this study are excellent. Similarly, the mean value is 1.48, which is higher than the average value of 0.00 items. Logit min shows the whole respondent agreeing that dimensions relate to the emotional intelligence. Moreover, if the meaning is higher than the meaning of the item, then the overall test meets the hope of this study. So, the person reliability value and the comparison between the person mean and item mean can be used for personality measures in this study.

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MODEL RMSE .29 TRUE SD .70 SEPARATION 2.40 Person RELIABILITY .85
S.E. OF Person MEAN = .07

Figure 2: Instrument validation For Person Reliability
Source: Output Rasch Model (WinSteps)

Item Reliability

The item reliability in this study is very good because the value is high, which is 0.97. This reveals that the item difficulties among the items are spread well. Hence, it also indicates that if the test were given to a different respondent group, the possibility of the item difficulties would still be the same.

SUMMARY OF 25 MEASURED Item

	TOTAL SCORE	COUNT	MODEL MEASURE	INFIT ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	412.0	105.0	.00	.14	.99	-.2	1.01	-.1
S.D.	47.6	.0	.97	.03	.26	1.8	.26	1.8
MAX.	501.0	105.0	1.52	.23	1.54	3.4	1.55	3.5
MIN.	323.0	105.0	-2.31	.12	.62	-3.2	.62	-3.2

REAL RMSE .15 TRUE SD .96 SEPARATION 6.23 Item RELIABILITY .97
MODEL RMSE .15 TRUE SD .96 SEPARATION 6.56 Item RELIABILITY .98
S.E. OF Item MEAN = .20

Figure 3: Instrument Validation for Item Reliability

Source: Output Rasch Model (WinSteps)

Infit and Outfit MNSQ

The infit is used to identify the unexpected response given by the respondents near the capability level of the respondent. The outfit is used to consider the expected answer and the actual answer given by the respondent, which shows how far away the item is agreed from personability. Furthermore, the infit and outfit MNSQ person are 0.98 and 1.01, respectively. Also, the infit and outfit MNSQ items are 0.99 and 1.01, respectively, which have a good value since the mean-square fit statistic value should be between 0.50 and 1.50. Therefore, the items do not easily guess or predict the answer. The ideal value of MNSQ is 1, so the value of the result above is close to the ideal value. This also indicates that it can be used for measurement

Infit and Outfit ZSTD

The ideal value of infit and outfit should be 0 (Sumintono & Widhiarso, 2014; Hidayat, Mulianah & Mujahidah, 2019). The data has a reasonable logic if the value of the infit and outfit of ZSTD falls between -1.90<y<1.90. Based on the result above (see Figure 1), the infit and outfit items are -0.20 and -0.10, respectively, which indicates that the items fit the model and can measure what is supposed to be measured.

Item Separation

The separation value indicates the quality of the separation between person and item. The separation is good when the value of separation is high, which means the quality instruments are better as well. The value of the separation (see Figure 3) is 6.23, which shows that the instrument quality is good.

Local Independence

Local independence means every response has to be determined only by the person's ability. Therefore, it must be independent, which means that one item does not overlap with other items. The value is less than 0.70, indicating that the items are independent of each other (Linacre, 2012). Hence, as shown in Figure 4, the result shows that no item overlaps with another.

LARGEST STANDARDIZED RESIDUAL CORRELATIONS
USED TO IDENTIFY DEPENDENT ITEM

CORREL- ATION	ENTRY NUMBER	Item	ENTRY NUMBER	Item
.41	18	I0018	20	I0020
.41	14	I0014	23	I0023
.38	18	I0018	19	I0019
.35	17	I0017	19	I0019
-.41	10	I0010	18	I0018
-.41	5	I0005	14	I0014
-.36	3	I0003	7	I0007
-.35	6	I0006	14	I0014
-.34	3	I0003	19	I0019
-.33	7	I0007	10	I0010

Figure 4: Local Independence Result
Source: Output Rasch Model (WinSteps)

Item Dimensionality

The item dimensionality, as shown in Figure 5 is 42.6%, which is higher than 20%. This shows that the instruments are able to measure what they are supposed to measure. Hence, the items fulfill the item dimensionality requirement. Moreover, there are also unexplained variance values, which show

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ideal results since they are not more than 15% (Sumintono & Widhiarso, 2014). The value is 7.8% and the other values are not more than 15%.

Table of STANDARDIZED RESIDUAL variance (in Eigenvalue units)

	-- Empirical --	Modeled
Total raw variance in observations =	43.5 100.0%	100.0%
Raw variance explained by measures =	18.5 42.6%	41.7%
Raw variance explained by persons =	5.7 13.1%	12.8%
Raw Variance explained by items =	12.8 29.5%	28.9%
Raw unexplained variance (total) =	25.0 57.4% 100.0%	58.3%
Unexplned variance in 1st contrast =	3.4 7.8% 13.5%	
Unexplned variance in 2nd contrast =	2.4 5.6% 9.8%	
Unexplned variance in 3rd contrast =	1.8 4.1% 7.1%	

Figure 5: Item Dimensionality
Source: Output Rasch Model (WinSteps)

Scalogram

The scalogram can be used to identify the item from the easiest item to the most difficult items to be endorsed and the most competent respondent to the least competent respondent, as illustrated in Figure. 6. It can also check for any careless answers given by the respondents, even if they fall in the most competent category.

GUTTMAN SCALOGRAM OF RESPONSES:

```
Person |Item
       |    11 1 212  1212122111
       |21941256855463023140378 97
       |------------------------
    26 +5455555555555555544444444  4
    37 +5554555545554355554454455  5
    60 +5545454454555454555455455  5
    32 +5454555555554555544444444  4
    57 +5545445555545544455544454  5
    16 +4554545545555454445554444  5
    56 +5554454544555444454445554  5
    23 +5555344545444454545455444  5
    24 +5544555533545454444534555  5
    54 +5555455554555444453553442  5
    59 +5545444545545444455544452  5
    89 +5544554554444455454444444  5
    40 +5555555555555554553513331  5
    46 +5545555555445544353345343  5
    51 +5555555454445434543444444  5
    11 +5545555545554455444424333  5
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Figure 6: Guttman Scalogram
Source: Output Rasch Model (WinSteps**)**

Person Item Distribution Map

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The person item distribution map (as shown in Figure 7) is used to identify the emotional dimensions of the emotional auditor. Analysis shows that self-awareness, self-management, motivation, social awareness, relationship management are the dimensions of emotional intelligence. Based on Figure 7 shows items of the self-awareness dimension are easily accepted by the respondents. While dimensions of self-management, motivation, social awareness, relationship management tend to be difficult to accept.

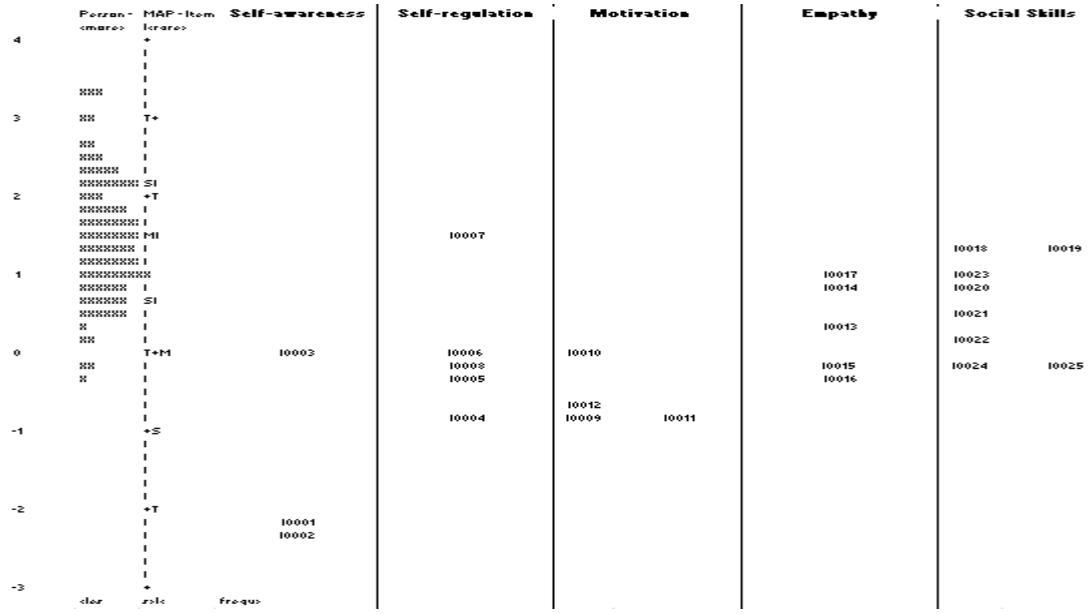

Figure 7: Person Item Distribution Map

CONCLUSION

Self-awareness, self-management, motivation, social awareness, relationship management are the dimensions of emotional intelligence. Therefore, the auditors' intelligence should pay attention to these dimensions. Based on the findings, the dimensions of self-management, motivation, social awareness, relationship management need to be taken into account.

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