

**The Impact of Motivation and Training on Employee Performance: a Mediating Role of Adversity Quotient of Livestock and Animal Health Department of West Sumatera Province**

**Darmayanti<sup>1</sup>, Yasri<sup>2</sup>, Yuliharsi<sup>3</sup>**

<sup>1</sup>Master Program, STIE "KBP" Padang, Indonesia

<sup>2</sup>Dep. Of Management, Faculty of Economics, Universitas Negeri Padang, Indonesia

<sup>3</sup>Dep. Of Management, Faculty of Economics, Universitas Andalas Padang, Indonesia

(\*)✉ (e-mail): [yantibunda@yahoo.co.id](mailto:yantibunda@yahoo.co.id); [yasrifeunp@gmail.com](mailto:yasrifeunp@gmail.com); [yuliharsi\\_eri@yahoo.com](mailto:yuliharsi_eri@yahoo.com);

**Abstract**

*This study aimed to obtain information about the influence of work motivation, work training, and adversity quotient on employee performance of the Livestock and Animal Health Department of West Sumatera Province. The population was 137 employee who work in the Livestock and Animal Health Department, and the samples were 130 people with the sampling method using the population sampling. The research instrument was prepared in the form of a questionnaire. Furthermore, the score was weighted and then processed by using SPSS Software version 15.0. This study uses quantitative methods and result of research conducted lines analysis. From the results of this study revealed that. (1) Significantly there is the influence of motivation and work training on adversity quotient level. (2) Significantly there is the influence of motivation, training, and adversity quotient on employee performance. From the finding of the study, the authors suggest that leaders do mentoring and coaching, giving attention and encouragement, and provide motivation to employee to obtain a favorable interaction, to understand the working conditions, and more attention to job-oriented in the future. So in the end will further improve the performance of employees of Livestock and Animal Health Department of West Sumatera Province.*

**1. Background of The Problem**

In order to improve its performance and its employees' quality and performance, an institution needs to pay attention to its employees' motivation and training relating to their expertise. Through this way, it is expected that employees can work efficiently which can eventually contribute to Employee Performance.

The quality of human resources is determined by the extent to which the system in the field of human resources is capable of supporting and satisfying the desires of employees. Increased knowledge and skills, changes in attitude and behavior, and correction on performance shortcomings are needed to improve the performance and productivity through training and motivation from the management or relevant agencies. The training will provide opportunities for employees at the Livestock and Animal Health Department of West Sumatera Province to develop new skills and abilities in their work so that their current knowledge and forthcoming knowledge would help them understand what needs to be done and why it should be done, and provide opportunity to increase their knowledge and expertise. Meanwhile, motivation will provide opportunities for employees to manage their individual egos and strengthen their commitment to the Livestock and Animal Health Department of West Sumatera Province.

Thus, the Livestock and Animal Health Department of West Sumatera Province should be able to play its role and function properly in order that its employees will have good work skills useful in carrying out their duties and responsibilities as expected. From the preliminary observations done at the Livestock and Animal Health Department of West Sumatera Province, the implementation of employee performance from the top level management and the executives continue encountering a number of obstacles, resulting in the improper work process. In addition, the results of the preliminary observations involving 35 employees of the Livestock and Animal Health Department of West Sumatera Province found several problems related to the implementation of such employee performance, including (1) many employees seldom carry out their duties for maximum results; (2) most

of the employees are unable to finish their duties properly, particularly when given more demanding tasks; (3) many employees are still reluctant to finish their tasks faster than do their colleagues; (4) many employees do not prioritize quality in finishing their tasks; (5) most of the employees are unwilling to sharpen their knowledge at work; and (6) most of the employees claim that, in carrying out their tasks, they rarely refer to the planning that has been defined. . Considering a number of factors affecting the employee performance and a number of problems found in the working environment at the Livestock and Animal Health Department of West Sumatera Province elaborated above, the author limits the factors that affect performance into work motivation, training and adversity quotient. Therefore, the author conducts research entitled “The Effect of Work Motivation, Training and Adversity Quotient on Employee Performance at the Livestock and Animal Health Department of West Sumatera Province”.

## 2. Review of Related Theories

### *a. Employee Performance*

Performance is a condition that must be known and confirmed to certain parties to find out the level of achievement of the results of an institution associated with the vision carried out by an organization or company and to know the positive and negative effects of the operational policy. Robert and John in Andraeni (2005) state that employee performance influences how many employees contribute to the organization. According to Soedarmayanti (2007: 260) performance is defined as the results of works, workers, processes or organizations which are concretely proven and measurable, compared to the predetermined standards.

In relation to employee performance, the results of the research done by Kurniawati (2015) show a significant effect of motivation on Employee Performance. Furthermore, the results of Herawati's (2015) research state that there are a positive correlation and a strong relationship between motivation and employee performance. In addition, she also found a considerable effect of motivation on the level of employee performance. Such correlation is also confirmed by the results of the research done by Rachmawati (2011) stating that work motivation has a significant effect on employee performance.

Furthermore, the results of the research done by Dahmiri and Kharisma Sakta (2014) show that there is a significant relationship between job training and employee performance. Such a significant relationship is reinforced by Denny Triasmoko's (2014) research highlighting the results that job training significantly affects employee performance.

Moreover, the results of the research done by Laura and Sunjoyo (2009) proved that there is a significant relationship between Adversity Quotient (AQ) and employee performance. In addition, the results of the research done by Dewanto and Utami (2014) showed that there was a positive influence between Adversity Quotient and employee's work motivation.

The definitions elaborated above suggest several main points that may be contained in performance, including work quality (the quality of work), work quantity (the amount of production), timeliness (the completion of tasks within a permissible time), responsibility (the completion of tasks and projects), attendance and timeliness (the compliance with work schedules), and cooperation (the cooperation and communication with supervisors and coworkers).

### *b. Motivation*

Work motivation is often understood as a mental impulse that moves and directs a person's behavior to do a job. Wahjosumijo (1984) explains that motivation is an impulse arising from within a person to behave in order to achieve a predetermined goal. The impulse is primarily influenced by both internal and external factors. According to Hersey and Blanchard in Pasolong (2013), humans are different from other creatures not only in their ability to do something, but also in their willingness to do something, known as motivation. Furthermore, Hanafi (1997) states that motivation is something that encourages someone to act or behave in a certain way, which is an important factor that supports work achievement. Meanwhile, Timple (2000: 273) defines motivation as a process that controls choice, made by people or organizations that are concerned with: (1) directions of behavior, indicated by whether the choice made by someone will be actualized when faced with a number of possible alternatives, (2) proportions or strengths of efforts, and (3) persistence of behavior.

Motivation, according to Hasibuan (2001: 219), is the provision of the driving force that creates someone's work enthusiasm to be willing to work together, work effectively and be integrated with all the efforts to arrive at satisfaction. According to Mc Clelland in Robbins (2001), the indicators of work motivation include the need for achievement, the need for power and the need for affiliation. According to Siagian (2004), the indicators of motivation are driving force, willingness, readiness, forming expertise, forming skills, responsibilities, obligations, and goals.

From the experts' opinions elaborated in the previous paragraphs, it is concluded that the level of work motivation owned by employees can be seen from their achievements, working behavior, responsibilities fulfillment, individual potential development, working conditions, personal relationships, and recognition from other parties. The other characteristics include showing enthusiasm in dealing with the work assignment, being at the forefront of efforts to uphold the work discipline in the organization and to complete their assignments, and showing an active effort to get the best results, both for organizations and individuals. Therefore, the greater their desire or motivation in carrying out their duties, the higher their performance will be.

### *c. Job Training*

According to Siagian (2003), training is defined as teaching and learning process by using certain techniques and methods conceptually whose purpose is to improve the skills and abilities of a person or a group of people. Usually those who have worked in an efficient organization, the effectiveness and production of their work need be improved in a directed and pragmatic manner.

The training indicators that will be used are (1) knowledge, (2) skills, and (3) expertise. The training is intended to get workers with good knowledge, good skills, good abilities and attitude to occupy the available job positions with high work productivity, which can produce good work results. The needs of each employee are very diverse; therefore, the training needs to be prepared and implemented in accordance with their specific field of work in order to enable them to carry out their duties and responsibilities smoothly in accordance with the correct procedures.

### *d. Adversity Quotient*

As social creatures, humans are defined as the creatures that cannot live alone and that always need social relations with other humans (Mulyadi, 2003). Mulyadi and Mamahit argue that as humans are social creatures, their life is dynamic and colorful due to various pressures and challenges. To deal with such pressures and challenges, in addition to having their own needs, talents, interests, ideals, characters, behaviors, attitudes or judgments, each of humans has different strengths. Stoltz in Mamahit (2003: 2) argues that one of the strengths possessed by humans is how far they are able to survive facing difficulties and how smart they are able to overcome difficulties.

Mamahit (2003) states that if individuals are able to survive facing difficulties and overcoming difficulties, they will achieve success in life. Stoltz (2000: 6) states that success is a level where a person moves forward and upward and continues showing good progress in life, despite various obstacles or sufferings. One of the factors determining an individual's success in life is adversity quotient (AQ), which is owned by every individual. And the success of an employee can be seen from his/her work performance.

Stoltz (2000) found that the feeling of helplessness (low AQ) has reduced someone's performance, productivity, motivation, energy, willingness to learn, self-improvement, risk-taking courage, creativity, health, vitality, tenacity, and perseverance. Stoltz states that a person who is pessimistic and despairing has a low AQ, while a person who is optimistic and continues to be better has a high AQ. This topic is interesting to study because it turns out that IQ and EQ are not enough to help someone get success. The most important factor in achieving success in life is AQ (Stoltz, 2000). Therefore, without good AQ, IQ and EQ will be useless and meaningless because to achieve success requires perseverance, resilience, and high fighting ability. As communicated by Stoltz, low AQ has an impact on reduced performance.

The research conducted by Lazaro-Capones in D'souza (2006:170) and the study conducted at Deloitte and Touche, Sun Microsystems, M.P. Resources in D'souza (2006:170) show that there is an effect of AQ on performance. The studies (D'souza, 2006; Lazaro-Capones, 2004; Stoltz, 2000; Williams, 2003) show that there are

a correlation and effect between AQ and performance. Based on those studies, the author draws the hypothesis that adversity quotient positively affects employee performance.

### 3. Conceptual Framework

This study uses two main variables (causal), i.e. work motivation and job training, one intervening variable, i.e. adversity quotient, and one dependent variable, i.e. employee performance. Based on such variables, performance is strongly influenced by adversity quotient, motivation, and employee training. The presence of motivation from the management and the training for employees will result in high adversity quotient which, eventually, will have an impact on the increasing employee performance at the Livestock and Animal Health Department of West Sumatera Province. In this study, the author describes the research conceptual framework as in Figure 1:

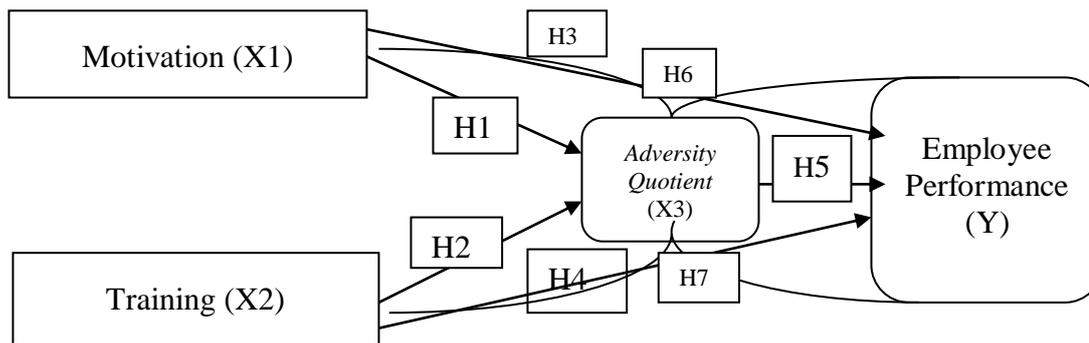


Figure 1. Research Conceptual Framework

### 4. Hypotheses

#### a. The Effect of Work Motivation on the Adversity Quotient of the Employee at the Livestock and Animal Health Department of West Sumatera Province.

The research conducted by Stoltz (2003:94) states that those who have high Adversity Quotient are considered as people who have motivation. So, regarding motivation, the hypothesis is whether motivation has a significant effect on the employees' Adversity quotient.

#### b. The Effect of Job Training on the Adversity Quotient of the Employees at the Livestock and Animal Health Department of West Sumatera Province

According to Sikula in Suwatno (2011: 117), training is a short-term educational process that uses systematic and organized procedures in which non-managerial employees learn knowledge and technical skills in limited purposes. So, regarding job training, the hypothesis is whether the training has a significant effect on the employees' adversity quotient.

#### c. The Effect of Motivation on the Performance of the Employees at the Livestock and Animal Health Department of West Sumatera Province

The higher the motivation of an employee, the higher the performance he/she will achieve. In regard to such statement, Cooper (1995) states that the high work motivation owned by someone will be seen at the level of his/her work achievement, the work itself, the responsibility, the potential individual development (advancement), the working conditions, the interpersonal relations, the recognition from other parties, and the organizational policies. So the hypothesis is whether motivation has a significant effect on employee performance.

#### d. The Effect of Job Training on the Performance of the Employees at the Livestock and Animal Health Department of West Sumatera Province

According to Siagian (2003), training is defined as teaching and learning process by using certain techniques and methods conceptually whose purpose is to improve the skills and abilities of a person or a group of people.

Usually, those who have worked in an efficient organization, the effectiveness and production of their work need be improved in a directed and pragmatic manner.

#### **e. The Effect of Adversity Quotient on the Performance of the Employees at the Livestock and Animal Health Department of West Sumatera Province**

A person who is pessimistic and despairing has a low AQ, while an optimistic person has a high AQ. This topic is interesting to study because it turns out that IQ and EQ are not enough to help someone get success. The most important factor in achieving success in life is AQ (Stoltz, 2000). Therefore, without good AQ, IQ and EQ will be useless and meaningless because to achieve success requires perseverance, resilience, and high fighting ability. As communicated by Stoltz, low AQ has an impact on reduced performance. So, the higher the ability and endurance of the employees at the Livestock and Animal Health Department of West Sumatera Province in facing difficulties, the higher their performance will be. This is in line with Stoltz's (2000) opinion that the most important factor in achieving success is Adversity Quotient (AQ). Without good AQ, IQ and EQ will be useless and meaningless because to achieve success requires perseverance, resilience, and high fighting ability. As communicated by Stoltz, low AQ has an impact on the reduced performance of the employees.

#### **f. The Effect of Motivation through Adversity Quotient on the Performance of the Employees at the Livestock and Animal Health Department of West Sumatera Province**

The effect of motivation through adversity quotient on the performance of the employees is indirect. This is in line with the result of the research conducted by Stoltz (2003: 94) which states that those who have high Adversity Quotient are considered as people who have high motivation. So, the hypothesis is whether motivation through adversity quotient has a significant effect on employee performance.

#### **g. The Effect of Training through Adversity Quotient on the Performance of the Employees at the Livestock and Animal Health Department of West Sumatera Province**

According to Sikula in Suwatno (2011: 117), training is a short-term educational process that uses systematic and organized procedures in which non-managerial employees learn knowledge and technical skills in limited purposes. So, the hypothesis is whether the training through adversity quotient has a significant effect on employee performance.

### **5. Research Method**

The population in this research was all Civil Servants at the Livestock and Animal Health Department of West Sumatera Province, so the total number of population was 137 employees. As the sampling technique applied in this research was total sampling, all of them were taken as the sample. So, the total number of the sample in this research was 137 respondents. The first variable in this study was work motivation (X1) using such indicators as physiological needs, safety needs, social needs, esteem needs, and self-actualization needs. The next variable was training (X2) using such indicators as knowledge, good skills, good abilities and attitude to occupy the available job positions with high work productivity, which can produce good work results.

In addition, the intervening variable was adversity quotient (X3) using such indicators as productivity, motivation, energy, willingness to learn, self-improvement, risk-taking courage, creativity, health, vitality, tenacity, and perseverance. Next, the dependent variable was performance (Y) using such indicators as quantity, quality, reliability, attendance, and cooperative ability. The data of this research were both primary data and secondary data, in the form of report documents and the organizational structure of the employees at the Livestock and Animal Health Department of West Sumatera Province. The internal data source was the employees at the Livestock and Animal Health Department of West Sumatera Province.

The instrument used in this research was a questionnaire designed in accordance with the Likert scale model for motivation variables (X1), training variables (X2), Adversity Quotient Variables (X3) and Performance Variables (Y). The questionnaire was an instrument of data collection used through the distribution of a list of

statements to respondents. Likert scale was used to measure attitudes, opinions, and perceptions of a person or a group of people about certain social phenomena. In this research, social phenomena have been specifically determined by the researcher (Sugiyono, 2008).

**a. The technique of Data Analysis**

**1) Path Analysis**

To prove the hypotheses that have been formulated, the data that had been collected were analyzed using a parametric analysis with the help of SPSS (Statistical Package for Social Science). The data analysis model was a Path Analysis method to explain the direct and indirect effects of a set of exogenous variables on the endogenous variables, as illustrated in the path diagram displayed in Figure 2:

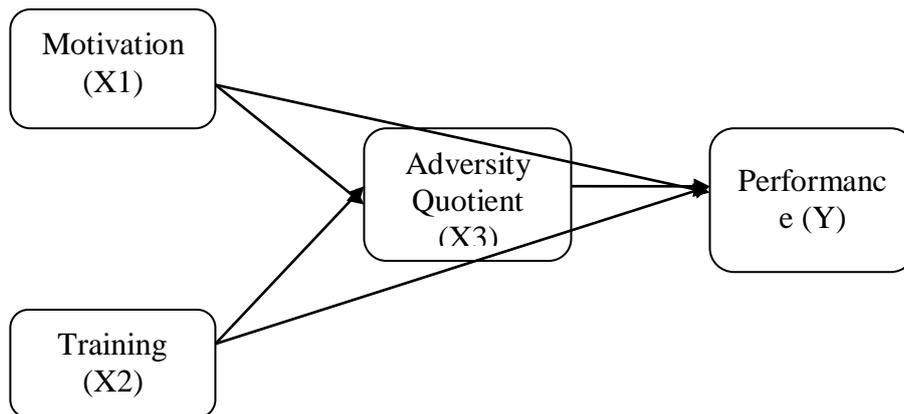


Figure 2. The Structure of the Relationship and the Effect of the Exogenous Variables on the Endogenous Variables

The results of the path diagram show the statistical effect of each endogenous variable on exogenous variables, which is called the path coefficient. Furthermore, the diagram in Figure 2 can be broken down into two sub-structures.

**1. Sub-Structure 1**

The diagram of Sub-Structure 1 is shown in Figure 3 below.

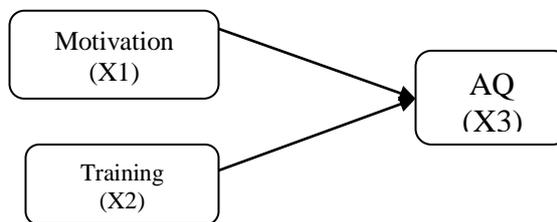


Figure 3. The Structure of the Relationship and the Effect of Motivation and Training Variables on the Employees' Adversity Quotient

Based on the interaction of variables in sub-structure 1, the structural equation was made as follows:

$$X3 = f(X, X2, \$2)$$

$$X3 = PX3X1.X1 + PX3X2.X2 + \$2$$

**1.Sub-Structure 2**

The diagram of Sub-Structure 2 is shown in Figure 4 below.

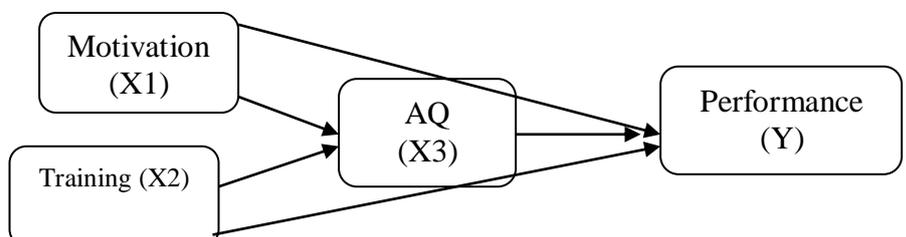


Figure 3. Path Diagram of the Effect of Motivation and Training on the Employees' Adversity Quotient and Its Impact on the Employee Performance

Based on the interaction of variables in sub-structure 2, the structural equation was made as follows:

$$Y = f(X1, X2, X3, \$3)$$

$$Y = PYX1.X1 + PYX2.X2 + PYX3.X3 + \$3$$

To determine the path coefficient ( $Pyx1$ ), i.e. the statistical effect of the causal variable and the effect variable (Sitepu, 1994: 28), was done by calculating:

1. the regression coefficient with the formula:

$$Byxi = Ci \sum XihYh + \dots Cik \sum XkhYh$$

2. the path coefficient with the formula:

$$Pyxi = byx \sqrt{\frac{\sum x2ih}{\sum y2h}}; I = 1, 2, \dots, k$$

**Notes:**

$Pyxj$  = the path coefficient of variable x on y

$Byxj$  = the regression coefficient of variable x on y

Following Sudjana (1982: 78), to test the significance of the effect of  $Xi$  on  $Y$ , the following formula was used:

$$t = \frac{Pyxi}{\sqrt{(1 - R^2_{Yxi \dots Yxk}) (Rij)}} \cdot \frac{1}{N - k - 1}$$

Notes:

$Pyxi$  = the path coefficient of variable xi on variable Y

$R_{Yxi \dots Yxk}$  = the coefficient which states the total determinant of all variables on the exogenous variable.

Meanwhile, the effect of other variables was determined by the formula:

$$Py\alpha3 = \sqrt{1 - R^2_{Yx1x2x3}}$$

Where:

$R^2_{Yx1 \dots xk}$  = the coefficient that states the total determination of all causal variables on the effect variable.

**2) Hypotheses Testing**

Following Sitepu (1994: 24), to find out the truth of the path coefficients, the hypotheses were tested using the F Test (overall testing) with the formula:

$$F = \frac{(n - k - 1) \sum Pyxi.Ryxi}{K (1 - \sum Pyxi.Ryxi)}$$

After the value of F count was obtained, it was then compared to the value of F table by using the following testing criteria:

$H_0$  is rejected if the F count is bigger than F table ( $F \text{ count} > F \text{ table}$ )

$H_0$  is accepted if the F count is smaller than F table ( $F \text{ count} < F \text{ table}$ )

### 3) Defining the effect of one exogenous variable (X) on the endogenous variable (Y) both directly and indirectly

To define the effect of one exogenous variable (X1) on the endogenous variable (Y) both directly and indirectly, the following formula was used:

a. Motivation Variable (X1)

Direct Effect:

$$X1 \text{ on } X3 = X3 \leftarrow X1 \leftarrow X3 \leftarrow$$

$$= (P_{x3x1}) (P_{x3x1})$$

$$X1 \text{ on } Y = Y \leftarrow X1 \leftarrow Y \leftarrow$$

$$= (P_{yx1}) (P_{yx1})$$

Indirect Effect:

$$X1 \text{ on } Y \text{ through } X3 = Y \leftarrow X1 \Omega X3 \leftarrow Y$$

$$= (P_{yx1}) (P_{x3x1}) (P_{yx3})$$

The effect of the other variable ( $P_{x2\alpha 1}$ ) on Adversity Quotient

$$P_{x2\alpha 1} = \sqrt{1 - R^2_{Yx1x2x3x4}}$$

b. Training Variable

Direct Effect:

$$X2 \text{ on } Y = Y \leftarrow X2 \leftarrow Y$$

$$= (P_{yX2}) (P_{yX2})$$

Indirect Effect:

$$X2 \text{ on } Y \text{ through } X3 = Y \leftarrow X2 \Omega X3 \leftarrow Y$$

$$= (P_{yX2}) (P_{X3X2}) (P_{yX3})$$

The effect of the other variable ( $P_{X3\alpha 2}$ ) on Adversity Quotient

$$P_{X3\alpha 2} = \sqrt{1 - R^2_{YX1X2X3}}$$

c. Adversity Quotient Variable (X3)

Direct Effect:

$$X3 \text{ on } Y = Y \leftarrow X3 \leftarrow Y$$

$$= (P_{yx3}) (P_{yx3})$$

The effect of the other variable ( $P_{y\alpha 3}$ ) on Performance

$$P_{y\alpha 3} = \sqrt{1 - R^2_{Yx1x2x3}}$$

## 6. Results and Discussion

After the requirements for parametric statistical analysis are met, the path analysis is then carried out as follows:

a. The Effect of Motivation (X1) and Training (X2) on the Level of Adversity Quotient (X3) of the Employees at the Livestock and Animal Health Department of West Sumatera Province

In this section, the discussion is about the effect of cause variables, i.e. motivation (X1) and training (X2), on the adversity quotient variable (X3), which serves as the intervening variable in this research. The result of data analysis is presented in Table 1 below.

**Table 1**  
**The Coefficient of Sub-Structure 1: The Estimated Value of Path Coefficient**

No	Influential Variables	Path Coefficient	t count	Sig
1	Motivation	0.6138	5.7103	0.0000
2	Training	0.3942	2.3288	0.0187

Source: Primary Data Processing

From the data presented in Table 1, the partial test results are explained for each independent variable on the dependent variable as follows:

1. Path coefficient  $P_{X_1X_3} = 0.6138$  with the obtained value of t count 5.7103 at the significance level of  $0.000 < 0.05$ . This means that there is a positive and significant effect of motivation on the adversity quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province.
2. Path coefficient  $P_{X_2X_3} = 0.3942$  with the obtained value of t count 2.3288 at the significance level of  $0.0187 < 0.05$ . This means that there is a positive and significant effect of training on the level of adversity quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province.

The interaction between motivation and training in the partial test results is presented in Figure 4.

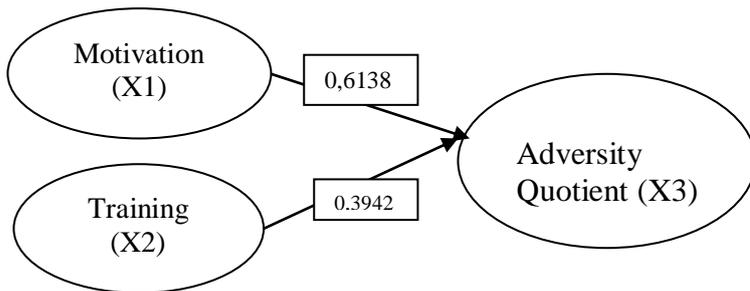


Figure 4. Path Diagram of the Effect of Motivation and Job Training on the Adversity Quotient

The result of data processing in sub-structure 1 can be substituted into the following equation:

$$X_3 = f(X_1, X_2, X_3, \epsilon_2)$$

$$X_3 = P_{X_3X_1} X_1 + P_{X_3X_2} X_2 + \epsilon_2$$

$$X_3 = 0,6138.X_1 + 0,3942.X_2 + \epsilon_2$$

The coefficient indicates that the effect of other variables on the adversity quotient is 79.75%, which is obtained from  $(0.7975)^2$ .

**a. The Effect of Motivation (X1), Training (X2) and Adversity Quotient (X3) on the Performance (X3) of the Employees at the Livestock and Animal Health Department of West Sumatera Province**

The results of data analysis concerning the effect of the cause variables motivation (X1), job training (X2) and adversity quotient (X3) on the performance (Y) of the employees at the Livestock and Animal Health Department of West Sumatera Province both jointly and partially are presented in Table 2 below.

**Table 2. Analysis of Variance II**

Model	Sum of squares	Df	Mean square	F Count	Sig
Regression	2465.24	3	821.74	18.55	0.000
Residual	2514.95	57	44.29		
Total	4990.19	60			

Source: Primary Data Processing

Table 2 presents the results of analysis of variance from the framework of sub-structure 2 of path diagram as shown in Figure 5. After the F-test is carried out, the result of the F-count is 18.55 with a significant level of  $0.000 < 0.05$ . Thus, it can be concluded that motivation, job training and adversity quotient have a significant effect on the performance variable of the employees at the Livestock and Animal Health Department of West Sumatera Province. The process can be then continued to partial testing, whose results of data testing are presented in Table 3 below:

**Table 3**  
**The Coefficient of Sub-Structure 2: The Estimated Value of Path Coefficient**

No	Influential Variables	Path Coefficient	t count	Sig
1	Motivation (X1)	0.7981	8.7752	0.0000
2	Training (X2)	0.2858	2.7322	0.0066
3	Adversity Quotient (X3)	0.2003	2.6426	0.0097

Source: Primary Data Processing

The data displayed in Table 3 explains that the results of the partial test of each independent variable on the dependent variable (Employee Performance the Livestock and Animal Health Department of West Sumatera Province) are as follows:

- 1) The path coefficient of  $P_{YX1} = 0,7981$  with the t count of 8.7752 at the significance of  $0,000 < 0,05$ . This result means that there is a positive and significant effect of Motivation on the Performance of the employees at the Livestock and Animal Health Department of West Sumatera Province. In addition, it also shows that if the motivation is increased, then the performance of the employees at the Livestock and Animal Health Department of West Sumatera Province will increase as well.
- 2) The path coefficient of  $P_{YX2} = 0.2858$  with the t count of 2.7322 at the significance of  $0.0066 < 0.05$ . This result means that there is a positive and significant effect of job Training on the Performance of the employees at the Livestock and Animal Health Department of West Sumatera Province. In addition, it also shows that if the training is improved, then the performance of the employees at the Livestock and Animal Health Department of West Sumatera Province will increase as well.
- 3) The path coefficient of  $P_{YX3} = 0,2003$  with the t count of 2.6426 at the significance of  $0.0097 < 0.05$ . This result means that there is a positive and significant effect of Adversity quotient on the Performance of the employees at the Livestock and Animal Health Departement of West Sumatra Province. Besides, it also shows that if the adversity quotient is improved, then the performance of the employees at the Livestock and Animal Health Departement of West Sumatra Province will increase as well.

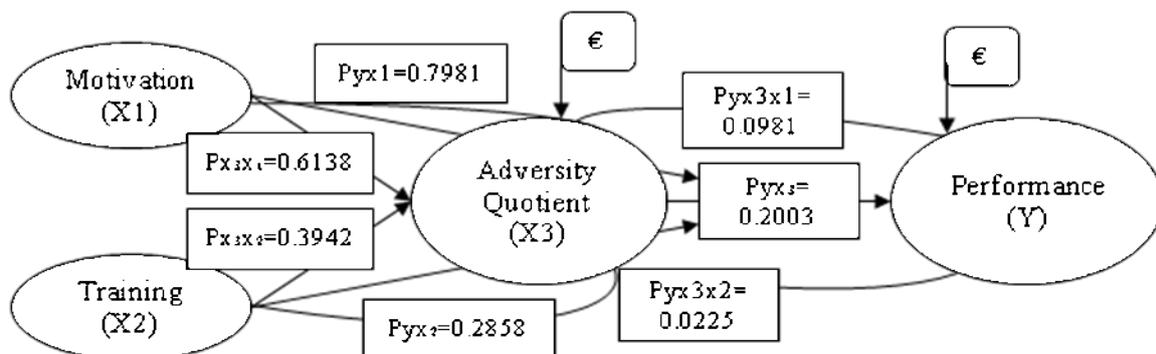


Figure 5. Path Diagram of the Effect of Motivation, Training and Adversity Quotient on Employee Performance

The results of data processing in sub-structure 2 can be substituted into the following equation:

$$Y = f(X1, X2, X3, \epsilon)$$

$$Y = P_{YX1} X1 + P_{YX2} X2 + P_{YX3} X3 + \epsilon$$

$$Y = 0.7981 X1 + 0.2858 X2 + 0.3942 X3 + \epsilon$$

The effect of the other variables on the dependent variable:

At this stage the researcher calculates the other variables which are not included in the model using the formula proposed by Sitepu (1994: 23) as follows:

$$P_{Y\alpha 3} = \sqrt{1 - R^2 Y_{x1x2x3}}$$

$$P_{Y\alpha 3} = \sqrt{1 - 0.3500 (0.6138 + 0.3942)}$$

$$P_{Y\alpha 3} = \sqrt{1 - 0.3528}$$

$$= 0.0883 = 8.83\%$$

The coefficient implies that the effect of the other variables on the Adversity Quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province is 8.83%. Meanwhile, the effect of the other variables on the dependent variable (Performance) is as follows:

$$P_{Y\alpha 3} = \sqrt{1 - R^2 Y_{x1x2x3}}$$

$$P_{Y\alpha 3} = \sqrt{1 - 0.6964 (0.7981 + 0.2858 + 0.2003)}$$

$$P_{Y\alpha 3} = \sqrt{1 - 0.8943} = 0.0325 \text{ or } 3.25\%$$

## 7. Hypotheses Testing

The following criteria are used the basis to determine whether the previously proposed hypotheses are accepted or rejected:

$H_0$  is rejected if the t count is bigger than t table (t count > t table) or (significance of observation < 0.05)

$H_0$  is accepted if the t count is smaller than t table (t count < t table) or (significance of observation > 0.05)

1. The first hypothesis is "Motivation has a significant effect on the Adversity Quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province". The results of data analysis show that the t count value is 5.7103 and the probability value is 0.0000; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Motivation has a significant effect on the Adversity Quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province.
2. The second hypothesis is "Training has a significant effect on the Adversity Quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province". The results of data analysis show that the t count value is 2.3288 and the probability value is 0.0187; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Training has a significant effect on the Adversity Quotient of the employees at the Livestock and Animal Health Department of West Sumatera Province.
3. The third hypothesis is "Motivation has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province". The results of data analysis show that the t count value is 8.7752 and the probability value is 0.0000; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Motivation has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province.
4. The fourth hypothesis is "Training has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province". The results of data analysis show that the t count value is 2.7322 and the probability value is 0.0066; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Training has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province.

5. The fifth hypothesis is “Adversity Quotient has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province”. The results of data analysis show that the t count value is 2.6426 and the probability value is 0.0097; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Adversity Quotient has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province.
6. The sixth hypothesis is “Motivation through Adversity Quotient has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province”. The results of data analysis show that the t count value is 1.412 and the probability value is 0.0981; therefore, the t count is smaller than t table (t count < t table) or (probability >  $\alpha = 0.05$ ). Thus,  $H_1$  is rejected and  $H_0$  is accepted. This means that Motivation through Adversity Quotient has no significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province.
7. The seventh hypothesis is “Training through Adversity Quotient has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province”. The results of data analysis show that the t count value is 2.541 and the probability value is 0.0225; therefore, the t count is bigger than t table (t count > t table) or (probability <  $\alpha = 0.05$ ). Thus,  $H_1$  is accepted and  $H_0$  is rejected. This means that Training through Adversity Quotient has a significant effect on the employee Performance at the Livestock and Animal Health Department of West Sumatera Province.

Therefore, the research model after conducting the research changes as shown in Figure 6.

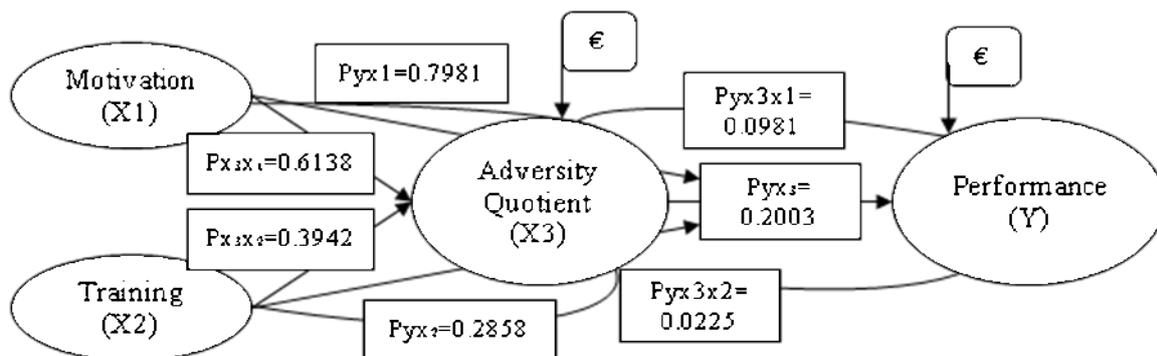


Figure 6.  
Path Analysis Structure (New)

Based on the new path analysis structure presented in Figure 6, taking into account its path coefficients, in order to improve the employee performance, it will be more effective if the Livestock and Animal Health Department of West Sumatera Province fix the current Training program to be more conducive. In addition, if the job training is well designed, it will increase the adversity quotient of the employees. Designing a good training program is much more important than directly improving the performance condition of the employees. Relying solely on improving motivation tends to be more difficult because it is undeniable that the arrogance factor among the employees at the Livestock and Animal Health Department of West Sumatera Province will be difficult to control unless sanctions are directly imposed. Similarly, relying solely on improving work motivation is also quite difficult because the current working conditions in the Livestock and Animal Health Department of West Sumatera Province tend to follow the old-fashioned working conditions where new employees must adapt themselves to the existing working conditions.

Besides, there are certainly other factors that affect the performance of the employees studied in this research, of which amount is 3.25%. This means that other factors can also affect the performance of the employees at the Livestock and Animal Health Department of West Sumatera Province. This finding supports Steers (1982) who argues that the factors that can influence someone’s performance include their ability, interest, and acceptance of the work based on their commitment. In addition, Anaroga (1992) confirms that the factors that can affect

someone's performance are their abilities, job attractiveness, wages, work security and protection, knowledge, management, environment, cooperative atmosphere, organizational culture, career development expectations, involvement in the organizational development, attention and leadership of the management.

**8. Direct and Indirect Effects of the Independent Variables-Motivation (X1), Training (X2), Adversity Quotient (X3) on the Dependent Variable (Employee Performance (Y))**

**a. Motivation Variable (X1)**

Direct Effect:

$$\begin{aligned} X1 \text{ on } Y &= Y \longleftarrow X1 \longleftarrow Y \\ &= (P_{yx1}) (P_{yx1}) \\ &= (0.7981) (0.7981) \\ &= 0.6369 = 63.69\% \end{aligned}$$

Indirect Effect:

$$\begin{aligned} X1 \text{ on } Y \text{ through } X3 &= Y \longleftarrow X1 \Omega X3 \longleftarrow Y \longleftarrow \\ &= (P_{yx1}) (P_{x3x1}) (P_{yx3}) \\ &= (0.7981) (0.6138) (0.2003) \\ &= 0.0981 = 9.81\% \end{aligned}$$

**b. Training Variable (X2)**

Direct Effect

$$\begin{aligned} X2 \text{ on } Y &= Y \longleftarrow X2 \longleftarrow Y \\ &= (P_{yx2}) (P_{yx2}) \\ &= (0.2858) (0.2858) \\ &= 0.0816 = 8.16\% \end{aligned}$$

Indirect Effect:

$$\begin{aligned} X2 \text{ on } Y \text{ through } X3 &= Y \longleftarrow X2 \Omega X3 \longleftarrow Y \longleftarrow \\ &= (P_{yx2}) (P_{x3x2}) (P_{yx3}) \\ &= (0.2858) (0.3942) (0.2003) \\ &= 0.0225 = 2.25\% \end{aligned}$$

**c. Adversity Quotient (X3)**

Direct Effect:

$$\begin{aligned} X3 \text{ on } Y &= Y \longleftarrow X3 \longleftarrow Y \\ &= (P_{yx3}) (P_{yx3}) \\ &= (0.2003) (0.2003) \\ &= 0.0401 = 4.01\% \end{aligned}$$

The Effect of the Other Variable (PY€3) on Adversity Quotient:

$$\begin{aligned} PY€3 &= \sqrt{1 - R^2_{YX1X2}} \\ PY€3 &= \sqrt{1 - 0.3500 (0.6138+0.3942)} \\ PY€3 &= \sqrt{1 - 0.3528} \\ &= 0.0883 = 8.83\% \dots\dots\dots (19) \end{aligned}$$

The Effect of the Other Variable (PY€3) on Performance:

$$\begin{aligned} PY€3 &= \sqrt{1 - R^2_{YX1X2X3}} \\ PY€3 &= \sqrt{1 - 0.6964 (0.7981+0.2858+0.2003)} \\ PY€3 &= \sqrt{1 - 0.8943} \\ &= 0.0325 = 3.25\% \dots\dots\dots (20) \end{aligned}$$

**Table 4**  
**Summary of the Interpretation of the Direct and Indirect Effects**

No	Descriptions	Percentage	Total Percentage
1	The direct effect of motivation on the employee performance	63.69%	
2	The indirect effect of motivation on the employee performance through Adversity Quotient	9.81%	
3	The total direct and indirect effects of motivation variable on the employee performance variable		73.5%
4	The direct effect of training on the employee performance	8.16%	
5	The indirect effect of training on the employee performance through Adversity Quotient	2.25%	
6	The total direct and indirect effects of training variable on the employee performance variable		10.41%
7	The direct effect of adversity quotient on the employee performance	4.01%	4.01%
8	The total direct effect of the exogenous variable on the endogenous variable		75.86%
9	The total direct and indirect effects of the exogenous variable on the endogenous variable		87.92%
10	The total effect of the other variable on the Adversity Quotient		8.83%
11	The total effect of the other variable on the employee performance		3.25%

Source: Primary Data Processing

## 9. Conclusions

Based on the results of the research on the effect of motivation, training and adversity quotient on the performance of employees at the Livestock and Animal Health Department of West Sumatera Province, the following conclusions are drawn:

1. Based on the results of the path analysis, it was found that motivation had a positive and significant influence on the Adversity Quotient (61.38%) and on the Performance (79.81%).
2. Based on the results of the path analysis, it was found that training had a positive and significant effect on the Adversity Quotient (39.42%) and on the Performance (28.58%).
3. Based on the results of the path analysis, it was found that Adversity Quotient had a positive and significant effect on the Performance as much as 4.01%.

4. Based on the results of path analysis, it was found that Motivation through Adversity Quotient had a negative and insignificant effect on the Performance as much as 9.81%
5. Based on the results of path analysis, it was found that Training through Adversity Quotient had a positive and significant effect on the Performance as much as 2.25%.
6. Based on the results of the path analysis, it was found that there was a positive and significant effect of work Motivation, Training and Adversity Quotient on the Performance of the employees at the Livestock and Animal Health Department of West Sumatera Province, with a contribution of 75.86%.

### 10. Suggestions

Based on the conclusions that have been drawn, the following suggestions are recommended:

1. The results of this research suggest that Motivation has a very strong influence on the performance of the employees at the Livestock and Animal Health Department of West Sumatera Province.
2. Motivation has an insignificant indirect effect on employee performance. So, if the employee's motivation is strong, then the adversity quotient should no longer be necessary to improve employee performance.
3. From the results of the study, it is known that adversity quotient has a very low direct influence on the performance of the employees at the Livestock and Animal Health Department of West Sumatera Province, so this should be a concern for future improvements.
4. There should be individual potential development of the employees so that they can improve their performance at work.
5. The Livestock and Animal Health Department of West Sumatera Province Office should increase its employees' sense of responsibility in carrying out their duties.

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