

CHAPTER II

LITERATURE REVIEW

2.1 Empirical Study

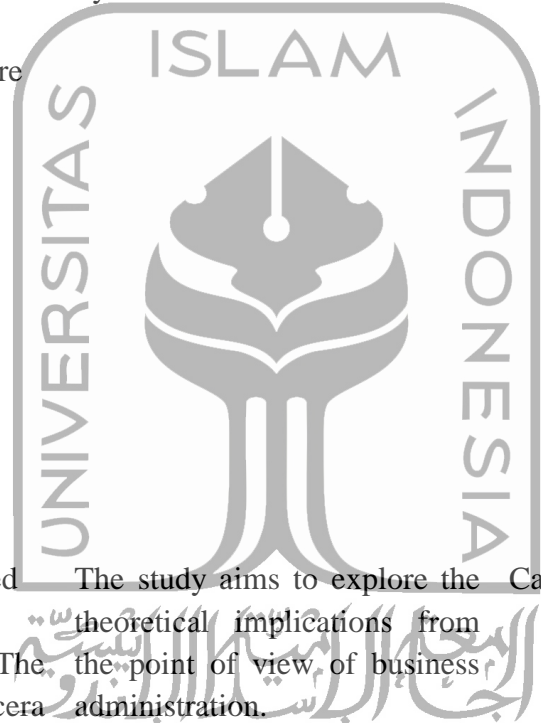
Empirical study refers to researches with the topic pertaining to this research that has been conducted before. The empirical study can be used as a reference and benchmark for the concepts used. The empirical study overview is compiled in a table which encompasses the research objective, method, object and result. Table 2.1 drafts the empirical study as shown as follow:



Table 2.1 Empirical Study

No	Year	Author	Title	Objective	Method	Object	Result
1	2018	Fanze Yang	The operation Mechanism of Amoeba's Organizational Model	Explore the operation mechanism of Amoeba's Organizational model, which provides reference for other enterprises that want to implement the amoeba organizational model.	Amoeba's business model	The operation mechanism of amoeba organization model	The organization should implement the amoeba organization model, starting from the four aspects of team relationship establishment, accounting mechanism, incentive mechanism and evaluation mechanism.
2	2016	Wiesław Urban, Joanna Czarska	Reaching an entrepreneurial management system of amoebas. A qualitative insight into the European experiences	The aim of the study is an assessment of the Amoeba Management System (AMS) introduction advancements in some European Companies.	Amoeba Management System	European Companies	Amoeba Management System is a very prospective management methodology which can support companies in employees' commitment during their journey towards operational excellence. The analysis results show different motivations for AMS introduction as well as different development paths, these are harmonized with different management styles in companies and culture occurring in countries.

3	2017	Wiselaw Urban	Amoeba Management System Transformation in the Light of System Organizational Change Literature	Aims to identify milestones of the transformation in a company organizational system approach to the Amoeba Management System	Conceptual System of Amoebas	The conceptual study shows that AMS is a very advantageous and promising system. However, on the other hand, AMS is difficult to introduce in a company because it requires profound changes in many areas of the company. The most challenging issues refer to changes in the organizational structure, new management styles, attitudes towards work and values inbuilt in the organizational culture, and a new financial reporting system. But supposedly the effects of AMS introduction are beneficial enough to take on these challenges.
4	2017	Yuichi Yoda	Philosophy-based corporate transformation: The Case of Kyocera MITA Corporation	The study aims to explore the theoretical implications from the point of view of business administration.	Case study Kyocera Mita Corporation	In theoretical conclusion, the inamori management philosophy works effectively to facilitate resolution of issues of confrontation and works dynamically while changing its form independently according to the business model and the characteristics of the



5 2017 Wiselaw Urban

System of Amoebas as a Remedy for Employee Engagement Deficits - Conceptual Deliberation



The study aims to identify the challenges for Amoeba System implementation in a traditionally managed bureaucratic company, taking into consideration the influence on workforce engagement

Conceptual research approach
Traditionally managed bureaucratic company

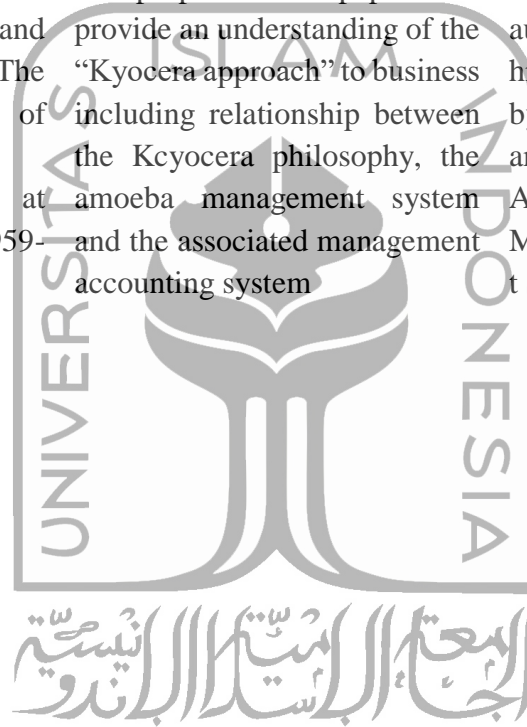
organizational culture for promoting corporate transformation. While in practical implication of the finding that management practice based on the Inamori management philosophy is also effective as a management method from the perspective of company. The philosophy based management promoted sense of unity, strong willpower and cost consciousness effectively for revitalization.

Amoeba is still too little explored and popularized as a very promising management approach deeply engaging employees. The conceptual study shows that it is promising but on the other hand very difficult to introduce in a typical western/ European company. The 4 major challenges are giving team far-reaching autonomy and independence, designing a new accounting system, introducing an effective

6	2014	Hiroshi Takeda, Trevor Boyns	Management, accounting philosophy : development management accounting Kyocera, 2013	The purpose of the paper is to provide an understanding of the “Kyocera approach” to business including relationship between the Kycocera philosophy, the amoeba management system and the associated management accounting system	Semi- autobiograp hical works by Inamori, architect of Amoeba Managemen t System	Kyocera
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and close to real market system of inner prices, and develop and continuously strengthen the set of clear principles.

This suggests that while the Kyocera approach may be applicable more widely in Japan or Asia, outside of this context, the conflicts between Western and Asian cultures, although not necessarily insurmountable, may provide barriers leading to incomplete applications of the Kyocera approach



Based on the empirical studies above, there are some conclusions that can be derived. A study by Yang (2018) that explored the operation mechanism of Amoeba's Organizational model, concluded that amoeba organization model should be implemented in organizations and should follow the four major aspect of the amoeba organizational model i.e. team relationship establishment, accounting mechanism, incentive mechanism and evaluation mechanism.

Study by Urban and Czarska (2016) that focused on the assessment of the Amoeba Management System (AMS) introduction advancements in some European Companies suggested that Amoeba management system is very prospective to be implanted in companies and can support the employees' commitment during their journey towards operational excellence. Moreover, the study showed different pattern of motivation for AMS introduction and different development paths that are harmonized with different management styles in companies and culture in different countries.

Study by Urban (2017) that aimed to identify the milestones of the transformation in a company organizational system to the Amoeba Management System concluded based on conceptual study. The research found that AMS is very advantageous and promising system to be implemented. The issue laid on the implementation which is difficult to be implemented regarding the profound changes that the company must accommodate including changes in the organizational structure, management styles, attitudes, and values inbuilt in the organizational culture, and a new independent financial reporting system.

Research by Yoda (2017) that aimed to explore the theoretical implications from the point of view of business administration in amoeba management system is performed through case-study. The study theoretically and practically concluded that the management system works effectively to facilitate resolution of issues of confrontation and works dynamically while changing its form independently according to the business model and the characteristics of the organizational culture for promoting corporate transformation. As a result, a sense of unity, strong willpower and cost consciousness is promoted through the philosophy based management.

A study by Urban (2017) was aimed to identify the challenges for amoeba system implementation in a traditionally managed bureaucratic company concluded that Amoeba

management system is still too little explored and popularized as a promising management approach deeply engaging employees. The study suggested that amoeba management system is very promising however at the other hand it is difficult to be implemented in typical western/ European companies. The challenges provided team far-reaching autonomy and independence, designing a new accounting system, introducing an effective and close to real market system of inner prices, and developing and continuously strengthen the set of clear principles.

Takeda and Boyns (2014) provided an understanding of the Kyocera approach to business including the relationship between the company's philosophy, the amoeba management system and the associated management accounting system. The study suggested that while the Kyocera approach may be applicable more widely in Japan or Asia, outside of this context, the conflicts between Western and Asian cultures, although not necessarily impossible to be resolved, may provide barriers leading to incomplete applications of the Kyocera approach.

Therefore it can be concluded that amoeba management system is a prospective management system that theoretically and practically offers many advantageous features that facilitates resolution of issues and works dynamically. However, the challenge in the amoeba management system is in the implementation which requires profound changes within the company's organizational structure and culture. While most of the researches are performed in the manufacturing industry, this research is carried out in the service industry. Therefore, this research will conduct a case study in a service industry. This research implements amoeba management system in a service industry to resolve the company's issue of not having a proper assessment of every department to improve productivity in the right area. The implementation process follows four major aspect i.e. construct the Amoeba organizational structure, amoeba accounting mechanism, Amoeba incentive mechanism, and amoeba evaluation mechanism.

2.2 Amoeba Management System

Amoeba management system is a management system developed by Kazuo Inamori in a Japanese ceramic fabrication company called Kyocera. The management system was influenced by the adversities that faced by Inamori while he was starting his startup and the business philosophy laying behind it. This effective organizational system

was appreciated by managers and researchers due to its advantages including very productive and leading to continuous growth. The implementation of AMS introduced by Kyocera gave the company more than 50 years of consecutive profitability (Urban, 2017). This system breaks down organizational structure into small groups performing similarly to independent small businesses refer to as amoebas. The term amoeba was coined due to its size, flexibility, self-organized, and self-developing abilities in terms of business changes. There are no exact or fixed numbers of employees in an amoeba. Hamada & Monden (2017) suggested that each amoeba consists of 3 to 50 employees with a wide range of competence and authority. The amoeba's leader has the authority to make decision as if they were the owner of the business and responsible for internal coordination and coordination among amoebas (Inamori, 2017).

The Amoeba management system is a total management control system, based on a philosophy of management and intimately tied to all systems within the company. A set of clear principles are embedded to the company's organizational culture as the provision of an AMS. These principles are termed the company's philosophy. The philosophy consists of a corporate motto, a management rationale, principles and philosophy. These philosophies underlie the ethical behavior of the employee in the organization.

2.2.1 Amoeba Management Implementation

There are three major objectives of the AMS namely establishing a market oriented divisional accounting system; developing leaders with managerial awareness; and achieving management by all. The first objective to establish a market oriented divisional accounting system is embodied through a unique accounting system where every amoeba is equipped with an accounting division. As a result, transaction among amoeba exist which refers to as internal transaction. To set the transfer price, an activity of negotiation and bargaining is performed corresponding to the market condition and comparable to market prices (Inamori, 2017).

Implementing the amoeba management system and the tools to achieve dynamic leadership and cooperation with stakeholders stimulates an organization to enhance the corporate performance and become more competitive in the business environment (Michaela, 2012). The implementation of amoeba management system can support companies in employee's commitment in their path toward operational excellence on various management styles and culture of organization (Urban & Czerska, 2016).

Urban (2017) in implementing Amoeba management system stated that the Amoeba management system is very challenging to be adopted in a traditionally organized bureaucratic organization. The most difficult part is to give the small teams far-reaching autonomy and transfer to them fully responsibility for their work. An empirical investigation of AMS was done in three European companies in (Urban & Czerska, 2016). The study concluded that AMS is a very useful management methodology which can support companies in employee's commitment during their path towards operational excellence.

The study on steps to implement amoeba system in an organization has been done by several scholars. Yang (2018) stated that there are four steps to implement amoeba management system to an organization namely establishing relationship among amoeba teams; designing accounting mechanism; designing incentive mechanism; and designing evaluation mechanism. (Urban, 2017) described the framework of the implementation of amoeba management system in 5 milestones i.e. comprehensive preparation for implementation of AMS; changing organizational structure; design an accounting system coherent with the amoeba structure; introduction of inner price between amoebas; and transformation of the organizational culture to the AMS values and principles.

Establishing relationship among amoeba revolutionize the traditional model of enterprise organization where employees in different departments need to communicate to each other. In conventional organization model, due to the traditional cross departmental communication which causes low efficiency. The amoeba management system organizational model consisting many different amoebas or teams, and teams need to communicate to each other. The trading rule inside the team is led by the amoeba organization. Therefore the relationship between different departments is no longer traditional but replaced by internal exchanges (Yang, 2018).

2.2.2 Amoeba Accounting System

Unlike the conventional accounting system that operates on global figures and reports the historical data which is useless for AMS approach (Inamori, 2017). The amoeba accounting system provides information about the total expenses of the amoeba includes all costs to facilities engaged and operations done by an amoeba that resulting a wide range of dynamism (Urban, 2017).

The accounting system of Amoeba organization introduces the independent accounting mechanism. Every department is responsible for their own profit and loss. There are two types of transaction in the organization, internal and external transaction. Internal transaction refers to the transactions among departments or amoebas. The internal transfer price between amoebas is determined through a process of bargaining and negotiations agreed among amoebas. The amoeba profits are determined by the selling prices however, it cannot be considered as its own profit but also as a profitability of the whole company (Urban & Czerska). While, the external trading is the normal operation and sales activities of an enterprise. In order to success, the teams are based on a realistic economic conditions, thus each amoeba has a real and timely finance calculation and the inner transfer prices must be realistic (Urban, 2017). Once all the amoeba units within the enterprise have a profit-oriented business principle, they should pursue maximum sales revenue, reduce cost and constantly increase actual profits, enterprises will naturally achieve high returns (Yang, 2018).

The amoeba profit or also called as the value added is the balance remaining after subtracting the total expenses from net value of production sold to other amoebas (Urban & Czerska, 2018). The amoeba profit indicates the hourly efficiency ratio in a unit. In the Amoeba structure, every department has their own incentive mechanism. A trading relationship is formed by the functional department with other team of the business unit. The salaries of the functional departments are linked to the performance of their work. Every department teams have their own incentive mechanism, and for the functional department, form a trading relationship with the team of other business units. The salaries of the functional departments are linked to the performance of their work, at the same time linked to the front-line staff work performance, which can fully motivate the various departments to work hard.

Evaluation Mechanism is used to check if the teams have completed the task aligned with the control objectives or performance standards. In the AMS there are no real performance appraisals due to the core objective of the organization to make the enterprise internal business unit staff to better understand their business and focus on the business sector to find and solve problems.

2.2.3 Amoeba Management Philosophy

Amoeba management is built upon the philosophy “do what is right as human being”. The criterion “do what is right as human being” is related to the ethic and moral based on conscience that is fundamentally owned by every human being. A simple example is as taught by parents or teachers such as “don't be greedy, “don't lie”, and “be an honest person” (Inamori, 2017). Having this philosophy embedded to the employees nature will create a healthy working environment. Moreover, Employees must have the sense of work to become meaningful. Organization can demonstrate how jobs fit with the organizations broader purpose to encourage people to see their work as meaningful.

Organization that succeed to increase the individuals meaningfulness in the workplace are more likely to attract, retain, and motivate the employee they need to build sustainably for the future and create the kind of workplace where human being can thrive (Bailey & Madden, 2016).

The company's philosophy refers to the principles and values that are embedded in the company's corporate culture. The Kyocera's philosophy is printed in a small book called the Kyocera philosophy published internally only for the company's employees. This pocket book is given to the employee on the first day of work in the company (Bailey & Madden, 2016).

2.2.4 Amoeba Target

Through the amoeba management accounting system, the productivity level or profit per hour rate which indicates the hourly efficiency ratio in unit can be identified. This can be compared to the amoebas actual average hourly labor cost and benchmark the unit's performance. From the hourly efficiency, the company can analyze how they obtain the profit per hour and plan for the next target and improve. There are many methods in setting the target. One of the methods is forecasting.

Forecasting is an activity to predict future events that is used in a wide range of application of the industry including the supply chain activities planning and control, sales demand, and setting target. In forecasting, time series analysis is important to enclose many different forecasting models. Thus it is important to select the best forecasting model that suits to the particular condition. There are three main groups of forecasting method i.e. qualitative, historical projections and causal (Ballou,2007). The best forecasting model will result the minimum error. Forecasting methods can be based

on mathematical models that relies on the historical data or in qualitative methods or it can also be based in a combination of both quantitative and qualitative methods (Barbosa et al, 2015).

The difference between quantitative and qualitative method is that quantitative methods are based on mathematical models. This includes time series models and associative models. Time series models attempts to predict the future based on the past pattern. There are many types of time series models, two of the models are trend and seasonal model. Trend is a technique that uses the least squares method to fit a straight line to the data. The formula to forecast using the trend method in period t is as follow,

$$F_t = a + b_t \dots\dots\dots(2,1)$$

Where :

$$b = \frac{n \sum(tY_t) - \sum t \sum Y_t}{n \sum t^2 - (\sum t)^2}$$

$$a = \frac{\sum Y_t - b \sum t}{n}$$

The formula is composed of n which is the amount of data and Y_t which is the actual data in period t. In seasonal model, the forecast method accomodate any seasonal patterns inherent in the data. While associative model is defined as a quantitative forecasting method that assumes that the variable being forecasted is related to other variables in the environment.

The qualitative methods are subjective in nature in which these types of forecasting methods are derived from judgments, intuition, personal experiences, and opinion. These methods can be obtained from group of managers' executive opinion, market survey, sales force composite, and Delphi method. Delphi is a method to obtain the most reliable consensus of opinion from a group of experts. This technique is intended for use in the judgment and forecasting situations where pure model based statistical method are not practical due to the lack of appropriate historical/economic/technical data and therefore where human judgmental input is more necessary (Barbosa et al, 2015).

In the application of Delphi, the most essential requirement are the need for experts judgments, group consensus to achieve a particular results, and anonymity in the

data collection. The members within the group should be a combination of individuals from multiple specialties and heterogeneous groups are preferred than the homogeneous groups (Baker, 2008). The method is used in qualitative research in which the result is mainly based on the individuals judgments and opinions.

Once the Ameoba target is defined a meeting is conducted to evaluate the efficiency performance ratio to the planned target. This is done to monitor the progress and plan for improvement. Generally, there are two major options in improving the profit per hour namely increase revenue or reduce cost.

2.3 Productivity Improvement

One of the most prominent factors for an organization to sustain its business in the competition is productivity improvement. The term productivity refers to the ratio of output and the input while productivity improvement intends to improve the ratio of output and input. Productivity improvement can help organization to increase production & productivity, reduce indirect and direct costs, offers improvements in working condition, and reduce fatigue or danger (Sahni, 2016).

Productivity improvement is a critical success factor and the foundation of profitability (Salaam, 2011). In the Ameoba management model productivity is expressed in profit per hour unit. The productivity level indicates the performance of every department at a point of time. Subsequently, the management will assess the performance and compare it with the target. Productivity improvement involves analyzing the current operations processes and compare with the target to determine specific areas of opportunity. The goal of productivity improvement is decrease in overall cost combined with an increase in revenue. According to the amoeba management productivity level expressed in profit per hour the profit is obtained from the deduction of expenses from revenue while the hour indicates the total working hour in a month.

There are three alternatives to improve productivity in profit per hour i.e. increase in profit while maintaining working hour, decrease in working hour while maintaining profit, and increase in profit with a decrease in working hour. Suppose that the working hour is constant and same thus the productivity improvement is done by an increase in profit. Increase in profit can be obtained by an increase in revenue and decrease in expenses.

2.4 Marketing Mix

Marketing strategy is one of the essential aspects that affect the total sales of a company. The ultimate goal of marketing mix is to increase the total sales of the company that will result in an increase in the revenue of the company. A successful marketing strategy for today's businesses is composed by marketing segmentation, positioning and fully integrated marketing mix. Development of marketing mix has received academic and industry attention. The marketing mix that initially consist of 4Ps which are product, price, promotion and place now has been modified into 7Ps including the additional 3Ps of people, process, and physical evidence as strategic elements. This was transformed because the traditional marketing mix is considered inadequate for services marketing context due to the unique characteristics of services. The additional 3Ps are fundamental marketing variables for the service aspect of the company. In order to achieve company's objectives, a marketer should make a combination of these elements to create a distinctive marketing mix aligned with the company's objective.

The marketing mix is not a theory but a conceptual framework that highlights the principal decisions that marketing manager's make in configuring their offers to meet the customers' needs. The tools can be used to develop long-term strategies as well as short-term strategies. The marketing mix is considered as a toolkit of transaction marketing and archetype for operational marketing planning by the majority of marketing practitioners (Constantinides, 2006). Numerous studies have suggested that the tool is extremely influential in informing the development of both marketing theory and practice (Goi, 2009). The concept has two major benefits as an important tool to enable to see that the marketing manager's job is a large part of the competitive strengths in the marketing mix against the benefits of others. The other benefit, it is aided to reveal another dimension of the marketing manager's job. An effective marketing mix management implementation enables marketer to create a combination of elements that enable to manage the company's budget wisely to achieve the desired objectives (Isoriate, 2016). The 7Ps of the marketing mix are:

1. Product

A product can be tangible or intangible must provide value to customer and involves developing new products or improving the existing ones. It is what can be offered to the market and could get attention to be acquisition and can satisfy

the wants or needs. According to Kotler (2003) in developing a product a product developer must concern and fulfil the three stages:

- a. Core benefit, the first stage which contain the benefits or the core service that are given to the customer
- b. Actual product, a set of attributes or condition which is typically expected by customer when purchasing the product
- c. Augmented product, the service or additional benefit that distinguishes the product offered with other product from competitors.

2. Price

The pricing must be competitive and results profit at the same time. This is one of the ways for a company to distinguish its offer from a competitor. There are four classification of pricing i.e. flexibility, price level, discount, and allowances. Flexibility can be used to determine price based on geographical location, delivery time or the complexity of the expected product. Price level is classified into three levels which is setting price above market, in balance with market, or below market. Discount refers to the reduction of price offered as a particular event to satisfy the customer. Allowance is similar to discount as it reduce the price based on the customer list from a particular activity. A strategy to set price according to Kotler is

- a. Determining price based on geographical location involves companies to determine its pricing system in different location around the globe.
- b. Most companies will adjust the price list and give discount or price reduction for faster payment, large purchases, and off-seasons purchases.
- c. Psychological pricing, pricing that considers human psychology that has an impact on consumer behavior, such as a price that looks better : \$3.99 looks better instead of \$4.00
- d. Value basis, which is based on the buyer's perception on value. All aspect of the product including the quality of the image and prestige will make the buyer's perception.

3. Place

Place refers to the place where customers can access to purchase the product. It can be a physical store or an online store through various channels such as wholesalers, retailers, and internet. By having a strategic business location can give a company

a competitive advantage of having a better business visibility which leads to consistent customer traffic. Through effective visual merchandising techniques, business can distinguish themselves from their competitors. In determining a physical location some aspects should be taken into account including accessibility, visibility, facility and environment

4. Promotion

Promotion includes the different ways of communicating to the customers of what the company has to offer. Promotion should be done to communicate the benefits of using the product rather than just promoting its features. The goal of promotion is to influence the customer to recognize the product offered and make them purchase the product. There are some factors that support the process of promotion according to Kotler (2003):

- a. Advertisement, promoting ideas, product, or service by a sponsor.
- b. Sales promotion, short term incentive to foster buying and selling a product or service. a sales promotion technique that consumers recognize as a marketing communication tool is awareness. It is a prerequisite to create a plan to purchase and establish respect.
- c. Publication, stimulus to a request for a product or service by spreading news about the product or service through internet, TV, or radio.
- d. Personal sales, oral sales through direct conversation with prospect customer particularly for sales purposes.

5. People

People refer to the staff working in the organization including the senior management and the sales person. The people in the organization play a vital role for effective marketing and customer satisfaction. Alnaser (2017) stated that customer satisfaction is directly influenced by the people representing the organization. It is because these people interact directly with customers. Everyone in the company should realize that the reputation of the brand depends on the people within the company.

6. Process

Process refers to the various stages and activities involved in delivering a product and service to the customer. A good process should have a rapid and timely delivery of products to customers. In the process of providing the service, it is

important to have a thorough knowledge on whether the service is helpful for the customer or not.

7. Physical (evidence)

Physical evidence refers to the ambiance and other physical attributes where customer interacts with the staff. In addition it is also the evidence or the experience from the customer of using the product or service. It refers to the physical evidence that the company exist such as the office building, the web interface etc (Lin, 2011).

2.5 Fishbone Diagram

Fishbone diagram or cause and effect diagram was founded in 1943 by Prof. Kaoru Isikawa, the name of the diagram was taken after his name ishikawa. Fishbone diagram is a graphic technique used to identify the causes of a problem or an event by using cause and effect analysis (Coccia, 2017). As the name indicates, the diagram is shaped like a fish bone which has a head which identify the effect and a body in the form of bones which illustrates the problems (Slameto, 2016). The diagram attempts to expose the root causes of the problem which can help the user to solve the problem more effectively and directed way. The root causes are the deepest underlying cause of positive or negative symptoms within any process if dissolved, can potentially result in elimination or massive reduction of the symptom (Slameto, 2016).

The fishbone diagram is composed of the head which indicates the problem or effect of an event, and the fishbone which indicates the causes. In developing a fishbone diagram, the problem is put in the head part and the causes or factors are put on the fish bones. In analyzing the causes of the problems, the source of the problem can be analyzed in some perspective. In particular, a typical fishbone diagram causes can be analyzed in 5 perspective i.e. material, machine, man, method, and environment.

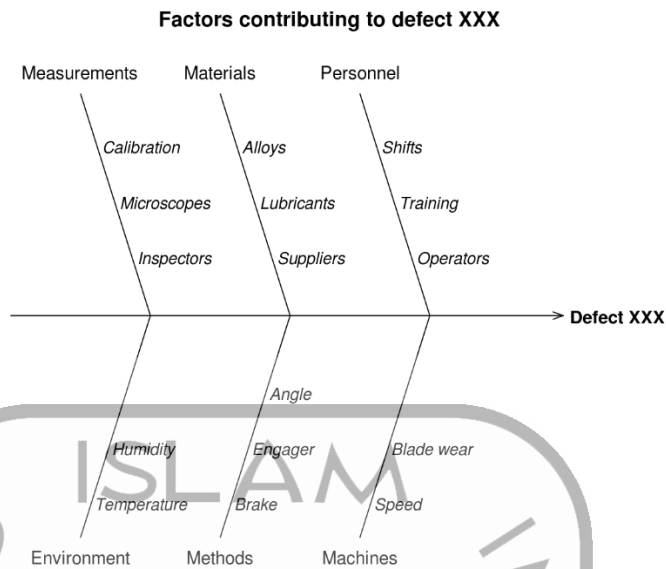


Figure 2.1 Fishbone diagram
(Source: Wikipedia.com)

2.6 Borda

Borda is a method proposed by Jean Charles de Borda, a French mathematician in 1770. This method can be used in many areas that involve voting (Zahid & Swart, 2007). Borda is a voting method used in group decision making for the selection of single winners or multiple winners. Borda determines the winner by giving a certain number of points for each candidate. Then the winner will be determined by the number of points collected by the candidate. The stages of resolving cases with borders can be explained as follows:

1. Determination of the ranking value in an alternative order of choice with the top sequence given the value of m where m is the total number of choices reduced by 1. The position in the second place is rated $m-1$ and so on until the last sequence is given a value of 0.
2. The value of m is used as a multiplier of the sound obtained in the position concerned.
3. Based on the calculation of the Borda function value from the alternative choice, the choice with the highest value is the most preferred choice of the respondents