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1. Repertoire of Fact

A quality assurance engineer ships the defective product to customer due to the time of release product is insufficient to complete the test. The released product is not possible on malfunction and the cause of physical harm to their customer, but the product may high possible to cause the data loss for the user. If the engineer does not ship the product, the other competitor company may take advantage of their weak point.

1.1 Case Story

Rachel works as a Quality Assurance Engineer at a large electronics company. She is responsible for the final testing of her company's servers and is part of a team which decides when new products will be shipped to distributors for sale.

Rachel's company has a contract with another company which makes the chips which are incorporated into the servers Rachel's company makes. The business model for this product is to release a new generation server approximately every six months, meaning Rachel has a limited timeframe to conduct her Quality Control tests.

Because there is such a short amount of time between the release of each next new product, the Quality and Assurance department cannot perform every possible test on the servers to ensure they are defect free. Rachel will not ship a product if there is any possibility that the server could malfunction and cause physical harm to the customer. However, she will ship a product that has a higher likelihood of failure resulting in data loss for the customer, because she knows that if she doesn't, her company's competitor will.

Is this an ethical way to conduct business? How should she determine when to ship a product with known defects?

1.2 The fact of case

1.2.1 Fact 1: Scenario (Shortage of time for Quality and Assurance department to perform testing)

The large electronics company is producing the server and incorporate and contract with another company which makes the chips. The server company is planned to release the new generation server every six month but the Quality and Assurance department is not capable to handle and finish the completely testing of the server to ensure that the server is defect free.

1.2.2 Fact 2: Scenario (Rachel will not ship the product which malfunction or cause physical harm)

Rachel is the engineer of Quality and Assurance department. She is responsible to ensure every server produced from the company is defect free and is fulfill all the quality standards in order to achieve the customer expectations and gain the customers' trust with the defect free product. Those servers may occur malfunction and cause physical harm to user will not be shipped to their customer to guaranteed quality of the product and not to break the trust and confidence of customer to their product.

1.2.3 Fact 3: Scenario (Rachel will ship a product which may cause the customer data loss)

Although Rachel will not ship the product which may occur malfunction and cause physical harm to user, she will ship the product which potentially cause customer data loss when using their server. Due to the shortage of testing time of product, Rachel must ship the defective product to customer without any choice because their competitor company will take the advantage when their weak exposed. This may cause the company loss the profit and loss the customer's confident and trust to their product.

1.3 Central Ethical Issues

Shipping the potentially to occur data loss of product to customer may cause the users' data loss while using the product especially the important data. This will cause the user need to re-create the data they loss. For the user who does not backup the data frequently will cause the irreversible consequences no matter it is the individual use or company use.

1.3.1 Ethical issue 1: Arguments conduct (Insufficient time to complete QA testing)

The company should provide a reasonable and sufficient times to the Quality and Assurance department to complete the fully testing before the product launch in order to guarantee the quality of the product. The insufficient time for testing will cause either the competitor company gains benefits from weakness or the launch the product without the completely final testing to ensure the quality to the distributors for sale.

1.3.2 Ethical issue 2: Arguments conduct (Rachel decides to ship defective product)

Ships the defective product to the distributors for sale is an unethical and immoral decision. The defective product may cause the user of the product loss their deserved and desired benefits. Rachel as a quality assurance engineer should done her job well to ensure the product to be launch is completely tested and defect free.

1.3.3 Ethical issue 3: Arguments conduct (Defective product cause harms to user)

The customer who receives the defective product will decrease the confidence and trust to the production company. In addition, the customer will notify people around them about how low quality the product from that company and inform their friends not to buy that company product. The defective product not only harm to the customer but also the producer as well, such as the reputation of company may decrease at a time due to defective product. For customer, received the defective product which may occur data loss may cause their important data loss and become an irreversible consequence especially the user who do not backup their data frequently.

2. Proposed Appropriate Solutions

There is a lot of competition between the company especially the company produces same kind of product. Every company willing to win the market and the loyalty and trust of customer which brings them the growth of profit to earn more money. Although there are many competitor company, as a proper business company, launch the incomplete tested defective product because the insufficient of time is an improper way to solve the problem. Therefore, the ethic theories are important to the business.

2.1 Duties Perspective

- The company of Rachel should give an appropriate and sufficient duration to the Quality and Assurance department to complete the final test of the ready-to-launch product.
- Rachel should not ship the defective product to the distributors for sales.
- Rachel should responses to company which the final testing is lack of time to complete.

2.2 Rights Perspective

- Quality and Assurance department have the rights to request more time to complete the final testing.
- If the defective product been sold, customers have the rights to know which defects exist in the products and is qualified to return the defective items to the distributors. This is a violation of customer rights.

2.3 Consequences Perspective

- From the case, the customer who purchase the defective product is deprivation of rights. Consumers had paid the certain amount of money in order to get a completely integrated product, but they only get a product which potentially cause the data loss.
- Data loss may cause the irreversible consequences to the user especially who do not backup their data frequently.
- The company may loss and decrease the reputation just because of the defective product. Also, may loss some of the loyalty customers.

2.4 Virtues Perspective

- Rachel is dishonest to the customers because the product is not defect free.
- Although Rachel ships the high resulting cause of data loss product, she not ships the product which will malfunction or cause the physical harm.

3. Develop an ethical analysis with theory or theories

Apply ethical ideas and principles to evaluate the options and select (and defend) the one that is best. I will discuss about our duty and the responsibility, but desire.

3.1 Kantian Evaluation

3.1.1 Evaluation:

From the inspection of second formulation of Categorical Imperative to analyse this case, Rachel was treat the consumer as the means to an end. She deceived the consumer with the goal of delivery product on time and selling the defective product. It was wrong for Rachel to treat the consumer as a money-giving machine rather than a smart consumer who purchase zero defect product, she could have label that the product is not zero defect and potentially cause the data loss or delay the delivery time in order to complete the fully testing.

For the inspection of the first formulation of Categorical Imperative, Rachel must deliver the product on time but the testing hasn't finish and found the product is not zero defect. The moral rule to be proposed, "I have to deliver product on time even the testing haven't done completely". However, if everyone followed this rule, the product selling on market may not zero defect and the testing before deliver is not done completely to ensure the quality of product. Her proposed moral rule is irrational, so it is wrong for Rachel to deliver the defective product to the distributors to sell on market.

We can imagine everyone are following the rule all the time without producing the logical contraction that undermines the rule. This may compare and evaluate between the company reputation/ image (not to launch defective product) and company profit (launch defective product).

3.1.2 Case for:

Distribute the highly potential to occur the data loss product may cause the user who purchase and using the product loss their important data. If the user does not backup the data frequently, they may be lost their data permanently and cause the irreversible consequence.

Also, the customer might unaware about the server may occur data lost, they are concealed from the truth, in other words, the Rachel's company are deceiving to their customer to gain the profit from them. From the evaluate above, Rachel did wrong in Kantianism due to deceive the consumer.

3.1.3 Case against:

Because of the contract between Rachel company and the incorporate chips company, Rachel company have to ship the product on time in order to avoid the law issues due to the contract, it may cause the company loss benefit and the reputation in the industry may affected. So, Rachel decides to ship the defective product to the distributors to sale, so her company competitor may not to take advantages and the

company compliance with the six-month contract in order to further incorporate with chips company to maintain the business model as well. The shipped product is highly potential to cause the data loss but not causing the physical harm and malfunction.

3.2 Social Contract Theory

3.2.1 Evaluation:

Rational people would collectively accept it as binding because of the resulting benefits to the community. In this case, Rachel was shipped the defective product due to the reason of the contract time is approximately 6 months to ship new product once. The rational agents involved are Rachel, Rachel's company, distributors and consumers. The morality of Rachel's act is question of whether she violated the consumer's rights and deceive the company which she does not complete the product and she decide to ship it with defective. If someone who purchase for the product with defective, both Rachel's company and the consumer have a business deal. So, as a consumer, is it right and rational to purchase a defective product and he/she do not know about that? If Rachel's company offers a price reduction which meets the product with defective to the consumer, or label the product is existing potentially cause of data loss, it may have an equality right to both. If not, the product is selling on the normal price and do not label it has the problem, the consumer is deceived and right violated. In conclude of social contract theory analysis, Rachel was wrong to ship the defective product.

3.2.2 Case for:

In social contract theory, the morality is consisting a set of rules which managing how people treat one another, the rational people will agree and accept the social contract in order to gain the equality benefit but not the possibility of getting inequality benefits. If we treat other people well and respect, the one another will treat us as well and kindness, this is the equality on the benefit.

In this case, Rachel allow her company to ship the defective product to sell on market. This will cause the unbalance of the benefit between Rachel's company and consumer who purchased their defective product. The consumer does not receive a fully tested and zero-defect product but their paid for the money which is an amount of the proper product with zero-defect.

3.2.3 Case against:

In our universal, some of the situation are complicated and cannot be described by only in a way, but many ways to analysis and the result may be changed. In this case, certainly there is not only involved Rachel and consumer, but Rachel's company and the chip company is involved into the case as well. If we said that Rachel is wrong to ship the defective product to distributor to sell on market, the reason is two company is incorporated and signed a contract for 6 months deliver a new product to market. So, we can comprehend that Rachel was forced to complete the testing in short given time in order to ship product on time. In addition, company of Rachel does not concern about how much time the Quality and Assurance department need to complete the

testing as well. In this case, the company of Rachel is needed to take the responsible to this circumstance, either the company extend the testing time or loss the consumer's confidence and trust.

3.3 Rule Utilitarianism

3.3.1 Evaluation:

To analyse this case by rule utilitarianism, we must think and generate an appropriate moral rule and determine that if everyone follow this rule would increase the happiness of the affected parties or vice versa. From this case, the appropriated moral rule might be the following: "If I cannot be done or complete my job well, then I should just ignore it even it may cause the serious consequences."

By following this rule, most of the manufacturers can cost down and just deliver what they have done in a certain time, they gain the benefit. But many of the consumers may face that what they paid is not what they should receive including quality of product etc.

In conclusion, the harm caused by universal adoption of this moral rule is outweigh the benefits of it. Therefore, the action of Rachel is morally wrong.

3.3.2 Case for:

Not every morally decision is required to performing the utility calculus. We can just imagine if everyone following this rule can or cannot increase the overall happiness and benefits in their life. If the benefit is outweighing of harm then it is a morally right action. In this case, Rachel was wrong to ship the defective product, it may cause the consumer loss their important data or maybe permanently loss to cause the serious consequences due to the defect of product.

3.3.3 Case against:

From this case, there is a contradiction to the case, if Rachel ships the defective product, consumer will unjust the benefit, but if Rachel does not ship the defective product and delay to deliver because of testing process, her company may be accused by the signed contract incorporate company due to not following the 6 months to deliver a new product rule. So, from above, Rachel is hard to decide whether to ships or not to ships the defective product, but both decision will cause the one loss the benefit.

3.4 Act Utilitarianism

3.4.1 Evaluation:

To analysis this case by act utilitarianism, the affected parties and the effects of shipping the defective product. The measurement unit to be used in this analysis is "happiness" and "unhappiness", the sum and subtract the number will be represent the increase and decrease of them.

The affected parties including company of Rachel, chip company and consumers. To the company of Rachel and chip company, they corporate to develop and build up a server in order to earn the money on market. Rachel ships the defective product to sell, both the companies gain the benefits and both companies' employee can get their salary for further few years in order to maintain their daily life expenses, in this side of getting happiness to the employee, we can add the mark +20 to the Rachel action and decision. But the consumer received the defective product may cause the data loss, they will also loss the confident and trust to the Rachel company, this will affect reputation and also may affect the further sales of company, so we need reduce mark - 15 to the consequences of shipping defective product. We assume that Rachel' company has announced that this product is defective but will fix the defect after delivered, so it may recover some of the confidence and trust of their consumer, we add up +5 to the mark.

In conclude of analysis, we found that the benefits (happiness of people) of ships defective product is outweighing of the harm (unhappiness of people). So, the action of Rachel was doing right in act utilitarianism.

3.4.2 Case for:

From act utilitarianism, it is only focuses on the most benefits or goods or happiness of the affected parties. Even the consequence of the action is breaking the rule such as lying in specific situation to solve the problem. The right action is depending on how much benefits it can be gained and not involved and affected by the moral rule.

So, Rachel ships defective product to consumer may cause consumer loss benefit but the overall of benefit in this case is greater than a part of it. Therefore, Rachel's action is determined as a right action.

3.4.3 Case against:

In this case, we only can do an assumption to every case and the effect to the affected parties. Also, to calculate the utility accurately have to spend a lot of time and energy to analysis every possible decision and consequence to the case. So, we just assume a simple and clear of possible case happened to do the analysis.

3.5 Virtue Theory

3.5.1 Evaluation:

By analysis of virtue theory, Rachel was dishonest to the company because of decide to ship the defective product since the company believe that the testing is fully completed and product is zero-defect. Rachel should report to her company that the given time to do the testing is insufficient to complete the fully test in order to ensure the quality of product is zero-defect.

In other sides, Rachel also indirectly deceive the consumer who purchase her company's product. The consumer does not know the product their received is defective and may cause data loss. If the product is announced as there is the defect

which will cause data loss may be acceptable to the rule because the consumer has the right to choose whether they want to purchase a defective product or not.

From above analysis, Rachel was wrong to ship the defective product.

3.5.2 Case for:

By the virtue ethics, it is simpler to determine whether the case is right or wrong, the one who breaks the moral rule and performs the right action or right character is determined as wrong action to virtue ethics. According to the simple rule of virtue ethics, Rachel is performing dishonest action in the case, so we can result that Rachel was wrong in virtue ethics analysis.

3.5.3 Case against:

Even the case shown that Rachel ships defective product is wrong action, but on other sides of consequence, Rachel not shipping the defective product may cause the break of contract between her company and incorporate company. This may cause another morally wrong action in further analysis such as cause the company loss sales and reputations.

4. Reflections

4.1 Reflection on solution

Based on the analysis by many of workable ethical theory, the majority of the ethical theories are giving the result of wrong actions and decisions done by Rachel. Shipping the defective products is morally wrong action and it does not support by the long-term consequence; the harms of the action is outweighing the benefits it gains. Rachel should not decide to ship the defective product that may cause the data loss which bring the risk to consumer and user.

In additions, Rachel can report or response to the company that the Quality and Assurance department could not complete the fully testing of the server before the due date of shipping the product. Maybe delaying the deliver time may break the rule or law between two incorporate company, but in the perspective of long term benefits, there is the worth to discuss to extend the testing time and make sure the product is zero defect.

4.2 Reflection on what you have learnt

The aim and scope of this assignment is to analyse the case study by the ethical theories. The case study was found online and I was read the case study and discussed with lecturer to confirm that the case study is suitable for me to do the further analysis.

In the process of analysing the case study by different of workable ethical theories, it required me to use the different point of view in order to complete the analyse and also provide the depth explore of the actions in the case study. From using the different point of view to analyse the case study, I was learnt how to analyse the actions to take and also how to decide the right action to take. Also, the evaluation by ethical theories I had learnt from the class was fully used to this assignment in order to complete it well.

4.3 Recommendation for Situation Improvement

In my opinion, first, Rachel is needed to response to her company that the testing cannot complete before the due date of shipping product. After that, the company should discuss with the incorporate chips company to prevent the law issues and take care for the long-term benefits to both company relationship.

The time to ship the product is needed to be extended in order to complete the fully testing of product. Also, if the product is found the defects, the company must solve the problem found as fast as possible. To deliver a great and zero-defect product, fully testing before the shipping is required to ensure it is worth to purchase by consumer.

5. References

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