

Masauso Mtolo

UD71942BEc81097

COURSE NAME:BEC612 Behavioral Economics

Doctorate in Economics

School: Business and Economics

Country: Zambia

2022

**Table of contents**

Theme Page

Introduction 3

Chapter 3 4

Chapter 4 9

Chapter 5 14

Conclusion 17

Bibliography 18

**Introduction**

Behavioral economics is a branch of economics that uses psychology to model consumer behavior. The major discoveries in behavioral economics research are a tendency for consumers to value goods and services, concern about the fairness of an economic transaction and the use of simple rule of thumb to make economic decisions. This information is from the main assignment textbook microeconomics by Robert Pindyck and Daniel Rubinfeld.This assignment covers chapter 3, chapter 4 and Chapter 5.

Chapter three of the main assignment textbook is titled consumer behavior. The topics covered are consumer preferences, marginal utility and consumer choice, and cost-of-living indexes. This chapter introduces the concept of a market basket which is a list with specific quantities of one or more goods. Among the preferences of consumer is transitivity which is explained that if a consumer prefers basket A to basket B and basket B to basket C then the consumer prefers basket A to basket C.

Chapter four is titled Individual and Market Demand. The topics covered in this chapter are individual demand, market demand, consumer surplus, network externalities and empirical estimation of demand. Network externalities is very interesting as the demand of a good or service by a consumer depends on the demand by other consumers.

Chapter five is titled Uncertainty and Consumer Behavior. The topics covered in this chapter are describe risk, reducing risk (only diversification is used),the demand for risky assets and aspects of behavioral economics this being a textbook of microeconomics. A risk is something bad which can happen to a business. A risk can cause loss, closure of the business. Probability from mathematics is used to calculate the expected utility and standard deviations which are important in portfolio management and business decision making.

Behavioral economics is very important field and the knowledge from this assignment has applications in marketing, manufacturing and e-commerce.

**Chapter 3**

**Question one**. What are the four basic assumptions about individual preferences? Explain the significance or meaning of each.

**My answer**.

1. Completeness. Preferences are distinct and can be ranked.

2. Transitivity. Preferences are said to be transitive meaning that if a consumer prefers basket A to basket B and basket B to basket C, then the consumer also prefers A to C.

3. More is better than less. Consumers always prefer more of a good.

4. Rationality.Consumers preferences are consistent and make sense.

**Question two**. Can a set of indifference curves be upward sloping? If so, what would this tell you about the two goods?

**My answer.** No. A set of indifferent curves cannot be upward sloping. To make my explanation easy I take the goods in behavioral economics terms as a market basket. If two goods have an upward sloping curve then it means the consumer is indifferent between the goods despite one of them having both which is against the assumption of consumer behavior.

**Question three**. Explain why two indifference curves cannot intersect.

**My answer**.Two indifference curves cannot intersect because consumer behavior follows the principle that more is preferred to less.

**Question four**. Jon is always willing to trade one can of Coke for one can of Sprite, or one can of Sprite for one can of Coke.

a. What can you say about Jon’s marginal rate of substitution?

b. Draw a set of indifference curves for Jon.

c. Draw two budget lines with different slopes and illustrate the satisfaction-maximizing choice. What conclusion can you draw?

**My answer**:

(a)Jon’s marginal rate of substitution is 1

(b)

**Question five:** What happens to the marginal rate of substitution as you move along a convex indifference curve? A linear indifference curve?

**My answer:**

The marginal rate of substitution along a convex indifference curve diminishes along the curve.

The marginal rate of substitution along a linear indifference curve is constant. That is the marginal rate of substitution remains the same.

.**Question six:** Explain why an MRS between two goods must equal the ratio of the price of the goods for the consumer to achieve maximum satisfaction.

**My answer:** The marginal rate of substitution is the rate the consumer can substitute one good for another. The ratio between the two goods is the slope of the budget line and must equal the slope of the indifference curve to confirm the ‘willingness’ to pay by the consumer which roughly equates to satisfaction.

**Question seven:** Describe the indifference curves associated with two goods that are perfect substitutes. What if they are perfect complements?

**My answer:**Two goods that are perfect substitutes have indifference curve that are straight lines.

If the two goods are perfect complements then the indifference curves are right angles.

**Question eight**. What is the difference between ordinal utility and cardinal utility? Explain why the assumption of cardinal utility is not needed in order to rank consumer choices.

**My answer**: Ordinal utility measures consumer satisfaction by preference or ranking while cardinal utility gives the magnitude of how one preference is more or less than another.

The assumption of cardinal utility is not needed to rank consumer choices because there is no agreed way to tell the level of satisfication from a market basket and this is not critical because the main aim is to know the consumer behavior which is shown by the order in ordinal utility.

**Question nine:** Upon merging with the West German economy, East German consumers indicated a preference for Mercedes-Benz automobiles over Volkswagens. However, when they converted their savings into deutsche marks, they flocked to Volkswagen dealerships. How can you explain this apparent paradox?

**My answer:**

This paradox or absurd situation can be explained by the fact that preference in particular under the assumption of completeness ignores the cost of an item as a factor in a purchase. When converted to deutsche marks, the money of the consumers from East German to pay for a Mercedes-Benz was too expensive compared to the price to purchase a Volkswagen (VW) which ordinarily have about the same standard features like a Mercedes-Benz. So many purchased VW’s.The reunification of Germany meant that consumers from East Germany needed available money to live at the same level as west Germany because water bills, electricity and others were in the process of being harmonized. So any saving meant better financial security.

From an African perspective, a Mercedes –Benz is a high class car used by Presidents and other rich persons and so are highly desired.This am told is not the same view in Europe. The ranking of a VW and a Mercedes Benz are so different that any comparison is ignored. Any model of Mercedes Benz among my peers is deemed of higher quality.

10. Draw a budget line and then draw an indifference curve to illustrate the satisfaction-maximizing choice associated with two products. Use your graph to answer the following questions.

a. Suppose that one of the products is rationed. Explain why the consumer is likely to be worse off.

b. Suppose that the price of one of the products is fixed at a level below the current price. As a result, the consumer is not able to purchase as much as she would like. Can you tell if the consumer is better off or worse off?

**Question eleven:** Describe the equal marginal principle. Explain why this principle may not hold if increasing marginal utility is associated with the consumption of one or both goods.

**My answer:**

The equal marginal principle states that a consumer will choose a combination of goods to maximize their total utility.

The equal marginal principle may not hold if increasing utility is associated with one or more goods because the principle is based on the law of diminishing marginal utility.

**Question twelve:**The price of computers has fallen substantially over the past two decades. Use this drop in price to explain why the Consumer Price Index is likely to overstate substantially the cost-of-living index for individuals who use computers intensively.

**My answer:** The Consumer Price Index uses the Laspeyres price index which is characterized by using a fixed consumption bundle in the base year. The Laspeyres price index overstates the cost-of-living index because it assumes unchanging consumption pattern as prices change and this formula when adopted in the Consumer Price Index overstates the cost-of-living.

**Question thirteen:** Explain why the Paasche index will generally understate the ideal cost-of-living index.

**My answer:** The Paasche index generally understate the ideal cost-of-living index because its mathematical assumption is based on the premise that the individual will buy the current-year bundle(a list with specific quantities of one or more goods) in the base period which are actually two separate time frames.

**Chapter 4**

**Question one**: Explain the difference between each of the following terms:

a. a price consumption curve and a demand curve

b. an individual demand curve and a market demand curve

c. an Engel curve and a demand curve

d. an income effect and a substitution effect

**My answer:**

1. A price consumption curve shows what happens to the consumption of both goods as the price of one of the goods changes.

A demand curve shows the relationship between the consumption and price of one good.

1. An individual demand curve shows the quantity demanded by one person at a selected price.

A market demand curve is the quantity demanded by all individuals in a market at a given price.

1. An Engel curve shows the quantity demanded of a good for any given income.

A demand curve shows the quantity demanded of a good for any given price.

1. An income effect is the change in consumption of a good resulting from an increase in purchasing power.

A substitution effect is the change in consumption of a good with a change in its price.

**Question two:** Suppose that an individual allocates his or her entire budget between two goods, food and clothing. Can both goods be inferior? Explain.

**My answer:** An inferior good is a good that as income rises consumption falls.

In this case both goods cannot be inferior.

For the individual food is inferior good because consumption of the food becomes less with increase in income and that money is put to clothing which is a superior good because consumption increases with income.

**Question three:** Explain whether the following statements are true or false:

a. The marginal rate of substitution diminishes as an individual moves downward along the demand curve.

b. The level of utility increases as an individual moves downward along the demand curve.

c. Engel curves always slope upward.

**My answer:**

1. The marginal rate of substitution diminishes as an individual moves downward along the demand curve.This statement is **true.**
2. The level of utility increases as an individual moves downward along the demand curve. This statement is **true.**
3. Engel curves always slope upward. This statement is **false.**

**Question four:** Tickets to a rock concert sell for $10. But at that price, the demand is substantially greater than the available number of tickets. Is the value or marginal benefit of an additional ticket greater than, less than, or equal to $10? How might you determine that value?

**My answer:** The marginal (extra) value is greater than $10 because among those who want to attend the rock concert but had not bought earlier there must be someone who is willing to pay more after the tickets are sold out even though not only for reason of the concert but other reasons e.g a date or status among peers or autograph.

I can determine the valueby practically having 5 extra tickets as a ticket agent. Adding the amount at which the tickets are sold and dividing by 5.

**Question five:** Which of the following combinations of goods are complements and which are substitutes? Can they be either in different circumstances? Discuss.

a. a mathematics class and an economics class are

b. tennis balls and a tennis racket

c. steak and lobster

d. a plane trip and a train trip to the same destination

e. bacon and eggs

**My answer:**

1. a mathematics class and an economics class are complements.An increase in the price of a mathematics class leads to a decrease in economics class because mathematics is a prerequisite to economics.
2. tennis balls and a tennis racket are complements.An increase in the price of tennis balls leads to a decrease in tennis rackets because tennis balls are needed in practice and golf tournaments.
3. steak and lobster are substitutes.An increase in the price of steak leads to an increase in purchase of lobster as an alternative.
4. a plane trip and a train trip to the same destination are substitutes.An increase in plane trip leads to an increase in train trip as an alternative.
5. bacon and eggs are independent goods.The price of bacon does not necessarily affect the price of eggs as these two food have different uses and taste.

**Question six:** Suppose that a consumer spends a fixed amount of income per month on the following pairs of goods:

a. tortilla chips and salsa

b. tortilla chips and potato chips

c. movie tickets and gourmet coffee

d. travel by bus and travel by subway

If the price of one of the goods increases, explain the effect on the quantity demanded of each of the goods. In each pair, which are likely to be complements and which are likely to be substitutes?

**My answer:**

a. tortilla chips and salsa. An increase in price of tortilla chips would cause a decrease in demand for salsa as tortilla chips is usually eaten together with salsa. They are complements.

b. tortilla chips and potato chips. An increase in price of tortilla chips would cause increase in demand for potato chips. They are substitutes.

c. movie tickets and gourmet coffee. An increase in the price of movie tickets would cause an increase in the demand for gourmet coffee as both are used widely as dating and family time activities. They are substitutes.

d. travel by bus and travel by subway. An increase in the price to travel by bus would cause an increase in the number of persons travelling by subway. They are substitutes.

**Question seven:** Which of the following events would cause a movement along the demand curve for U.S. produced clothing, and which would cause a shift in the demand curve?

a. the removal of quotas on the importation of foreign clothes

b. an increase in the income of U.S. citizens

c. a cut in the industry’s costs of producing domestic clothes that is passed on to the market in the form of lower prices

**My answer:**

That causing movement along the demand curve for U.S produced clothing. These stem from change in price.

* A cut in the industry’s costs of producing domestic clothes that is passed on to the market in the form of lower prices.
* The removal of quotas on the importation of foreign clothes.

(this lowers the demand for domestic clothes and eventually reduces their price)

That causing a shift in the demand curve for U.S. produced clothing. These stem from a change in income.

* An increase in the income of U.S. citizens.

**Question eight:** For which of the following goods is a price increase likely to lead to a substantial income (as well as substitution) effect?

a. salt

b. housing

c. theater tickets

d. food

**My answer:** Theater tickets and housing.

Salt has no substitute.

**Question nine:** Suppose that the average household in a state consumes 800 gallons of gasoline per year. A 20-cent gasoline tax is introduced, coupled with a $160 annual tax rebate per household. Will the household be better or worse off under the new program?

**My answer:**It will be better off but only if it reduces using 800 gallons /year.20/100 is 0.2. Now 0.2 of 800gallons/year is $160.The average household is at the point of neutrality.To benefit from the new program the average household must reduce the use of gasoline by encouraging use of bicycles,making only necessary trips and combing family activities like joint shopping.

**Question ten**. Which of the following three groups is likely to have the most, and which the least, price-elastic demand for membership in the Association of Business Economists?

a. students

b. junior executives

c. senior executives

**My answer:**

Most price-elastic demand group for membership in the Association of Business Economists are students who have financial limitation see the subscription as a burden and optional.

The least price-elastic demand group for membership in the Association of Business Economists are senior executives because their company normally pay for their subscription as part of official duties.

**Question eleven:** Explain which of the following items in each pair is more price elastic.

a. The demand for a specific brand of toothpaste and the demand for toothpaste in general

b. The demand for gasoline in the short run and the demand for gasoline in the long run

**My answer:**

(a)The demand for toothpaste in general is more price elastic.In Zambia ,Colgate toothpaste is a household name and the price is about k20.This is not the case for other toothpaste brand.A similar size of Sensodyne is k50 and Aquafresh is k30.

(b)The demand for gasoline in the long run is more price elastic due to uncertainty of supply, wars, and electric cars. In the short run the price changes are small because the gasoline is already in storages and transported or orders already secured.

**Question twelve:** Explain the difference between a positive and a negative network externality and give an example of each.

**My answer:**

A positive network externality is a situation where the quantity of good demanded by a consumer increases to the growth by other consumers whereas a negative network externality is a situation where the quantity demanded by a consumer decreases to the growth in purchases by other consumers.

An example of a positive network externality is a social network website like LinkedIn or Facebook (Meta).

An example of a negative network externality is the snob effect good like a painting or sports car.

**Chapter 5**

**Question one**:What does it mean to say that a person is risk averse? Why are some people likely to be risk averse while others are risk lovers?

**My answer**:A risk averse person is an investor who is known to choose lower profit with known risks over higher profits with unknown risks.

Risk lovers want more profit and are willing to try the waters(chance experiencing loss) hoping all will be well. Risk lovers usually have confidence in reading and setting the investment and are convinced beyond doubt that there is nothing to worry about.

Risk averse people want a safe return and tend to have a satisfaction that a little profit is better than keeping the money or losing it.Some risk averse people were risk lovers but have realized through loss that risks do play out and any safety is something to pursue.

**Question two:** Why is the variance a better measure of variability than the range?

**My answer:** Variance is a better measure of variability than range because variance is always positive while range can sometimes be positive or negative.

**Question three**. George has $5000 to invest in a mutual fund. The expected return on mutual fund A is 15 percent and the expected return on mutual fund B is 10 percent. Should George pick mutual fund A or fund B?

**My answer:**

Return on mutual fund A is $5000\*15/100=50\*15=$750

Return on mutual fund B is $5000\*10/100=50\*10=$500

George should invest in mutual fund A because it gives a higher return (profit).

My calculation assumes the risks of the mutual funds are the same.

:

**Question four:** What does it mean for consumers to maximize expected utility? Can you think of a case in which a person might not maximize expected utility?

**My answer:** Maximized expected utility is when the consumer chooses the option that yields the highest average utility.

A person not knowing the probabilities might not maximize utility.

**Question five:** Why do people often want to insure fully against uncertain situations even when the premium paid exceeds the expected value of the loss being insured against?

**My answer:** This is because for a risk-averse person losses count more than gains and to enjoy higher utility.

**Question six:** Why is an insurance company likely to behave as if it were risk neutral even if its managers are risk-averse individuals?

**My answer:**This question borders on company policy and employee private values.Except for church workers and other religious representative ,private companys do not have say in employees lifestyle except perhaps if its criminal or breaks the law or threatens peace and health of others directly.

An insurance company has several advantages to appear and work risk neutral because this enables risk averse and risk loving clients to approach the insurance company.If its risk loving only then risk averse clients would not deal with it.If its risk averse then risk loving clients would not deal with it.

The managers have no obligation to disclose their stance but as ordinary citizen being risk averse has less loss.The only demand would be for the managers to use their own insurance company.This gives the idea of taking one’s own medicine and walking the talk and boosts public confidence in the insurance policies of the company.

**Question seven**: When is it worth paying to obtain more information to reduce uncertainty?

**My answer**: Information is worth paying for when it gives precise prediction of sales and reduces risks which can lead to losses. The information can help forecast on next year sales which facilitates planning, procurement and administration of the business.

**Question eight:** How does the diversification of an investor’s portfolio avoid risk?

**My answer:** The diversification of an investor’s portfolio avoids risk by selecting investments which are negatively correlated or have no correlation.That is if the price of one sector reduces the other will increase or be not affected.Diversification cannot however protect against systemic risk.

**Question nine:** Why do some investors put a large portion of their portfolios into risky assets while others invest largely in risk-free alternatives? (Hint: Do the two investors receive exactly the same return on average? If so, why?)

**My answer:** Risk-free assets pay a small return but the payment is certain. So this requires a patient investor. Examples of risk free investment are treasury bills, saving account and short term certificate of deposit.

Risky assets promise a high return generally but the payment is uncertain. This type of investment requires a risk loving investor. Examples of risky investment stock market and real estate.

**Question ten:** What is an endowment effect? Give an example of such an effect.

**My answer:** The endowment effect is the fact that an individual holds higher value on a good that they already own than the value they would place on the same good if they did not own it.

My personal experience is refusing to sell a car at a market price when I have used it for some years because of my attachment to it and when with a few addition of money I can buy a newer model.

An example is social experiment where those taking part were given a mug and asked if they could trade it for Swiss candy which is more expensive than the mug. Most refused.

**Question eleven:** Jennifer is shopping and sees an attractive shirt. However, the price of $50 is more than she is willing to pay. A few weeks later, she finds the same shirt on sale for $25 and buys it. When a friend offers her $50 for the shirt, she refuses to sell it. Explain Jennifer’s behavior.

**My answer:**

**i**t’s the endowment effect of attaching more value to what one has than the market can offer.The the $25 purchase was lucky because it was a sale which is probably over.In the shop there is a chance o the shirt is out of stock or the price has been adjusted upward.For these reasons Jennifer has refused to sell her friend the shirt.

**Conclusion**

This study of behavioral economics was very interesting and beneficial to me.It enabled me to know how elements of psychology such as preferences,decision making and cognitive mechanism could play a role in the economy.

The study of consumer behavior in behavioral economics allows a business to use effective methods of marketing and make sale forecasts.

Behavioral Economics has ethics were experimentation on consumers is not allowed but research is taken from the field of psychology.

Consumer behavioral helps economists formulate public and corporate trade policy, taxation, government spending and monetary policy.

**Bibliography**

1. Vedantu(2022).Introduction to Cardinal Utility and Ordinal Utility.Retrived from <https://www.vedantu.com/commerce/difference-between-cardinal-and-ordinal-utility>

2. Lalas C(unknown).3 Applications of Behavioral Economics in The Real World.Retrieved from https://thedecisionlab.com/insights/business/3-applications-of-behavioral-economics-in-the-real-w..

3. Vashishtha H(2021).3 Applications of Behavioral Economics in the Real World.Retrieved from [https://sixthfactor.com/3-applications -behavioral-economics-real-world/](https://sixthfactor.com/3-applications%20-behavioral-economics-real-world/)

4.Pindyk R and Rubinfeld D(2013).Microeconomics.8th edition.Prentice Hall.San Francisco.

5. Scott G(2020).Risk Neutral.Retrieved from <https://www.investopedia.com/terms/r/riskneutral.asp>

6. Emily(2018).Marginal Rate of Substitution(?MRS),Marginal Utility(MU).and how they relate.Retrieved from https://blog.cambridgecoaching.com/marginal-rate-of-substitution-mrs-marginal-utility-mu-and-how-the