CHAPTER 2
CONSUMER BEHAVIOUR
(UTILITY ANALYSIS)
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Every individual has certain wants and he consumes commodities which lead to the satisfaction of such wants. It means that the commodities have a capacity to satisfy human wants. Therefore, in general terms, we say that a commodity is useful if it satisfies our want.

In Economics, the want satisfying power of a commodity is called “utility”. Utility is the capacity of a commodity to satisfy particular human want.
Also, utility and satisfaction are two different terms but they are inter-related. **Utility is pre-consumption and satisfaction is post-consumption.** Utility is assumed satisfaction but satisfaction is something that is actually realized.
Consumption of goods and services depends on utility. Every product possesses power to satisfy human wants. This inner quality of a commodity which satisfies human wants is called as utility.
UTILITY

• Pre-consumption

• Assumed satisfaction

SATISFACTION

• Post-consumption

• Something that is actually realized
- **Forms the basis for demand**
- **Ethical significance not considered**
- **Also different from usefulness**
- **The measurement not possible**
- **Utility** - subjective concept
- **Relative Concept**
- **Even different from pleasure**
- **Satisfaction and utility are different**
- **Utility depends on intensity of the want**
A person will demand a commodity only if it has utility for him.

FEATURES

F - FORMS THE BASIS FOR DEMAND
E - Ethical significance not considered
A - Also different from usefulness
T - The measurement not possible
U - Utility - subjective concept
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

U - Utility depends on intensity of the want
F - FORMS THE BASIS FOR DEMAND
E – Ethically neutral
A - Also different from usefulness
T - The measurement not possible
U - Utility - subjective concept
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

U - Utility depends on intensity of the want

An uneducated person will not demand a book as it has no utility for him. A student will demand a book as it has utility for him.

A student pursuing Arts will not demand a calculator as it has no utility for him. A student pursuing Commerce will demand it.
F - Forms the basis for demand

**E – ETHICALLY NEUTRAL**

A - Also not the same as usefulness

T - The measurement not possible

U - Utility - subjective concept

R - Relative Concept

E - Even different from pleasure

S - Satisfaction and utility are different

The concept of utility does not consider whether the commodity satisfies a good want or a bad want. A commodity can have utility even if it satisfies a bad or unethical want. Utility does not consider any moral or ethical factors. In short, it is ethically neutral.

U - Utility depends on intensity of the want
FEATURES

F - Forms the basis for demand

E - ETHICAL SIGNIFICANCE
   NOT CONSIDERED
   A - Also different from usefulness
   T - The measurement not possible
   U - Utility - subjective concept
   R - Relative Concept
   E - Even different from pleasure
   S - Satisfaction and utility are different

U - Utility depends on intensity of the want

A gun has utility for a soldier as well as a terrorist.
Usage is the benefit that is derived by consuming a commodity whereas utility is the want satisfying power of a commodity. A commodity having utility need not be useful.

F - Forms the basis for demand
E – Ethically neutral
**A - ALSO NOT THE SAME AS USEFULNESS**
T - The measurement not possible
U - Utility - subjective concept
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

U - Utility depends on intensity of the want
F - Forms the basis for demand
E – Ethically neutral
**A - ALSO NOT THE SAME AS USEFULNESS**
T - The measurement not possible
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U - Utility depends on intensity of the want

**Alcohol has utility to drunkard but it is not useful as it harms his health.**

**Hookahs have utility for customers of a hookah bar but it is not useful as it harms their health.**
F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
**T - THE MEASUREMENT NOT POSSIBLE**
U - Utility - subjective concept
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

Utility is a psychological concept. It is intangible and invisible. It is an inherent feeling. Therefore, it cannot be measured cardinally i.e. in numbers.

U - Utility depends on intensity of the want
Features

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - THE MEASUREMENT NOT POSSIBLE
U - Utility - subjective concept
R - Relative Concept
E - Even different from pleasure
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U - Utility depends on intensity of the want

It cannot be said that “Good Day” biscuit has 5 utility and “Dark Fantasy” biscuit has 10 utility.

However, utility can be measured in relative terms.

The utility of food is ‘higher’ for a person who is hungry and ‘lower’ for a person who is not hungry.
FEATURES

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - The measurement not possible
U - UTILITY - SUBJECTIVE CONCEPT
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

“Subjectivity” means changing from one person to another. A product may give utility to one person but the same product may not give as much utility to another. Therefore, utility is a subjective concept as the utility of a commodity differs from person to person on account of differences in tastes, preference, habits, surroundings, age, occupation etc.

U - Utility depends on intensity of the want
FEATURES

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - The measurement not possible

**U - UTILITY - SUBJECTIVE CONCEPT**
R - Relative Concept
E - Even different from pleasure
S - Satisfaction and utility are different

U - Utility depends on intensity of the want

A measuring tape will have more utility to a tailor as compared to a cobbler.

A fish curry will have more utility to a non-vegetarian while it may have less utility or no utility at all to a vegetarian.
Utility of a commodity changes from time to time and place to place.

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - The measurement not possible
U - Utility - subjective concept
R - RELATIVE CONCEPT
E - Even different from pleasure
S - Satisfaction and utility are different

U - Utility depends on intensity of the want
Aquaguard (water purifier) has more utility in the rainy season compared to other seasons because the risk of water-borne diseases is high.

A room freshner has more utility in the bathroom as compared to the drawing room.
Utility and pleasure are different. A commodity may have utility but it is not necessary that its consumption will give pleasure to the consumer.

A textbook has utility for a student but he may not derive pleasure from reading it.
Utility and satisfaction are inter-related but there is a difference. The following are difference:

1. **Utility** is the want satisfying power of a commodity i.e. utility is considered pre-consumption. Satisfaction is the happiness derived by the consumer after consuming a commodity i.e. it is post-consumption.

**FEATURES**

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - The measurement not possible
U - Utility - subjective concept
R - Relative concept
E - Even different from pleasure

**S - SATISFACTION AND UTILITY ARE DIFFERENT**

U - Utility depends on intensity of the want
FEATURES

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
T - The measurement not possible
U - Utility - subjective concept
R - Relative concept
E - Even different from pleasure

S - SATISFACTION AND UTILITY ARE DIFFERENT

2. Utility is assumed satisfaction but satisfaction is something that is actually realized.
3. Utility is related to the commodity whereas satisfaction is experienced by a person.

U - Utility depends on intensity of the want
The utility of a commodity depends on the intensity of the want. If the want is intense and the commodity satisfies the want, then the utility of the commodity is higher.
The utility of notes is higher when exams are closer as the want for notes is intense.

The utility of the fan is high when the weather is warm outside as the want for the fan’s breeze is high.

F - Forms the basis for demand
E – Ethically neutral
A - Also not the same as usefulness
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R - Relative concept
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U - UTILITY DEPENDS ON INTENSITY OF THE WANT
TYPES OF UTILITY

- PLACE UTILITY
- SERVICE UTILITY
- TIME UTILITY
- FORM UTILITY
- KNOWLEDGE UTILITY
- POSSESSION UTILITY

SMART CODE: PLACE SERVICE ON TIME TO FORM KNOWLEDGE POSSESSION
When a change in place of a commodity increases its utility, it is called as **place utility**. Place utility is created when goods are transferred from place of production to place of consumption. Transportation helps to create place utility.

- The utility of Alphonso mangoes increases when they are transferred from mango farms to other parts of the country.

- The utility of mobile phones increases when they are distributed from manufacturing plants to mobile stores.
Service utility is created when *any service is provided* by any person to other person or group of people.

**E.g.**:
- Professor taking lectures in a coaching class.
- An advocate giving legal advice to his clients.
When utility of a commodity increases by storing it and making it available during the time of need, it is called time utility. Warehousing helps to create time utility.

E.g.:
- The utility of umbrellas will increase if they are made available during the rainy season.
- The utility of crackers will increase if they are distributed during the period of Diwali.
Form utility is created by **changing** the **form** or **shape of goods**. The process of **manufacturing** or **processing** creates form utility.

**E.g.:**

- When wood is changed to furniture, its utility increases.
- When tea leaves are processed to tea powder, its utility increases.
The utility of a product increases when the user or buyer gains knowledge about such product. This utility is called as knowledge utility. Advertisements, demonstrations, user manuals etc. help the user or buyer to acquire knowledge about the product.

E.g.:

• The utility of a washing machine will increase when the user knows about its operation.

• The utility of a computer game will increase when the player knows all its control keys.
Possession utility is created when the **legal ownership** and **possession is transferred** from one person to another (generally seller to buyer).

E.g.:

- The cakes in the Monginis cake shop have utility. However, the utility will increase when you place your order for the cake, pay the price and take possession of it.
- The utility of a house will increase once the ownership is transferred from the seller to the buyer.
**CONCEPTS OF UTILITY**

**TOTAL UTILITY**

*Sum total of the utilities derived by a consumer by consuming all possible units of a commodity at a point of time*

*E.g.: If there are 5 Dairy Milk chocolates, then total utility is the sum total of the utilities that are derived from consuming all the five chocolates (one after the other) at a point of time.*

**MARGINAL UTILITY**

*Additional utility derived by the consumer on consumption of an additional unit of the commodity*

*E.g.: Suppose the consumer has consumed 2 Dairy Milk Chocolates, the additional utility that he derived when he consumes the 3rd chocolate is called as marginal utility.*
CONCEPTS OF UTILITY

TOTAL UTILITY

\[ TU_n = MU_1 + MU_2 + MU_3 + \ldots + \mu_n \]

There is a **direct relation** between a stock of a commodity and total utility. As the stock of a commodity with a person goes on increasing, the total utility also increases. **Larger the stock, larger is the TU.**

Note: The TU goes on increasing till MU reaches zero. When marginal utility is negative, the total utility reduces. Please refer to schedule.

MARGINAL UTILITY

\[ MU_n = TU_n - TU_{n-1} \]

There is an **inverse relation** between a stock of a commodity and marginal utility. As the stock of a commodity with a person goes on increasing, the marginal utility decreases. **Larger the stock, lesser is the MU.**
TU and MU curve begin at the **same point**.
The TU curve **slopes upwards** from left to right.
The MU curve **slopes downwards** from left to right.

<table>
<thead>
<tr>
<th>No. of choc.</th>
<th>TU</th>
<th>MU</th>
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<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>18</td>
<td>8 (18-10)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>22</td>
<td>4 (22-18)</td>
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<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>24</td>
<td>2 (24-22)</td>
</tr>
<tr>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>24</td>
<td>0 (24-24)</td>
</tr>
<tr>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>22</td>
<td>-2 (22-24)</td>
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</table>
When TU curve moves downward, the MU curve goes below zero. This indicates dis-satisfaction or disutility.
When TU curve **move upwards**, the MU curve **slopes downwards**.

When TU curve is at the **maximum point**, the MU is **zero** (i.e. it touches the x-axis). This is the **point of satiety** or **point of maximum satisfaction**.
From the above schedule, it can be observed that:

1. After the first chocolate is consumed, the TU and MU are the same.
2. As the consumer consumes more chocolates, the TU goes on increasing from 10 to 18 to 22 to 24 while the MU goes on decreasing from 10 to 8 to 4 to 2. TU increases at a diminishing rate.
3. After consumption of the 5th chocolate, the consumer does not derive any marginal utility and the total utility also is the same as the previous unit. This is the point of maximum satisfaction or the point of satiety. When the TU is maximum, MU is zero.
4. On consumption of the 6th unit, the total utility also reduces from 24 to 22 and the marginal utility is negative i.e. -2 (disutility). Therefore, when total utility reduces, the marginal utility is negative. This is the stage where consumer would prefer not to consume the chocolate.
### RELATIONSHIP: MU & TU

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<tr>
<th>NO. OF CHOCOLATES</th>
<th>TU</th>
<th>MU</th>
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<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>10</td>
<td>10</td>
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<tr>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>22</td>
<td>-2 (22-24)</td>
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<tr>
<th>CONSUMPTION</th>
<th>TU</th>
<th>MU</th>
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<tbody>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; to 4&lt;sup&gt;th&lt;/sup&gt; at diminishing rate</td>
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<tr>
<td>at 5&lt;sup&gt;th&lt;/sup&gt; unit</td>
<td>Max</td>
<td>zero</td>
</tr>
<tr>
<td>at 6&lt;sup&gt;th&lt;/sup&gt; unit</td>
<td></td>
<td>Negative</td>
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<td>LAW OF DIMINISHING MARGINAL UTILITY</td>
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<tr>
<td>1</td>
<td>VIDEO</td>
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<td>2</td>
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The Law of DMU explains economic behavior of a rational consumer. Mr. H. Gosses, a German Economist, was the first (in 1854) to explain this law and hence it also called as Gossen’s First Law of Consumption. Prof. Alfred Marshall later on restated and propounded the law in his book ‘Principles of Economics’ in the year 1890.

2 FUNDAMENTAL PRINCIPLES:
– The more we have the less we want of it.
– Only a single want is satiable at a time.
In simple words, as the consumers acquires or consumes more and more units of a commodity, the marginal utility derived from every successive unit goes on declining.
LAW OF DIMINISHING MARGINAL UTILITY

SCHEDULE

The Law of DMU can be explained with the following utility schedule:

1. When the consumer consumes the first unit, the marginal utility (MU) is 10.

2. As consumption increases, MU keeps decreasing from 10 to 8 to 4 to 2. This proves that as the stock of the commodity increases, the MU goes on declining.

<table>
<thead>
<tr>
<th>NO. OF CHOCOLATES</th>
<th>MU (MEASURED IN UTILS)</th>
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<tbody>
<tr>
<td>1st</td>
<td>10</td>
</tr>
<tr>
<td>2nd</td>
<td>8</td>
</tr>
<tr>
<td>3rd</td>
<td>4</td>
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<tr>
<td>4th</td>
<td>2</td>
</tr>
<tr>
<td>5th</td>
<td>0</td>
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<tr>
<td>6th</td>
<td>-2</td>
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The Law of DMU can be explained with the following utility schedule:

3. Further, when the 5th unit of the commodity is consumed, the MU becomes zero. This is a point of maximum satisfaction or the point of satiety.

4. When the consumer consumes the 6th unit, the MU becomes negative i.e. -2. This indicates negative utility or disutility.
The law of DMU can also be explained with the help of the following diagram:

**Explanation to the diagram:**

1. In the diagram X axis represents no. of units consumed and Y axis represents marginal utility.

2. The MU curve is a downward sloping curve from left to right. It indicates that increase in consumption of a commodity leads to decrease in the utility of that commodity.
The law of DMU can also be explained with the help of the following diagram:

**Explanation to the diagram:**

3. The point at which the MU curve intersects the X-axis is called the ‘point of maximum satisfaction’ or the ‘point of satiety’. At this point, MU=0.

4. After further consumption, the MU curve slopes downward below the X-axis indicating negative utility or dis-utility.
LAW OF DMU - ASSUMPTIONS

1. All other factors constant

2. Size of the commodity is reasonable

3. Successive consumption

4. Uniformity of units

5. Measurement

6. Product or commodity is divisible

7. The MU remains constant

8. Only single use

9. Normal or rational behaviour

SMART CODE: ASSUMPTION
The law begins with the words “other things being equal” i.e. the law assumes that factors affecting utility of the commodity to be constant. The law also assumes that MU of each unit of money remains constant for the consumer.

E.g.: No change in price, income of consumer, habits, preferences, etc.
It is assumed that all the units of the commodity consumed are neither very small nor very big. The size of the commodity is reasonable i.e. of a standard size.

E.g.: A thirsty person will consume a glass of water and not a jar of water. Similarly, he will not consume water in a teaspoon.
The Law of DMU assumed that there is **no time gap** between consumption of units i.e. there is **continuity** in consumption. The units should be consumed back to back. If there is a time gap in consumption, the MU will not diminish.

**E.g:** After one unit of the commodity is consumed, the consumer cannot consume the next unit of the commodity after 2-3 hours or the next day. The consumption should be back to back.
The Law of DMU assumed that all the units of the commodity being consumed are **uniform**. They are **same** or **identical** in terms of shape, size, colour, smell etc. 

**E.g.:** If the commodity being consumed is a **Cadbury Dairy Milk**, then all the other units consumed also should be Cadbury Dairy Milk only. The consumer cannot change to **Dairy Milk Silk**.
Utility is a psychological concept and therefore it is not measurable cardinally. However, for explaining the Law of DMU, Prof. Alfred Marshall assumed that utility can be measured cardinally i.e. it can be expressed in numbers.
The Law of DMU assumed that the commodity consumed by the consumer can be divided into smaller parts so that it can be acquired (purchased) in small quantities and consumed quickly.
It is assumed that the marginal utility of money remains constant throughout the period of consumption for the consumer. If the MU of money changes due to increase or decrease in income, then it cannot yield correct measurement of the MU of the commodity. In short, the law will not hold good.
It is assumed that the commodity is used to **satisfy** only a **single want**. If the commodity satisfies many wants, the Law of DMU might not apply as the marginal utility will keep increasing. The consumer will keep using the commodity to **satisfy** his **various wants**.
In order for the Law of DMU to apply, it is assumed that the consumer is rational and behaves normally. The aim of the consumer should be to maximize his satisfaction.
There are certain commodities for which the Law may not be applicable. Such commodities may be different for different people. You may feel that you can keep eating your favourite chocolates/ice-creams or you can watch ‘Dilwale Dulhaniya Le Jayenge’ over and over again. These may be considered as exceptions to the law.

Note: This paragraph is only for your understanding. Please do not write it in your exams.
1. MONEY
2. DRUNKARD
3. HOBBIES
4. MUSIC
5. BOOKS
6. MISER
7. POWER

EXCEPTIONS
1. MONEY
Money is the biggest exception to the Law of DMU. MU of money keeps increasing as stock of money increases as money can be used to satisfy various wants. However, money cannot be considered to be real exception for the following reasons:
• Money does not have a single use and therefore it violates one of the basic assumptions of the law.
• Secondly, the MU of money for a rich person reduces as his stock of money (bank balance) keeps increasing.
1. MONEY
It may be noted that the **TU of money can never decrease** and hence **MU of money cannot be zero or negative**. Even the richest person will never have zero or negative utility of money.

**E.g.:** Mr. Mukesh Ambani will not tear or throw away a note of Rs. 10 because that note still has utility for him.
2. DRUNKARD
The MU of alcohol keeps increasing as a drunkard keeps having more of it. The intoxication increases with every peg of alcohol. However, the drunkard cannot be considered to be rational. The assumption of rationality is violated and therefore, it cannot be considered to be a real exception to the law.
3. HOBBIES

A person having a **hobby** of collection of old coins, artifacts, painting, etc. gets **more pleasure** when he **collects more** of it. In other words, the MU keeps increasing. Hence it can be said to be an exception to the law. However, the person does not collect the same coins or artifacts and the assumption of **homogeneity** is violated. Hence, it is not a real exception.
EXCEPTIONS

4. MUSIC
The law may also not be applicable to music as repeated hearings of a song may give more satisfaction to the listener. However, it is not a real exception for the following reasons:
• After a certain point, the law of DMU applies and the music becomes monotonous.
• The listener may listen to another song and then again listen to the previous song.
Thus, assumptions of homogeneity and continuous consumption are violated.
5. BOOKS

The MU of a book keeps increasing for a **scholar** as his **knowledge** keeps increasing when he reads the book. Therefore, it can be considered as an exception. However, the scholar may acquire knowledge only on reading **different books** and not reading the same book again & again. The assumption of **homogeneity** is violated and hence it is not a real exception to the law.
6. MISERS

A miser is a person who wants to accumulate more and more wealth and he does not want to even spend it. Therefore, the MU of money increases for a miser as the stock keeps increasing. However, even here, the assumption of rationality is violated and it cannot be considered to be a real exception.
7. POWER

A person who has power / influence, keeps wanting more of it. The **MU of power keeps increasing** as the person continues to get more power. The greed for power does not end. Therefore it can be said to be an exception to the law. Again, it is not a real exception as the assumption of rationality is violated.
<table>
<thead>
<tr>
<th>SR. NO</th>
<th>EXCEPTION</th>
<th>VIOLATES ASSUMPTION OF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Money</td>
<td>Single use</td>
</tr>
<tr>
<td>2</td>
<td>Drunkard</td>
<td>Rationality</td>
</tr>
<tr>
<td>3</td>
<td>Hobbies</td>
<td>Homogeneity</td>
</tr>
<tr>
<td>4</td>
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<td>5</td>
<td>Books</td>
<td>Homogeneity</td>
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<td>6</td>
<td>Music</td>
<td>Homogeneity</td>
</tr>
<tr>
<td>7</td>
<td>Power</td>
<td>Rationality</td>
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</table>
Prof. Alfred Marshall explained to Law of DMU in his book ‘Principles of Economics’. The Law of DMU states that “other things being equal, the additional benefit which a person derives from the increase in the stock of a thing diminishes with every increase in the stock that he already has”
The following are the limitation to the Law of DMU: (SMART CODE: LIMIT)

1. LAW OF DMU IS NOT APPLICABLE TO INDIVISIBLE GOODS

2. IMPRACTICAL OR UNREALISTIC ASSUMPTION

3. MEASUREMENT OF UTILITY IS NOT POSSIBLE CARDINALY

4. ITS ASSUMPTION OF ‘SINGLE WANT’ NOT PRACTICAL

5. THE MARGINAL UTILITY OF MONEY DOES NOT REMAIN CONSTANT
LIMITATIONS

1. LAW OF DMU IS NOT APPLICABLE TO INDIVISIBLE GOODS

Marginal utility can be calculated only when two or more units of a commodity are consumed successively at a time. Generally, a consumer will buy only one laptop or TV or house or mobile at a time. There will not be recurring purchase of such items and therefore it will not be possible to calculate the marginal utility on such goods.
2. IMPRACTICAL OR UNREALISTIC ASSUMPTION

The Law of DMU is based on various assumptions like homogeneity, rationality, constancy, successive consumption, etc. These assumptions are impractical and unrealistic.
3. MEASUREMENT OF UTILITY IS NOT POSSIBLE CARDINALLY

Utility is psychological concept and hence it cannot be measured cardinally. However, the law assumes that utility can be measured cardinally. This assumption of the law is not practically possible. Utility can only be measured in relative terms.

(in numeric terms)
LIMITATIONS

4. IT’S ASSUMPTION OF SINGLE USE NOT POSSIBLE

A person may use one commodity to satisfy many wants at a time.
E.g. Water may be used for cooking, cleaning, bathing, drinking.
5. THE MARGINAL UTILITY OF MONEY DOES NOT REMAIN CONSTANT

The law assumes that the marginal utility of each unit of money remains constant. However, the MU of money changes:

1. From one person to another
2. For the same person from time to time.

E.g.: The MU of money for a beggar will be more as compared to a wealthy person.
1. To the Finance Minister

2. To the Government

3. To understand ‘Value Paradox’

4. To the Monopolist

5. To the Consumer

6. To the Producer

Importance
1. TO THE FINANCE MINISTER

• The Law of DMU guides the finance minister in **framing the taxation policy** wherein higher taxes are collected from the rich.
• This is because MU of money is less for them and there is a less burden of taxes on them.
• On the other hand, lower taxes are collected from the poor as the MU of money is high for them. This helps to reduce economic inequality in the country.
• MU of money is lower for rich means that every additional unit of money is not as dear to them as it would be for a poor person.
• The government provides welfare to the poor people through various welfare schemes.
• The law of DMU is useful to the government in implementing the economic policies like public distribution system, social justice etc.
• It helps to improve the welfare of the people in the society.
The Law of DMU explains ‘value paradox’ by showing the difference between value in use and value in exchange. Some commodities have high value in use (i.e. they are very useful) while some commodities have high value in exchange (i.e. they can be exchanged for a high price).

Eg: A commodity like ‘air’ has high value in use but no value in exchange. On the other hand, ‘diamonds’ have high value in exchange but no value in use.

Greater value in use is determined by higher TU and greater value in exchange is determined by higher MU.
4. TO THE MONOPOLIST

- A monopolist is at liberty to fix any price for his product and even charge different price to different customers.
- Thus, he can charge higher price to rich customers as MU of money is lower for them.
- On the other hand, he can charge a lower price to poor customers as MU of money is high for them.
5. TO THE CONSUMER

- A consumer always tries to maximize his satisfaction.
- Therefore, the consumer purchases those commodities wherein he feels that the marginal utility is equal to the price spent for it.
- He, therefore, tries to maximize his satisfaction.
- E.g.: You will hesitate to pay Rs. 50 for a vada pav because you know that the MU of the one vada pav is not worth Rs.50.
The Law of DMU helps the producer to fix the price of products.

Larger the stock of the commodity, lower is the MU and hence the producer may decide to fix a lower price for the product.

On the other hand, smaller the stock of the commodity, higher is the MU and hence the producer may decide to fix a high price for the product.
IMPORTANCE

6. TO THE PRODUCER

- E.g. The prices of “limited edition” items are kept very high because they producers have limited stock of that item.
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When we come out of a cinema hall, we may comment “Picture vasool tha yaar” i.e. we were entertained worth the amount spent on movie tickets. We always try to derive maximum satisfaction from the money that we spend. This is normal consumer behavior and this has been explained in the Law of Equi-Marginal Utility.

Note: The above paragraph is for your understanding only. Please do not write it in any exam.
The Law of Equi-Marginal Utility explains consumer equilibrium when he spends his income on various goods to maximize satisfaction. According to Prof. Alfred Marshall, “Other things being equal, a consumer will distribute his money income on different goods in such a way that the ratio of marginal utilities and their prices tends to be equal”.
LAW OF EQUI-MARGINAL UTILITY

In simple words, a consumer will derive maximum satisfaction when:

\[
\frac{\text{Marginal Utility Derived From Consuming Various Commodities}}{\text{(Respective Prices Of Those Commodities)}} = \text{The Marginal Utility Of Money Income Of The Consumer}
\]
LAW OF EQUI-MARGINAL UTILITY

E.g.: If there are three commodities, A, B and C, then the consumer will derive maximum satisfaction when:

\[
\frac{\text{MU}_A}{P_A} = \frac{\text{MU}_B}{P_B} = \frac{\text{MU}_C}{P_C} = m
\]

Where,

- \( \text{MU} \) = Marginal Utility
- \( P \) = Price
- \( m \) = Marginal utility of given money income.
LAW OF EQUI-MARGINAL UTILITY

The law of equi-marginal utility can be explained with the help of following schedule:

<table>
<thead>
<tr>
<th>Units of Commodity</th>
<th>MU of A</th>
<th>Ratio= ( \frac{MU_A}{P_A} )</th>
<th>MU of B</th>
<th>Ratio= ( \frac{MU_B}{P_B} )</th>
<th>MU of C</th>
<th>Ratio= ( \frac{MU_C}{P_C} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st})</td>
<td>24</td>
<td>24/2 = 12</td>
<td>30</td>
<td>30/3 = 10</td>
<td>32</td>
<td>32/4 = 8</td>
</tr>
<tr>
<td>2(^{nd})</td>
<td>20</td>
<td>20/2 = 10</td>
<td>24</td>
<td>24/3 = 8</td>
<td>24</td>
<td>24/4 = 6</td>
</tr>
<tr>
<td>3(^{rd})</td>
<td>16</td>
<td>16/2 = 8</td>
<td>18</td>
<td>18/3 = 6</td>
<td>16</td>
<td>16/4 = 4</td>
</tr>
<tr>
<td>4(^{th})</td>
<td>12</td>
<td>12/2 = 6</td>
<td>12</td>
<td>12/3 = 4</td>
<td>8</td>
<td>8/4 = 2</td>
</tr>
<tr>
<td>5(^{th})</td>
<td>8</td>
<td>8/2 = 4</td>
<td>6</td>
<td>6/3 = 2</td>
<td>0</td>
<td>0/4 = 0</td>
</tr>
</tbody>
</table>

Where,
Price of A = 2, Price of B = 3, Price of C = 4
Suppose, the consumer’s income is Rs. 25, he would spend the amount in order to get maximum satisfaction. As per the law, the consumer would get maximum total satisfaction when:

\[
\frac{MU_A}{P_A} = \frac{MU_B}{P_B} = \frac{MU_c}{P_c} = m
\]
LAW OF EQUI-MARGINAL UTILITY

In the schedule there are three points of equi-marginal utility (i.e. 8, 6 & 4)

1. When the ratio is equal to 8, it means that the consumer will buy 3 units of A, 2 units of B and 1 unit of C. in this case, the total expenditure will be:
   A = 3 x 2 = 6
   B = 2 x 3 = 6
   C = 1 x 4 = 4
   \[16 \text{ (i.e. } < 25)\]
LAW OF EQUI-MARGINAL UTILITY

In the schedule there are three points of equi-marginal utility (i.e. 8, 6 & 4)

2. When the ratio is equal to 4, it means that the consumer will buy 5 units of A, 4 units of B and 3 units of C. In this case, the total expenditure will be:

A = 5 x 2 = 10
B = 4 x 3 = 12
C = 3 x 4 = 12

34 (i.e. > 25)
In the schedule there are three points of equi-marginal utility (i.e. 8, 6 & 4)

3. When the ratio is equal to 6, it means that the consumer will buy 4 units of A, 3 units of B and 2 units of C. In this case, the total expenditure will be:

\[
\begin{align*}
A &= 4 \times 2 = 8 \\
B &= 3 \times 3 = 9 \\
C &= 2 \times 4 = 8 \\
\text{Total} &= 25 (=\text{consumer’s income})
\end{align*}
\]
Therefore, the consumer will get maximum satisfaction when:

\[
\frac{\text{MU}_A}{P_A} = \frac{\text{MU}_B}{P_B} = \frac{\text{MU}_C}{P_C} = m
\]

i.e. \[
\frac{12}{2} = \frac{18}{3} = \frac{24}{4} = 6
\]
The following table shows the consumer’s allocation towards various commodities and the total utility derived from the given income:

<table>
<thead>
<tr>
<th>Commodity</th>
<th>No. of Units</th>
<th>Total Spend</th>
<th>Total Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>8</td>
<td>72 (4x2)</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>9</td>
<td>72 (3x3)</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>8</td>
<td>56 (2x4)</td>
</tr>
</tbody>
</table>

25 200
**Conclusion:**
Thus, it can be observed that the Law of Equi-Marginal Utility guides the consumer to get maximum satisfaction from the given income, while arranging his total expenditure.
Thank You