Section or society in general needs to

Business, Industries

Section A: Define the following: Transitivity is one of the underlying assumptions made in order for an indifference curve to be viable. It states that if a consumer prefers good X to Y and prefers good Y to Z, then the consumer should prefer good X to Z, so that there is a consistent and logical order in a consumer's preference between goods. The marginal rate of transformation (MRT) is regarded as a measure of opportunity cost.

It is the amount of one good a consumer or society in general needs to sacrifice in order to consume one additional unit of another good and in a production possibility frontier (PPF), it is equal to the first derivative of the PPF curve. A country is said to have comparative advantage if it produces a good at a lower opportunity cost (relative cost) than another country. It is a basic concept of international trade theory and results from different endowments of factors of production (capital, land, labour, enterprise). Examine the following statement (8 marks) " An increase in the hourly wage rate must lead a worker to reduce their chosen number of leisure hours" The indifference curve (IC) in diagram 1 shows the trade-off a worker is prepared to make between income and leisure.

(MRS). The x axis represents leisure measured in hours while the y axis represents income in pounds (£). There are two constraints imposed on the diagram. A time constraint from 0 to Tmax and a wage constraint, showing the wage rate earned from each additional hour of work, starting at maximum leisure and placing the worker at Tmax.

The wage rate is assumed constant and is thus represented as a straight line. The individual is also assumed to have a supply of income independent

of labour represented by N. This shifts the wage rate up vertically by a distance of N and could include shares, rental income etc. From analyzing the changes of the optimizing choice of labour by individuals as wage rate changes, a labour supply curve diagram can be derived; which plots a worker's chosen amount of labour supplied to labour market at different possible wage rates. Outcome A: Diagram 1 shows ' a' as the initial optimizing point where the individual supplies L0 to L* amount of labour with wage rate w. On the labour supply curve this can be shown where a is at L*. As the wage rate increases, it rotates upwards showing an increase in income received by the individual. The first outcome shows the individual moving up a higher indifference curve IC2, at a new optimizing point a* which lies vertically above the original point a.

This implies that the labour supply curve which is shown as a vertical line on the labour supply curve diagram is perfectly inelastic: an increase in wage rate has no change in labour supplied. This total shift from a to a* can be explained through the substitution and income effect. In order for this to be accomplished, the new budget line is shifted until it is just a tangent to the original IC. a to b represents the substitution effect which reflects the higher opportunity cost of an hour of leisure. The relative price of income and leisure change but with no change in real income (utility) and so the individual remains on the same IC. The higher wage rate increases the incentive to work as the relative price of leisure is higher causing the individual to shift from leisure and to supply more labour to the labour market. The income effect, represented by b to a*, shows that the individual is better off as they move to a higher IC and has more real income.

As a result, the individual can reach their assumed ' target income' by working less and instead choose to take more leisure. a* lies to the right of b under the assumption that leisure is a normal good. As the substitution effect and income effect offset each other, the increase in wage rate has no overall effect on the labour supply, thus deriving a vertical labour supply curve. Outcome B: This outcome shows how an increase in wage rate leads to an increase in the labour supplied which occurs when the substitution effect dominates the income effect. As the wage rate rises, the wage constraint swivels outwards from point N. Diagram 2 shows that point a* (representing the individual's new optimal point) lies to the left of point a.

Here, the income effect is smaller in absolute size than the substitution effect thus, the individual has a smaller increase in real income than they previously had and so less time is spent on leisure as there is more incentive to work. The individual chooses to increase labour supply which is shown by the upwards sloping labour supply curve. In this case, the elasticity of labour supply is positive. Outcome COutcome C shows how an increase in wage rate leads to a decrease in labour supplied and this occurs when the income effect dominates the substitution effect. As before, the rising wage rate leads to an outwards swivel of the wage constraint with a* lying to the right of a. The individual chooses to take more leisure as the disincentive to work dominates the incentive to supply labour. Leisure is seen here as a luxury good as the individual's better offenses leads to them taking more leisure and supplying less labour as shown by the higher IC. The labour supply curve derived in this case is downwards sloping with a negative elasticity.

To conclude, each of these outcomes are theoretically possible but are also dependent on the relative dominance of the substitution or income effect. The analysis however is based on the assumption that the individual can continuously choose how many hours of labour to supply and does not consider the demand for labour as this will also affect the individual's preferred hours. This analysis could also consider the effect of a policy introduction, such as unemployment benefits, on a workers chosen hours of labour. Examine the following statement (8 marks) " An increase in the interest rate must lead a saver to reduce current consumption." The inter-temporal choice of an individual looks at the decision between spending (consumption today C0) and saving (consumption tomorrow C1) income. The horizontal axis in diagram 4 represents income and consumption ' today' while the vertical axis represents ' tomorrow'.

Point E In diagram 4, known as the endowment point, represents the level of income that the consumer would have in the future without any saving or borrowing. Because a saver prefers consumption tomorrow, C0 lies to the left of E as consumption today will be less than income today. Point A on the IC1 curve is the initial optimal point. Following an increase in interest rate, the budget constraint rotates clockwise and the individual's future consumption increases from a to a*. Due to the higher interest rate, it becomes more profitable to save as there is larger returns earned and as a result, the saver's real income increases and they move onto a higher indifference curve IC2. This shift from IC1 to IC2 can be decomposed in the diagram through the substitution and income effect.

The substitution effect, represented by the movement from a to b shows the relative price effect from the higher interest rate. It becomes relatively cheaper for consumers to save and more expensive to consume in the current period. The opportunity cost of consumption today increases and so the individual is inclined to save and reduce their current consumption. So, the substitution effect moves leftward causing C0 to decrease. In contrast, the Income effect will lead the saver to consume more today as they are made better off by the rise in interest rate. Assuming consumption is a normal good, the saver will increase both their current and future consumption and thus move from b to a*(onto a higher indifference curve), illustrating the higher utility from their savings. There is thus a rightward movement for the income effect and consequently the income and substitution effect move in opposite directions.

The relative dominance of the substitution and income effect is ambiguous and as such, an increase in interest rate will not necessarily lead to the saver reducing current consumption. This will instead depend in the preference of the individual. Comment on any similarities and differences in your analysis of questions 2 and 3 above in terms of the relationship between income and substitution effects in the two cases (8 marks)In question 2 and 3, we see that the representation of the substitution and income effect are similar.

The substitution effect is the relative price effect and represents the higher opportunity cost for, in the case of question 2, having an additional hour of leisure and in question 3, consuming in the current period. The worker or saver in question 2 and 3 respectively, remain on the same Indifference

curve as there is no change in their utility (satisfaction). The income effect in both questions represent the higher utility and better offness of the worker and saver as they both move to a higher indifference curve and as a result acquire more utility in the form of income.

In both cases, the substitution and income effect work in opposite directions and offset each other. Because the substitution effect represents the higher opportunity cost of an hour of leisure and consuming in the current period, it incentivises both individuals in the two cases to earn more income (by saving/ supplying more labour to the market) and so they both have a leftward shift on the same IC curve as represented in the diagrams above. The Income effect on the other hand tells the individual that they are better off (as they move to a higher IC curve) and so can spend more or take more leisure hours. In question 2We see that whereas question 2 provided us with different possibilities arising from the fact that the substitution effect was either stronger or weaker it meant that labour either increased, decreased or stayed the same. However in question 3 we see that their dominance is ambiguous. It is not clear which is stronger and instead it depends on the consumer preference. Whether they prefer to save or spend in that moment.

Unlike question 2 where the substitution and income effect affected the outcome and what would happen depending on the dominance of either one of them. For question 3 it appears that the outcome depends on other factors as well e. g. (some examples) In both cases we are assuming the good on the horizontal axis (is a normal goodOn a technical point, notice that the Income and Substitution effects were also in the same direction in

Lecture 7 (in the case of normal goods). Related to this, note that the budget line in Lecture 7 rotates in a similar fashion to that section of the inter-temporal budget line for the analysis of a borrower.

In contrast, when we consider the case of a saver, note that the budget line rotates in a similar way to wage-rate budget line in the income-leisure diagrams shown in Lecture 9. As in that case, we'll see that for the saver (unlike for the borrower) the Income and Substitution effects offset each other (in the case of normal goods). If we were to consider an increase in interest rates on a borrowerSection B: Why would you expect there to be (I) job losses and (ii) a welfare loss if a monopolist takes over a previously competitive industry? What factors will influence the extent of monopoly welfare loss? The presence of a Monopoly, a market structure in which there is a single seller of a commodity, co-exists with economic inefficiency.

This is in the form of a welfare loss as well as reduced consumer surplus. Consumer surplus is simply the difference between how much a consumer is willing to pay for a specific quantity of goods and how much they actually pay. A monopoly is characterised by high barriers to entry/exit and a unique product. At the under end of the spectrum is a perfectly competitive market with the assumptions that; there numerous buyers and sellers in the industry with no barriers to entry or exit. The buyers are price-takers, all selling the same homogenous products for the same price. The foreign exchange market (FOREX) is the closest real-world example of this market structure as currency values are determined by market demand and supply, and the

goods traded are homogenous in the sense that a pound sterling is a pound whether traded in UK or China.

However, the markets can be influenced by intervention from government or central banks. Diagram 5 shows a market demand curve with a perfectly elastic long-run industry supply curve for a perfectly competitive market. The equilibrium price and quantity are Pc and Xc respectively and the consumer surplus is represented by the triangular area CS. Producer surplus is assumed to be measured by supernormal profit which is 0 as perfectly competitive firms are assumed to break even (produce on lowest point on average cost curve). Thus, the total economic welfare (consumer surplus + producer surplus) is just the consumer surplus.

From this, we can represent the monopoly welfare loss which is done by illustrating what happens to the consumer surplus under perfect competition when the industry is taken over by a monopoly. Diagram 6 shows the monopolist producing at its profit maximisation point; where Marginal revenue= Marginal cost instead of producing at the lowest point on AC curve as was the case with the perfectly competitive firms. The monopolist has reduced production relative to the competitive level as this enables it to ' hike up' prices along the demand curve. Thus, the welfare loss can be shown by the triangular area c, representing the loss of output Xc-Xm. By using its monopoly power to reduce output leading to an increase in price, it follows that the monopolist would also lay off workers in an attempt to keep output restricted and minimise average cost so as to make supernormal profit. So, it is expected that there would be job losses as the monopolist takes over the

industry. Additionally, the monopolist operates at a higher average cost; this is because there are high barriers to entry and so there is a lack of competitive forces pushing the monopoly to maximum technical efficiency. Some of the consumer surplus is now a welfare loss as the monopolist is less efficient as seen by the rectangular area b.

Due to the rise in price and fall in output, consumer surplus (CSm) reduces to the area under the demand curve above monopoly price Pm. There is also a transfer of welfare from the consumer to the producer, as the monopolist attains supernormal profit shown by the rectangular area a. Thus, the total welfare loss associated with the monopoly is represented by the areas b+c. The extent of welfare loss under monopoly is determined by the difference between maximum price consumers are willing to pay and perfect market price as well as the slope of demand curve. From this analysis, we can understand why a monopoly is viewed as an inefficient market structure generating more costs to society than benefits, This explains the strict regulations in place to prevent artificial monopolies from emerging through mergers or takeovers. For example the block by the European commission against the attempted takeover of O2 mobile by three in 2015. The European competition commissioner, Margrethe Vestager, believed that the takeover would " probably have increased prices and reduced choice" for consumers as too much power would be placed with one mobile operator. Monopolist firms, however, can become efficient as they benefit from having economies of scale.

These are factors such as hiring specialist managers or having a lower interest rate on borrowing that lower average cost per unit which can then be passed on to the consumers in the form of lower prices. It is thus likely for a monopoly to be more productively efficient than perfect competition. In addition, monopolist firms like Apple and Microsoft are considered dynamically efficient as they invest their supernormal profits into research and development in order to better their products. This not only encourages innovation but could potentially create new jobs in the market. Investing in new technology also lowers average costs which promotes productive efficiency in the long-run.

However, it can be argued that monopolists particularly natural monopolists have no incentive to invest in research and development as they face no potential competitors because only one firm can survive in the market in the long-run.