A businessman claimed it was difficult to make decisions as his business was subject to uncertainty and interdependence. Discuss the methods used by oligopoly firms to reduce uncertainty and interdependence and the extent to which these methods exploit the consumer. [25]

Oligopoly has the following features. Firstly, the products may be homogenous or differentiated. Secondly, oligopolists may or may not choose to maximise their profits. Besides, there are relatively a small number of firms in the industry. So there is a high market concentration ratio in the Oligopoly. It can be obtained by either adding up the market share of top 'n' firms or by HHI (Herfindahl-Hirschman Index) calculated by squaring each firm's market share by summing these numbers. Since there is imperfect knowledge, there are high barriers to entry or exit.Price elasticity of demand (PED) is a numerical measure of the responsiveness of the quantity demanded to a change in price of a product.

The behaviour of firms under oligopoly conditions is often complex, and there are different models of oligopolistic decision-making. Firstly, the kinked demand curve model shows the interdependence between the firms and price rigidity. Diagram 1 is drawn to show this situation. Assuming oligopolists aim to maximise their profits in the kinked demand curve model, if firms decide to raise the price, other firms in the market would not follow, and the demand curve above the kink is elastic, which leads to a decrease in total revenue. Hence, the demand curve above the price should be flatter as PED is greater than 1. In contrast, if the firm decides to decrease the price, other firms in the market will follow. The demand curve below the kink is inelastic; because of inelastic demand, total revenue would decrease. Hence the demand curve below the price should be steeper as PED is less than 1. As a result, raising the price and reducing the price would lead to different responses; thus, the firm has a kinked demand curve. Interdependence is reflected in the kinked demand curve, where either cutting or raising the price depends on how other firms would react to this action. Thus, as firms in this model behave competitively, it shows the need for non-
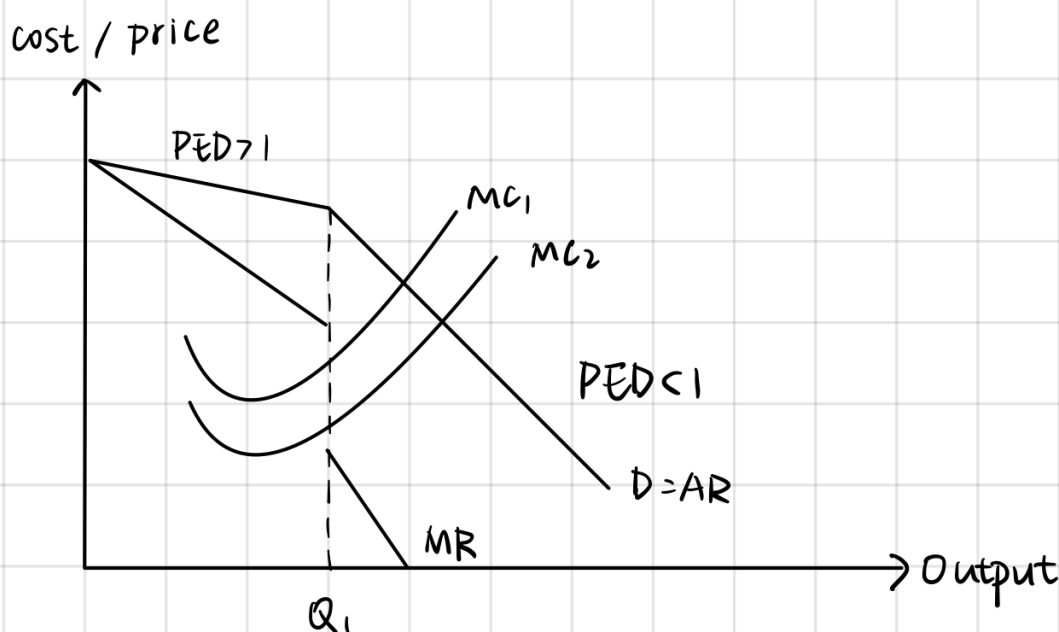

Diagram 1

price competition, which will be explained later.

The kinked demand curve is not the only theory explaining the conduct of firms in an oligopoly market. There is significant uncertainty in the market in terms of how oligopolists behave. Game theory helps us

understand some of the pay-offs from the different decisions made by 'players in the oligopoly market. There are four features in the game theory. Firstly, players assume duopoly; secondly, all games have rules which govern the conduct and behaviour of the players; thirdly, pay-offs suggest the outcomes such as higher profit, greater market share, etc. Fourthly, there are a range of possible actions of each player, such as raise price, invest in research and development. In the case of a 'prisoner's dilemma', each player has an incentive to choose an action that benefits itself at the other player's expense. As a result, both firms sell at £0.9, the noncooperative equilibrium as the best outcome given the other person's choice earns a lower profit. When both players act in the best way for themselves and harm the other, both are worse off than if

	firm B : £1	firm B : £0.9
firm A: £1	10m , 10m	1m , 13m
firm A: £0.9	13m , 1m	2m , 2m

Diagram 2

they had acted cooperatively. Thus, there is a strong incentive to collude to reduce uncertainty and thus maximise total profits.

There are several methods used to reduce uncertainty and interdependence. Firstly, collusion is an anti-competitive action where firms get together and agree about quantities produced and, therefore, prices. *Formal collusion* is a cartel, a formal agreement among competing firms like the OPEC. However, collusion is always illegal, so informal collusion often takes place, which usually takes the form of price leadership, where firms automatically follow the lead of one of the groups. Therefore, firms can collude where they do not have to predict what price/output competitors set, which reduces uncertainty in the market. Nevertheless, whether the measures are used to reduce uncertainty and interdependence depends on the condition of collusion. In collusion, it is easier to achieve when: there are only a small number of firms in the industry, and there are significant barriers to preventing new firms from entering the industry; market demand is not too variable, which is quite predictable; market demand is fairly inelastic, so a higher cartel price increases the total revenue to suppliers like OPEC where oil is still a necessity; each firm's output can be easily monitored because this enables the cartel more easily to control total supply and identify firms who are cheating on output quotas.

Secondly, non-price competition can be adopted by firms in oligopoly markets to gain a larger market share instead of changing prices to reduce interdependence. For example, firms can offer a better quality of customer service, including low-cost servicing agreements, good after-sales service; discounts on product upgrades when they become available in the market; longer opening hours for retailers, and 24-hour online customer support. Also, advertising can increase revenue; if persuasive advertising leads to an outward shift in demand, consumers are willing to pay more for each unit consumed. This increases the consumer

surplus that a business might extract. Therefore, firms can use non-price competition to reduce interdependence by making their products look more attractive than other firms rather than charging a different price. Whether firms exploit the consumers depends on how firms cope with the price. In collusion, the cartel might exploit consumers because they limit the supply of products and raise the price, reducing the consumer surplus.

Thirdly, firms can also employ price competition to win more market share and more profits. Predatory pricing or price war can undercut competitors by charging at a much lower price; firms with higher average costs would find a loss at the lower price and leave the market. Hence, the winners remain in the market, obtaining a larger market share. Price competition often occurs in the mortgage market and price discounting in cinemas. Therefore, price competition can reduce uncertainty. It could eventually stabilise the oligopoly market when all firms with similar cost structures sell at a lower price, and losers leave the market. A consumer might benefit from the low price in the short run. In the long run, firms may innovate new production methods that increase productivity to lower the average costs, which also benefits consumers. However, firms may choose to raise the price again or cut the cost by cutting quality and variety to obtain substantial profits, eventually exploiting consumers.

In conclusion, uncertainty and interdependence exist in the oligopoly market because of their features. These have been shown in the kinked demand curve model and game theory's prisoner's dilemma case. To reduce uncertainty and interdependence in the oligopolistic market, non-price competition, collusion, and price competition can be used. Nevertheless, the effectiveness of these measures depends on the real market situations.