What is economic efficiency?

Economic efficiency can be defined as when an economic system is doing well, thus using scarce resources in the most effective way in order to meet the highest level of wants. If resources are being used in the best possible way, then this implies that three different types of efficiency are being achieved – productive efficiency, allocative efficiency and parato efficiency.

Productive efficiency is using the least possible amount of scarce resources to produce a particular product, or producing the maximum quantity at the lowest possible cost. E.g. Providing a bus service with the lowest possible costs, i.e. the cheapest buses, petrol etc. This can be shown on a graph of total cost curves for a firm or industry. Production must take place at the lowest point on the lowest possible cost curve, so the maximum quantity is being produced using the lowest possible cost techniques, as shown below. The curve (cost) rises after the lowest point because as more products are produced, the maximum is being stretched therefore more employees / machines / time are needed, increasing the cost.

Productive efficiency is also said to occur where MC=AC, as shown on the following graph.

Although to achieve full economic efficiency, it is not enough to simply produce goods and services at the lowest possible cost. Allocative efficiency is producing the products that are most wanted by consumers, given their cost of production. For example, two buses, *x* and *y*, cost exactly the same amount to produce and run, but bus *x* gives twice as much satisfaction as bus *y*. If allocative efficiency is to exist, bus *x* should be produced and used in preference to bus *y*. If two methods of transport, train and taxi, yield the same amount of customer satisfaction, but the train costs half as much to produce and run as the taxi, it would be allocatively efficient to provide the train service in preference to the taxi. Allocative efficiency exists when the selling price of a product (P) is the same as the marginal cost of producing that product (MC), i.e. the price paid by the consumer will represent the true economic cost of producing the last unit of the product, this ensures the correct amount of the product is produced, as shown below. (Marginal benefit must always be greater than marginal cost).

However if P>MC (in monopolies) consumers will be paying a higher price for the good than the cost of producing it, so the good will be underconsumed. If P<MC the price paid by the consumer will be less than the cost of producing the good, so it will be overconsumed. These will lead to allocative inefficiency.

Pareto efficiency is said to exist when it is not possible to make any one person in society better off without making someone else worse off. If this situation exists, then there will be productive efficiency as nothing more could be produced with the resources available, and there is no possibility of any extra production. It also implies that allocative efficiency exists because if it didn't then it may be possible to swap production in such a way that consumers can be made better off without necessarily having to make someone else worse off.

Economic efficiency can be illustrated on the PPF. Point *a* is productively efficient because all resources are being employed and it is not possible to increase the production of either product. This is opposed to point *b* where it is possible to increase production with the scarce resources that are available. Point *a* can also be considered to be a point of Pareto efficiency as it is only possible to increase the production of one product by reducing the production of another and therefore making someone worse off. This is not true of point *b* where it is possible to increase the production of either product without sacrificing the production of any other product. If people value product *x* higher than product *y* then point *c* will be allocatively efficient and not point *d.* It is unlikely that points *e* and *f* will be allocatively efficient as most economies wont want to devote all of their resources to producing just one type of good or service.

All of the above types of efficiency are forms of static efficiency. They refer to efficiency at a point in time, and ignore the fact that the economy is constantly changing, with new technology, methods of production and final products being developed and economic growth taking place. Dynamic efficiency is concerned with how resources are allocated over a period of time. It results from improvements of methods

of production and existing products, and development and marketing of new products.

Traditionally, economists have argued that for markets to work efficiently there has to be a high level of competition between th e firms. A competitive transport market would lead to productive efficiency as it provides firms with the incentive to provide services at the lowest possible cost. If a firm can produce at a lower cost then its competitors then its profits will be higher. Failure to keep costs low will lead to the firm going out of business either because it cannot maintain competitive prices or, if it does, it is selling at a loss. There would be allocative efficiency in competitive transport markets because if firms wish to make maximum profit they must provide the services that are most demanded by consumers. The price paid in the market will be exactly equal to the cost of producing/providing that unit of output, i.e. the selling price is equal to the marginal pric e of production. A free and competitive market will also lead to Pareto efficiency as people will only trade with each other if they believe that trading is mutually beneficial. No one will trade with someone else unless they believe that they will benef it from the trade. So in a free market all trades that are advantageous to both traders will occur. It will not be possible to improve the situation by someone better off without making someone else worse off. However some economists have argued that in some circumstances, firms, which face less competition, may benefit customers more, although they will not be economically efficient.

To conclude this, markets operate economically efficiently when resources are fully employed, the quantity of goods and services produced reflect consumer preferences and are produced at the lowest possible average cost, and where individual people and firms get the maximum benefit from their resources.