

EXECUTIVE SUMMARY



This report has been commissioned by the Livestock Auctioneers Association. Its purpose is to investigate the total economic contribution generated by livestock auction markets in England and Wales. This contribution stretches beyond the support the livestock industry and farmers receive from well-managed, efficient auctions to sustaining and developing local businesses to the benefit of rural incomes and employment.

Livestock auction markets in England and Wales generate total expenditure of £3.42 billion, much of it in the rural areas in which they are located. In carrying out their business, livestock markets generated the equivalent of 3,095 full time jobs while supporting many thousands of livestock

farmers and their employees.

Livestock farming is the dominant agricultural enterprise in E&W. Cattle and sheep account for more than half the value of livestock production and since 2001 the value of this production has risen more than 200 per cent.

In 2017, 1.4 million cattle and some 10 million sheep were traded in E&W's livestock auction markets. Of these trades, 57 and 30 per cent respectively were sales to farmers as stores for finishing or animals for breeding.

Auction markets are not only intuitive and transparent but also as neither buyers nor sellers can unfairly influence the price, they ensure that the price achieved is 'fair', i.e. it accurately reflects current demand based on the available information.

Auctions are a natural market for selling livestock as no standard value exists for an individual animal. Bidding results in an animal's price reflecting the buyer's perceived value depending on a range of attributes e.g. health, breed, pedigree, sex, weight for age as well as the intended use.

Livestock farms as small businesses gain the advantage of equality when selling in a public auction. They also benefit from avoiding the transaction costs associated with: acquiring sufficient information to make an informed judgement; devoting excessive time to carrying out a negotiation; and ensuring that contracts will be honoured.

Buyers gain as auctions bring together a broad cross-section of sellers and a wide choice of animals thereby increasing the likelihood that their needs will be more precisely met. Again, the transparent nature of auctions reduces buyers' transaction costs

and guarantees that the trade will be honoured.

In addition to complying with all legislation concerning the gathering of animals, livestock auction markets take their animal welfare responsibilities seriously. All markets have operational welfare policies including the employment of an onsite Animal Welfare Officer, and all selling livestock to slaughter choose to be members of the Red Tractor Assurance scheme for livestock markets.

Drovers are not only essential to the smooth operation of livestock markets, but they also have a key role in ensuring the highest standards of animal welfare through sensitive handling. All drovers in E&W's livestock markets undergo effective training.

Livestock auction markets generate at least three positive externalities for the livestock industry. They provide: an independent assurance that sector wide cattle and sheep prices reflect market conditions; a forum for sharing of contemporary sector and technical information; and an opportunity for social networking.

Farming is a lonely occupation, particularly for smaller scale livestock farms. Auctions not only provide an opportunity to socialise with other farmers, but it is now common for auction markets to include facilities where farmers can meet with trained social and/or health workers to address issues of stress and illness.

The estimated expenditure and employment set out above is a significant underestimate of the total contribution of auction markets because the values do not include the expenditure and employment generated by businesses located on their sites or in close proximity.

The locations of auction markets puts them in prime positions to become hubs fostering ancillary business activities, either by renting space on their sites or, if located on out of town sites, becoming the catalyst for rural businesses.

Livestock auction markets are now increasingly found at the centre of a network of rural businesses that not only include livestock related activities e.g. feed companies and land agents, but also non-farming activities including retail outlets, conference facilities and venues for social gatherings e.g. weddings.

Investments by livestock markets in E&W to expand the boundaries of their operations to embrace other rural businesses are a welcome and necessary strategy in the face of challenges faced by rural economies. The concept of multifunction auction markets acting as a catalyst for a broad range of additional business activities offers not only new income earning opportunities for livestock markets but also realistic and valuable scope for the generation of rural incomes and employment.



SÉAN RICKARD Independent Economist PhD, MBA, MSc(econ), BSc(econ), FHEA, RiVF Email: sean@seanrickardItd.co.uk Web:

www.seanrickard.co.uk

A 45 year career as an economist centred on food and agriculture. In 1987 he was appointed the NFU's Chief Economist. In 1995 he joined the Cranfield School of Management as an academic specialising in business economics and becoming Director of its flagship MBA Programme. While at Cranfield he was an Academic Adviser to Defra on farming and rural matters. Having retired from Cranfield in 2012 he now runs a consultancy business, Sean Rickard Itd specialising in the economics of food and farming. Sean also has a number of extracurricular roles: notably he is Chair of First Milk Members' Council and a Non-executive Director on the NFU Sugar Board.





1. INTRODUCTION

Traditional livestock auctions, more correctly live ring call auctions, provide forums for buyers and sellers to openly trade livestock. There are 110 livestock auction markets in England and Wales. In total they employ some 2,599 people and generate a turnover of £1.8 billion. These markets are geographically spread across the country, predominately located at key nodal points in the livestock marketing network. While the share of the liveweight sales of finished cattle has declined relative to deadweight sales, over recent years the position of livestock auction markets has stabilised and in the case of sheep there has been a resurgence in sales through live markets.

Liveweight auction markets remain critical for farmer-to-farmer trading of store and breeding animals but a focus on the numbers of animals traded seriously undervalues the contribution these markets make, not only to farmers and the livestock industry, but also to the local economies in which they are located. Auction markets are at the interface of agriculture and the local, rural economy. Their locations put them in a prime position to foster ancillary local businesses. Modern markets augment their operations by expanding the activities offered on their sites and/or they serve as hubs for clusters of local businesses who have purposely located in close proximity. Local businesses benefiting from the presence of a livestock market range widely from livestock related activities such as feed merchants and land agents, to non-farm businesses and retail outlets as well as

conference facilities and venues for social gatherings. Multifunction auction markets acting as a catalyst for a broad range of additional business activities offers not only new income earning opportunities for livestock markets but also realistic and valuable scope for the generation of rural incomes and employment.

This report has been commissioned by the Livestock Auctioneers Association. Its purpose is to investigate the total economic contribution generated by livestock auction markets in England and Wales. That is, not only the contribution they make to livestock farmers and the livestock industry in general but also the wider socio-economic contribution they make to the areas in which they are located. What follows, is separated broadly into three sections. The first provides a brief overview of the value and numbers of final beef and sheep marketings in the formeat marketing of livestock in the UK. The second explains the role of livestock auctions as an integral part of the livestock industry. This embraces the efficient trading of live animals which encompasses not only the generation of a fair price but also the underpinning of high standards, the provision of pertinent and contemporary information as well as providing a forum for farmers to network socially. The third section quantifies the economic contribution of livestock auction markets to their surrounding economies. The section uses standard techniques to assess how the activities of livestock markets boost incomes

and employment in their localities. However, standard techniques are not equipped to quantify the additional value generated by livestock markets operating as a catalyst for clusters of rural

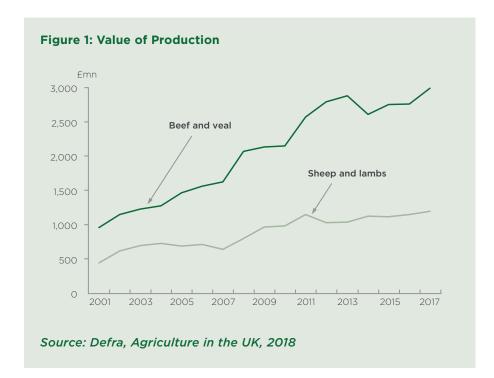
MARKETS

and employment in their localities However, standard techniques are not equipped to quantify the additional value generated by livestock markets operating as a catalyst for clusters of rural businesses. To the extent that these rural businesses would be less successful, less developed or even not exist in the absence of their proximity to a thriving livestock market, so this amounts to a contribution to rural economies that is very real and much needed.

06

2. LIVESTOCK MARKETING: AN OVERVIEW

Livestock farming is the dominant agricultural enterprise in the UK. It involves not only the production of meat but also dairy products and eggs. This report is primarily concerned with grazing livestock i.e. cattle and sheep, as these animals overwhelmingly dominate the activities of livestock auction markets. Some auction markets also deal in pigs and poultry but for these sectors direct selling dominates and consequently the volumes involved tend to be small. According to Defra, total sales of cattle and sheep to customers beyond the farm gate e.g. meat processors, amounted to some £4.2bn in 2017 of which beef and veal products contributed some £3bn (71 per cent) and sheep and lambs some £1.2bn (29 per cent). Figure 1 shows how the value of sales for these sectors has moved over recent years.

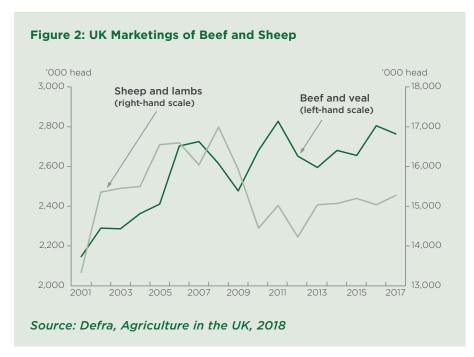


The figure shows a steady increase in value, particularly in sales of beef and veal that have increased by 200 per cent over the period shown. In part, the values shown are the outcome of rising prices and increasing carcase weights

- an indication of increasing efficiency - but also, they reflect upward trends in animal numbers. Figure 2 shows how the numbers of cattle and sheep sold for meat have moved over the period. However, the data shown in

Figure 2 only represents a proportion of the numbers of livestock that are sold each year. The data does not include the farmer-to-farmer trade in store and breeding animals that largely takes place through the medium of auction livestock markets and hence, the numbers shown seriously underestimate total annual marketings.

A significant proportion of the cattle and sheep populations will necessarily be relocated during their lives to farms that are better equipped to finish them. Lambs born in hill and upland areas need to move to lowland pastures where grass is more plentiful for finishing. Dairy and beef herds sell calves and yearlings as store cattle to specialist feeders. Smaller, native breeds of cattle generally require a longer growing period based on forages, whereas finishing periods for larger continental cattle are shorter and efficiency demands rations containing high quality feeds and forage that facilitate fast growth rates. Similarly, bulls are better suited to systems based on energy dense diets, which exploit their potential for fast, lean growth. It is the existence of livestock auction markets that facilitates this necessary movement of animals towards specialist finishers. It is not an exaggeration to say that without auction markets, cattle and sheep populations would be smaller i.e. the nation's livestock industry would be smaller, in part because without these trades it would be difficult for breeders to earn



a living from farming. Efficiency minimises production costs; hence facilitating the movement of animals to the most economically viable sources of finishing is not only necessary if consumers are to be offered affordable, high quality meat but also it helps ensure that the country's agricultural land is used productively.

Not all auction sales involve stores for finishing. A very important proportion of auction sales involve breeding animals which are key to improving the quality of dairy and beef breeding herds as well as sheep flocks. Crossbreeding remains one of the most effective lowinput, high-return management practices a grazing livestock producer can adopt. It creates the opportunity to combine the desirable characteristics of two or more animals, thus achieving a

higher overall performance level of desired traits. This reinforces the point that by facilitating farmer-to-farmer trade in breeding animals auction markets play a vital role in the development of healthy, productive livestock populations and thereby the production of affordable highquality meat and dairy products. The importance of auction sales is shown in Table I. Row 1 shows the total marketings of cattle and sheep that are sold to abattoirs either directly on a deadweight basis or indirectly on a liveweight basis through auction markets. Note the data apply to E&W and hence the numbers shown are lower than Figure 2 which refers to the UK. Row 2 shows the number of sales that go through auction markets although these include farmer to farmer sales of stores (including calves) for finishing and breeding.

Table 1: Total and Auction Sales of Cattle and Sheep in E&W in 2017

	Cattle	Sheep
1. Total sales ('000 head)	1,845,000	13,277,000
2. Auction sales ('000 head)	1,362,000	10,093,000

Source: AHDB and Livestock Auctioneers Association

Table 1 makes clear the importance of livestock auction markets accounting for more than 1.3 million cattle sales and more than 10 million sheep and lamb marketings in England and Wales. Although tempting, for the reasons explained above, it would be misleading to present auction sales as a proportion of total sales. As noted in the introduction, although the numbers of finished cattle sold through auction markets have declined, with the spread of deadweight marketing, numbers have now reached a plateau and over recent years the numbers have stabilised. As regards liveweight sheep sales, having taken a knock in the year following the outbreak of FMD disease in 2001, liveweight sheep sales recovered relatively quickly and have now returned to levels typical in the years before the FMD crisis.

The growth of direct/deadweight selling during the 1990s was overwhelmingly driven by the supermarkets. But the power of supermarkets to dictate trends and practices is increasingly facing challenges from consumers who retain considerable clout and who are increasingly wielding it. In response, the supermarkets have all adopted Corporate and Social Responsibility strategies. involving a greater focus on more traditional farming methods, a heightened interest in traceability and enhanced animal welfare and, as will be explained below, this mindset is aligned with the role and contribution of auction markets. These observations kindle cautious optimism that the coming years might see a rising, if modest upward trend, in liveweight sales of cattle and sheep

3. LIVESTOCK MARKETS: UNDERPINNING EFFICIENCY

The quest for efficiency in the way an industry allocates and uses its resources is one of the major themes of economics. When a seller and a buyer agree to exchange an item of value, efficiency demands that at the time of the transaction the price paid is a 'fair' price i.e. the best outcome available to both parties. It is a powerful tenet of economics that this outcome is more likely to be realised in markets where there are significant numbers of buyers and sellers all possessing sufficient information relating to the attributes of the item being exchanged to form a judgement as to its value. The presence of many alternative buyers and sellers is necessary to ensure that no individual has an undue influence on the exchange price but it is not

sufficient. To ensure a fair price neither a buyer nor a seller must be obliged to complete a transaction if they are not convinced it represents their assessment of value.

Developed economies are frequently referred to as 'freemarket' economies, reflecting the fact that the vast majority of exchange transactions are determined within a market setting. For example, purchases of food, clothing and household wares typically involve large numbers of buyers seeking, from a wide choice of sellers, products whose prices are aligned with their assessments of value. Although these transactions generally take place in a shop where sellers post prices for their products, the exchange

takes place within a market setting where buyers are free to choose whether or not to make a purchase, For frequently purchased, low priced items, shops have the advantage of convenience. Although consumers (buyers) will possess subtle variations in their assessment of value, when it comes to such products, typically branded consumables, buyers will have experience of individual products' attributes and in this situation devoting time to haggling is rarely justified. However, in the short run posted prices suffer the disadvantage that they are inflexible; as it takes time for sellers to alter their prices they are unresponsive to changes in demand.

Another type of market is a bilateral negotiation. In a private negotiation both the buyer and seller seek, and expect to influence the price by haggling, whether or not the price has previously been posted. Such markets work best if the negotiation is spread over a period of time, allowing the buyer greater scope to investigate the seller's claims regarding a product's attributes, and terms may be tailored to a buyer's specific situation. But they also suffer a number of disadvantages. Chiefly, they can be very time consuming and expensive and sellers have to put effort and funding into informing and attracting buyers. Consequently, bilateral, private negotiations tend to be associated with rarely purchased, high value products such as houses, complex machinery and companies.





A NATURAL MARKET

An auction is another form of market whose mechanisms fall between the extremes outlined above. Auctions have existed since antiquity and their defining characteristic is the way that the exchange price is set. They take a number of forms; for example, English, Dutch, sealed-bid. When it comes to livestock auctions in England and Wales the form is English, open-outcry, ascending price auctions whereby, the auctioneer opens the bidding with a suggested price, hopefully low enough to attract bids and accepts successively higher bids from potential buyers. The highest bidder at any given moment is considered to have the standing bid and if no competing bidder offers a higher bid the standing bid becomes the winner i.e. the bidder purchases the offering. Attempts were made in the 1990s to use electronic auctions to sell cattle and sheep but with only limited success. They re-emerged following FMD in 2001 but again proved short lived once auction markets re-opened. demonstrating a clear preference by both sellers and buyers of livestock for live sale ring auctions.

Participants find the mechanism not only familiar and intuitive but also it is rapid and transparent as the bids are known to all bidders. Although auctions have clearly understood rules, an English auction has the advantage that the selling price is 'discovered' by the process of bidding. This ensures that it accurately reflects current demand based on the available information. Most importantly, and of particular relevance to livestock markets, the auction mechanism explicitly allows for subtle variations in perceived assessments of value by individual buyers - no two animals are identical. More than any other selling system auctions have the flexibility to rapidly vary prices to cope with variations in buyers' evaluations of individual animals. Auctions also have the advantage over negotiations in that they allow the seller to compare the offers of competing buyers simultaneously rather than having to consider each offer one at a time and are therefore much less time consuming. Finally, once the rules of an auction are agreed the seller remains passive while buyers' bids determine the price ensuring that neither buyers nor

sellers can unfairly influence the winning price to their advantage.

The foregoing demonstrates why auction markets are a natural market for selling livestock. As individual animals vary, albeit subtly, in their attributes determining the exchange price ultimately depends on the valuation that the buyer places on specific attributes. Put simply, in contrast to a manufactured product, as there is no standard value for an individual animal a process of price discovery is essential. When it comes to assessing value the health status of an animal is only the starting point. The perceived value to an individual buyer will depend on a range of attributes some of which may be idiosyncratic but will generally include breed, pedigree, sex, weight for age, timing and farm-assured status. Critical will be the intended use and the seller's reputation. It is these attributes, or more correctly the perceived, differentiating value placed on them by individual buyers, that ultimately determines the price bid for an animal.



These value differentiating attributes become very important when a breeding animal is for sale. Buyers will be using their knowledge and experience to weight an animal's attributes in order to assess its fertility, productivity and lifetime profitability. But profitability also depends on factors beyond the potential buyers' control; in particular, future market prices. In this respect auction markets have a major advantage. By bringing a significant number of potential buyers together to bid, the buyers' group will collectively contain a vast proportion of the available information - including expectations regarding the likely development of market prices. Thus, while risk can never be eliminated from assessments of future markets an efficient auction market will ensure that livestock trade at a fair value on the day in question because open-cry auctions make it impossible for a buyer to purchase an undervalued animal or for a seller to sell at an inflated price.

Central to the performance of a livestock auction is the competence of the auctioneer. An auctioneer's role is to facilitate free and open trade and thereby to arrive at a 'fair' price. A successful auctioneer must be articulate but also have a sound knowledge of the livestock being presented and be in a position to advise on the many issues directly related to livestock production and marketing e.g. tagging requirements and movement regulations. Talented auctioneers use their charisma and personalities to create excitement. drive bidding and effortlessly command the attention of the crowd. Good auctioneers often also employ humour to engage with and put bidders at ease, and commonly have signature lines in their back pocket to get the bids flowing but above all they bring professionalism to the auction ring. To this end the Livestock Auctioneers Association has established a route to membership in collaboration with Harper Adams University. The collaboration has resulted in Harper Adams offering a Livestock Market Operations and Management course, aimed at aspiring auctioneers which provides a route to membership of the LAA and the Institute of Auctioneers and Appraisers of Scotland. The course is spread over four years and has attracted participants from a wide range of backgrounds.

BENEFITS TO SELLERS

Livestock farms are small businesses and as such have little market power when compared to large scale, corporate food companies. Put simply, they are weak sellers if entering into private negotiations with powerful buyers and risk a transaction that undervalues their animals. In contrast, selling livestock in an open-cry auction market will, as explained above, guarantee a fair price. Of course, a 'fair price' on the day may fall below a seller's expectations but by putting in a reserve price the seller retains control over the price they are prepared to accept as a minimum. In fact, sellers are assured by the fact that an opencry auction that attracts a wide range of buyers increases the likelihood that the prices paid for the distinctive attributes of their livestock are likely to be the highest achievable on the day. Moreover, the presence of multiple potential buyers greatly reduces the risk that they will not find someone willing to purchase their offerings - see the next section. While all markets draw buyers from the surrounding area - typically up to 40 miles - some buyers will travel from much further afield, particularly for specialist and seasonal sales. Some buyers will be seeking breeding animals, others stores and yet others finished stock either for themselves or as agents for third parties. Buyers will range from farm businesses to wholesalers, breeders, independent butchers and specialist buyers e.g. restaurants, all seeking varying attributes deemed suitable for the intended end use.

Apart from the price advantages inherent in using an auction market, sellers also benefit from lower selling costs. Entry to livestock markets is straightforward, and in return for a modest fee sellers avoid the transaction costs associated with other marketing channels. Transaction costs can be

summarised as the costs of seeking and securing the best price. Such costs are very real though rarely acknowledged. They involve acquiring sufficient information to make an informed judgement - including identifying suitable trading partners - the time devoted to carrying out a negotiation and attempts to ensure that contracts will be honoured i.e, both the price and the terms agreed are adhered to. Most importantly, payment is guaranteed as the livestock auction companies pay the sellers and collect payment from the buyers. Although it is now common for sellers to be paid by bank transfer rather than on the day, they receive payment within a week of the sale thereby transferring the risk of a bad debt to the auction company. This guarantee of payment within days is of particular benefit for smaller scale, farm businesses.

BENEFIT TO BUYERS

The position of auction market buyers mirrors that of sellers, with regard to the number and variety of sellers, the transparency of the process for determining a fair price and the minimisation of transaction costs. As observed above, buyers will have varying demands and assessments of value according to intended use for the purchased animals, and this means they will attach differentiating values to particular attributes. As a typical livestock auction brings together a wide cross-section of sellers; buyers will not only enjoy a wide choice of animals whose attributes can easily be compared and valued but also the increased likelihood that their needs will be more precisely met. A further advantage might be the opportunity to enhance a buyer's reputation. Being seen to purchase high quality animals, particularly for breeding, is likely to generate good publicity for a farmer. And attending a sale is an efficient way to meet and assess the buying and selling of other farmers.

It follows that the process of engaging in a transparent and fair process of price discovery, delivers to auction buyers the value of much reduced transaction costs. In an auction market, animals with different genetics from alternative breeders and finishers are on offer in one location thereby reducing the costs of search. Watching and listening to other buyers reduces the costs of seeking information on value. And the auction market guarantees that the trade will be honoured reducing the costs of enforcement. The result is that buyers in making better, more satisfying choices i.e. their purchases will be closely aligned to their preferences, do so at minimum cost. Moreover, with the introduction of electronic identification (EID) for sheep and its expansion to cattle in the near future, buyers can, by the simple scanning of tags, directly link to the Livestock Information Service (LIS) to obtain information on an individual animal's history and health status. Thus, EID increases transparency and affords buyers greater assurance but it remains the case that only auction markets can allow buyers to satisfy themselves as to the integrity of the animals being offered for sale by directly engaging with sellers.



BENEFITS TO ANIMAL WELFARE

Auction markets take very seriously their responsibilities in respect of the welfare of the animals they administer. Under the Welfare of Animals at Markets Order 1990 it is an offence for a farmer to offer an unfit animal for sale and animals come under the control of competent, experienced staff who check for health and welfare when they enter an auction market. All livestock markets must have an Animal Gatherings Order (AGO) licence from the Animal and Plant Health Agency (APHA). The conditions attached to an AGO licence require that all reasonable steps are taken to prevent the spread of disease including the appointment of a biosecurity officer and operational procedures including a contingency plan if a notifiable disease is suspected and/ or an adverse event e.g. a power failure, threatens the markets ability to cleanse and disinfect. It follows that all livestock markets are effectively fenced, keep records to allow tracing of animals, employ a biosecurity officer and have in place measures to reduce the risk of the spread of disease by both staff and visitors, including appropriate and clean clothing for staff at each market as well as facilities for disinfecting boots and hand washing.

In addition to complying with all legislation concerning the gathering of animals, livestock auction markets are conscious of their animal welfare responsibilities. Livestock auction markets are an integral part of the beef and lamb supply chain and high animal welfare standards are crucial to the industry's success. Good practice now requires that all markets have operational welfare policies including the employment of an onsite Animal Welfare Officer, systems for the recording, investigating and resolution of any complaints received relating



to animal welfare and access to veterinary surgeons at all times. Markets like farmers can choose to be members of the Red Tractor Assurance scheme for livestock and in practice most are assured. Red Tractor assured livestock markets must have fully operational and demonstrably effective traceability systems providing a complete record of movements of livestock, on to and off the site. Markets must be regularly cleaned and disinfected, their appearance must be tidy and all facilities livestock have access to are designed, maintained and constructed to provide a suitable environment for livestock. For example, fresh clean water and suitable feed is available on site at all times, floor surfaces are non-slip and livestock have sufficient space to allow for normal behaviours.

An important aspect of animal welfare is sensitive handling. Livestock markets must be able to demonstrate sufficiency in the numbers of staff employed to handle animals and that they have undergone effective training, are signed off as competent to carry out the activities that they are employed to do and their

performance is subject to regular review. To this end the Livestock Auctioneers Association has, in partnership with the AHDB, supported the development of the new Safe Hands' Master Drovers Programme by independent training professionals Animal-I. Drovers are an essential part of the smooth operation of the livestock market, they have a key role in ensuring that the highest standards of animal health and welfare are met at all times. Already, around eighty-five senior market staff have attended 'train the trainer' events throughout the country. High standards of welfare within livestock markets are not sufficient. Animals must be transported to and from markets and although transporters have primary responsibility, livestock markets also have an important role. Under existing legislation those transporting animals - be they farmers or hauliers - must ensure that the animals are fit for the intended journey and that the animals are transported in a way that protects them from injury or undue suffering. In the case of livestock markets, welfare is aided by the fact that animals are transported to and from markets

in relatively small groups and over relatively short distances. Markets are responsible for unloading and loading of animals and stress is reduced by the existence of facilities at all markets designed for this purpose as well as experienced and competent drovers.

A study, undertaken by the Humane Slaughter Association, surveyed twenty-four livestock auction markets in England and Wales representing a crosssection of large, medium and small businesses. The study concluded that all had an operational welfare policy, were complying with the requirements of existing legislation and with those of Red Tractor Assurance. More to the point, in all cases, the establishment of effective personnel and training policies together with procedures and infrastructures e.g. pens and gateways, ensured high standards of animal and human welfare. Following their market visits - in some cases more than once - the authors stated that that they had neither witnessed nor had raised with them, any serious animal welfare concerns.

Having inspected the facilities and procedures for dealing with injured and unfit animals they were satisfied that necessary actions would be applied promptly and effectively.

BENEFITS TO THE LIVESTOCK INDUSTRY

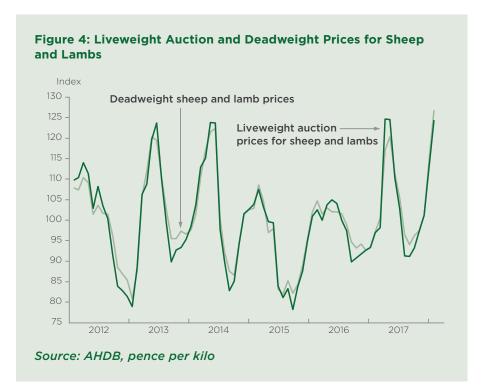
Although the prime purpose of a livestock auction market is to bring sellers and buyers together in order to facilitate trade, they also have the advantage that they generate a positive externality for livestock farmers and the sector as a whole. A positive economic externality is a benefit that is enjoyed without cost by a third-party as a result of a private transaction e.g. the buying and selling of livestock in an auction market. The livestock industry gains at least three, positive externalities arising from the activities of auction markets. They provide: an independent assurance that sector wide cattle and sheep prices reflect market conditions; a forum for sharing of contemporary sector and technical information; and an opportunity for social networking whereby farmers and the wider public have the opportunity to interact.

Livestock prices are notoriously volatile and difficult to predict, but the existence of livestock auction markets provide industry wide transparency and confidence that prices are in line with market forces. It is instructive to compare the formation of cattle prices in England and Wales with Ireland where direct selling of cattle dominates sales of finished animals. In May 2018, Farm Ireland published an article on this issue under the headline 'Why are Irish farmers among the unhappiest in the world on price transparency?' As the prices generated by auction markets are deemed to be 'fair' they serve as a check on the prices offered by deadweight markets. Figure 3, shows the relative movement of liveweight auction

movement of liveweight auction and deadweight prices for steers. As can be seen there is a very close correspondence between the two series shown in Figure 3 providing assurance to the wider industry.

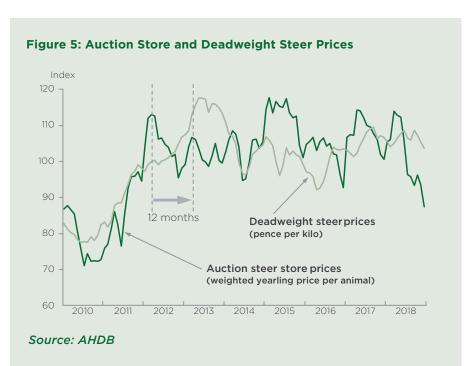






As a graph comparing liveweight and deadweight prices for heifers shows a very similar picture it is not displayed here. **Figure 4** shows liveweight auction and deadweight sheep and lamb prices and again there is a very close correspondence.

As observed above livestock auction markets are the primary source of trades in store animals for finishing. As there is a lag between the purchase of a store and its final sale as a finished animal one would expect – despite the volatility of livestock markets





- a correlation between the prices for stores obtained in auction markets and deadweight prices for finished animals. **Figure 5** shows the relationship between prices for yearling steers and deadweight prices for finished steers. If allowance is made for a lag of one year it can be seen that livestock auction markets perform rather impressively in anticipating future prices for finished animals.

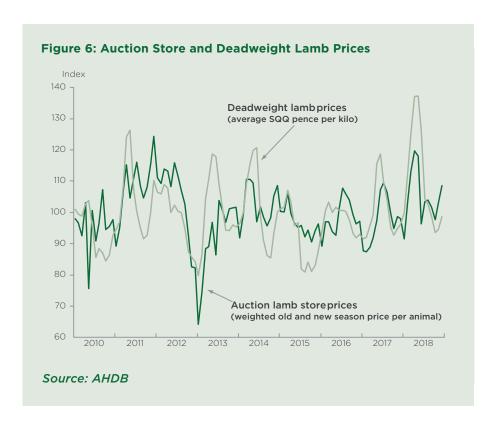
A very similar graph exists if data for auction lamb store prices are compared to deadweight lamb prices. **Figure 6** compares the two series which display a very high correlation even though the relationship is complicated by the need to weight the prices of old and new season lamb stores.

An important concern for any business, or more correctly those taking business decisions, is to keep abreast of market developments and underlying trends, particularly in production techniques. While many sources of such information exist, livestock auction markets have a particular advantage in that they provide

farmers with the opportunity to receive, discuss and question such information with peers. Moreover, they are a forum that farmers trust and understand and within which participants share a common interest. It follows that the nature of the information that is shared amongst farmers is unlikely to be subject to the vested-interests that is frequently the case when provided by external organisations. Good intelligence is a valuable asset and as a source of relevant and contemporary information, auction markets provide a positive externality to livestock farmers which aids the development and commercial success of their businesses.

If livestock markets are a valuable source of information for farmers, they are also a source of pertinent information for sectors closely associated with livestock farming. Livestock markets exist at the centre of an agricultural network; by the nature of farmers from different locations and experiences coming together they are repositories of contemporary and detailed information that serves to support and align the offerings by associated professional services e.g. land agents, farm suppliers. The role of markets in generating information makes them attractive sites: indeed, prime locations for farming related business activities. We will return to the role of markets as prime locations for rural businesses below, here we acknowledge the value of markets as a source of information to participants.

In many respects farming is a lonely occupation, particularly for smaller scale livestock farms. A further positive externality provided by livestock auction markets is the social dimension of attending. Commercial matters aside, attending market is a social occasion and it remains for many farmers and their families a very good way of socially interacting with their peers. Given the isolated



existence for many farm families, the opportunity to keep in touch and catch up on the gossip should not be underestimated. Farming is also a stressful business and auction markets, being places where significant numbers of famers gather on a regular basis, have adopted the socially responsible approach of offering support. It is now common for auction markets to provide facilities where farmers can meet with trained social and/or health workers to share their concerns and if appropriate directly address issues raised by stress and illness.

Not only farmers enjoy the social aspects of attending livestock markets. The onsite facilities offered by modern markets extend, inter alia to premises for ancillary businesses e.g. insurance, shops and restaurants. Thus, auction markets have become places where farmers and the general public can meet and build social networks. The nature and pace of modern life has resulted in a loss of understanding, on the part of the

wider public, as to the realities of livestock production and farming in general. That said surveys reveal that farming has a special place in most people's hearts and modern auction markets offer a unique opportunity for the public to interact with the business of livestock farming. To the extent that in addition to enjoying the facilities, the general public have the opportunity to gain greater empathy with livestock farming so auction markets generate a positive externality that extends to farming in general.

4.AUCTION MARKETS: THE WIDER BENFITS FOR THE LOCAL ECONOMY

As noted in the introduction there are 110 livestock auction markets in England and Wales. In total they employ some 2,599 people and generate a turnover of £1.8 billion. These markets are geographically spread across the country, predominately located at key regional nodal points in the livestock marketing network. Traditionally, livestock markets were located in town centres and some were under the ownership of local authorities. Over the years as pressures for urban space mounted, many livestock markets relocated to the outskirts of towns; in the process investing in the development of new sites while creating the opportunity for business to invest in and develop the town centre sites vacated. Also, where local authorities decided that they were not well placed to own and maintain livestock market sites, ownership has been transferred to the private sector with investors, including farmer users, coming together to finance the building and development of new facilities.

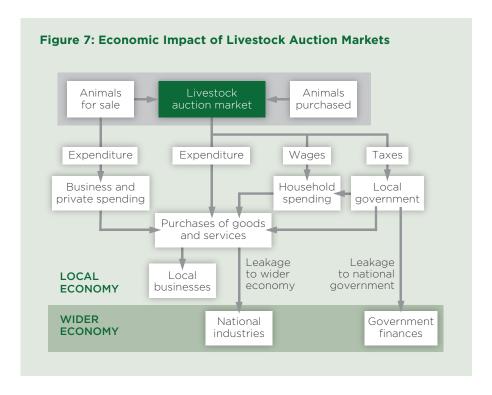
Livestock auction markets principally draw customers from the surrounding economy; however, the size of the catchment area varies from market to market. It will in part depend on the size of the market i.e. the expected throughput on market days and the quality of the local road network. But markets are also in competition with each other and hence the

quality of the service offered is a major influence; in particular, the reputation and knowledge of staff as perceived by vendors. For many markets a radius of 40 miles represents the distance buyers and sellers will typically travel though as noted above, specialist sales attract participants from a much further distance. The economic benefits of auction markets go beyond the sellers and buyers who use them to trade livestock. Just like any other business, an auction market in carrying out its operations is linked to other businesses and through these

links many additional incomes and jobs are created. These wider economic impacts are summarised in **Figure 7.**

THE ECONOMIC IMPACT OF LIVESTOCK AUCTION MARKETS

Formally the quantification of these 'ripple effects' for the surrounding economy are captured by 'multipliers' – see Appendix I for a detailed explanation – which, as the name implies, estimate the wider impact for the economy





arising from an initial injection of expenditure or employment by an auction market. This increase in expenditure or employment consists of the sum of three effects – direct; indirect and induced – as set out below.

- Direct effects are generated by auction markets' operational and investment expenditures. Operational expenditures, normal measured on an annual basis, consist of payments to livestock sellers, purchases of materials and services from other businesses. the payment of business rates and taxes as well as employees' wages and dividends. From time-to-time auction markets will make investments involving expenditure on capital items i.e. the purchase of buildings, plant and machinery. All these expenditures will ultimately be funded by the revenue auction markets earn - though in the short-run investment might be funded by borrowing - hence, turnover provides an estimate of annual, direct expenditure.
- Indirect effects arise from subsequent rounds of expenditure made by the livestock sellers and

'front-end' businesses supplying goods and services to auction markets. In order to trade or supply the auction market's demands these agents will, in turn, have to devote expenditure to purchasing materials and services from other businesses, paying their employees' wages and owners' dividends as well as business rates and taxes and, as necessary to meet the auction market's demands, investment expenditure on capital items. This indirect 'ripple' effect then widens out to the businesses supplying the traders and front-end business progressively moving down supply chains.

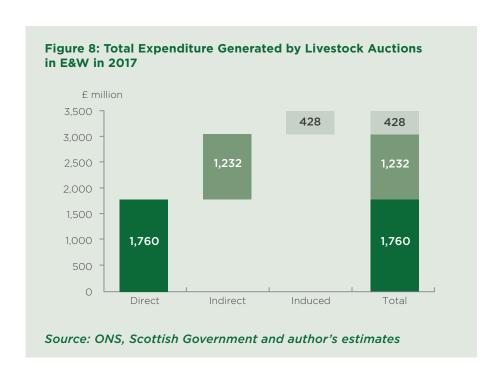
• Induced effects are attributable to the auction market's employees' and shareholders spending their wages and dividends on household items that contribute to their standard of living. These will be broad based ranging from rents and mortgages to food and entertainment and the expenditure involved in meeting these household demands will generate demands on predominantly local businesses e.g. retailers and restaurants.

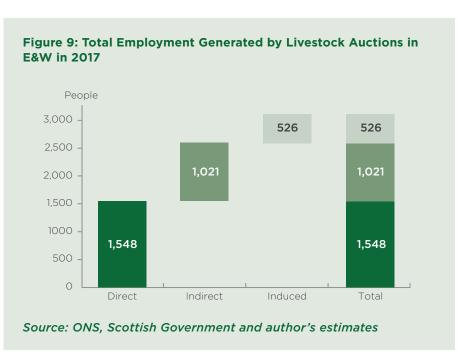
Quantification of an industry's or a sector's 'multiplier' provides a degree of precision as to the ratio of the industry's or sector's initial economic stimulus of say direct expenditure to the total effect via the chain of spending and re-spending embodied in the indirect and induced effects. That is, for an initial injection of say £1 million of expenditure arising from auction markets' activities and personal spending by their employees it is possible to estimate by how much the rise in total expenditure will exceed the initial injection. Estimates of the multipliers for industries and sectors, grouped according to the Standard Industrial Classification, are provided by the Office for National Statistics. Using these official ONS calculations - see Appendix I - we estimate that the £1.76 billion of direct expenditure injected into the economy of England and Wales by livestock auction markets generates a further £1.66 billion of indirect and induced expenditure, contributing total expenditure of £3.42 billion to the economy.

Figure 8 provides a summary of the composition of total expenditure in the economy arising from the activities of livestock auction markets in England and Wales.

Multipliers can also be used to estimate the 'knock-on' impacts of direct employment in livestock auctions on wider employment. Government multipliers for employment are based on full-time employment and again the total impact is the sum of direct, indirect and induced effects. Livestock auction markets in England and Wales employ 496 people full-time and 2,103 part-time. Converting part-time employees to full time equivalence, gives total employment of 1,546. Using official calculations of employment multipliers, we estimate that the 1,546 of direct full-time employment generates a further 1,021 indirect jobs and 526 induced jobs contributing total employment of 3,095 full-time jobs; Figure 9.

A problem with ONS multipliers is that they relate to the economy as a whole. At the national level, some expenditure will 'leak' to overseas producers via the purchase of imports but this is allowed for in the official calculations. Our interest here is the impact of livestock auction markets on their proximate geographic economies. Some of the expenditure generated by livestock auctions will leak out of the local economy to the national economy but in the absence of local multipliers the extent of this leakage is impossible to estimate. When it comes to local multipliers, we can assume that any local taxes e.g. fees, licenses, will be internalised i.e. local governments will re-spend local taxes in the local economy. We might further, safely assume that to the extent that much of the expenditure by livestock auction markets flows





to smaller business in the locality so the leakages to the national economy will be that much smaller. We noted above that the catchment area for livestock markets is generally within a 40-mile radius which suggests a very high proportion of the initial expenditure generated remains in a concentrated locality.

SUSTAINING AND DEVELOPING RURAL ECONOMIES

It can be said with some confidence that the estimates of the total expenditure and employment generated by livestock markets in England and Wales set out above are a significant underestimate. This follows because in addition to their auction activities modern livestock markets utilise their sites and/or location to become hubs of local economic activity. Their locations put them in prime positions to foster ancillary business activities. Some markets augment their livestock activities by renting space on their sites for a wide range of business activities. Others, located on out of town sites have become the centre of an industrial hub whereby local businesses have been attracted to close proximity in the knowledge that the livestock market will attract potential customers.

These site based or co-located businesses include livestock related activities such as farm pharmaceutical businesses, farm machinery sales offices, farm feed businesses, general farm supplies, land agencies, banks and insurance services. But increasingly, they go much wider embracing not only retail activities such as butchers, clothes shops and restaurants but also the facilitation of vehicle

auctions, antiques and fine arts sales as well as car boot sales. Some sites offer conference facilities and venues for social gatherings e.g. weddings, and even university courses. While the rent accruing to livestock markets from the provision of onsite locations for these additional activities is accounted for in the calculations above - as would be services provided by the site such as catering for wedding parties - the foregoing does not capture the value of the expenditure and employment generated by onsite businesses themselves, nor does it capture the additional economic activity generated by business by virtue of their location in an industrial hub surrounding a livestock auction market.

A rural town centre auction market, such as Melton Mowbray, that has invested in its development has brought new businesses to its site; in the process enhancing its status as a feature of a town centre while helping to sustain the town's heritage and economy. The market's development has provided additional scope to

attract visitors to the town whose presence generates higher levels of expenditure for the town's businesses. By encouraging people to visit or even stay overnight, the market serves to complement and underpin many businesses located not only in the streets adjacent to the market but also in other areas of the town and surrounding area. In addition to attracting visitors the provision of offices and workspaces promotes enterprise, particularly if space is taken by start-ups. Thus, the market's development has contributed to the support and development of an historic town and in a way that is in keeping with the town's character and history an economic contribution that is very difficult to value. In short, the development of Melton Mowbray livestock market has both engaged and benefited the local community. It has created jobs, encouraged interest in farming and ensured that the town's infrastructure is put to valuable use at a time when many towns are finding it increasingly difficult to attract businesses

MELTON MOWBRAY MARKET

With its strapline 'more than just a market', Melton Mowbray Livestock Auction Market opened its new state of the art building in March 2018. The market has been in existence for 1,000 years and it is the largest town centre livestock market in England and Wales. Its location in the historic market town offers much more than auction market facilities to surrounding livestock farmers. The site rents space to 50 shops and local businesses as well as providing a multi-purpose venue for large conferences, a banqueting suite and a licensed tavern.

The consequence of utilising its site for wider activities is that in addition to its weekly markets for cattle and sheep, it also operates on a regular basis, fur and feather markets as well as farmers markets. Other sales include antiques and collectables, as well as a thriving car boot on Sundays and regular

horse sales. The market's award-winning Market Tavern and Banqueting Suite can seat up to 450 guests – a popular location for weddings – and its conference facilities can seat up to 850 people. Overall the market's ancillary activities result in some 350,000 people visiting the site annually.

Bringing visitors to the centre of Melton Mowbray directly and indirectly generates economic activity in the town and its surrounding area. For example, people attending weddings and conferences are likely to seek accommodation in local hotels, guest houses and farmhouses while taking the opportunity to shop locally – purchasing a pie from Ye Olde Pork Pie Shoppe is a particular attraction - and visit attractions offered by a location deep in the English Shires such as Rutland Water, Belvoir Castle and Burghley House.

The Melton Mowbray livestock auction market demonstrates the potential offered by town centre sites for supporting and regenerating rural towns. Indeed, this potential has attracted interest and financial support from local authorities. The future of the Melton Mowbray Market was secured with the Council's help, which recognised its importance to the town and the region with a £5.5m investment in a new cattle building which included a contribution of £3.5m from the Leicester and Leicestershire Enterprise Partnership. The injection of public money is proof that analysis supports the claim that such developments not only meet the needs of farmers in the locality and beyond, but also ambitious expansion into non-farming enterprises helps stimulate wider interest, attracting existing and new businesses to the site who recognise the growth potential.

It is widely accepted that rural economies face a number of challenges and the setting up of a House of Lord's Rural Economy committee, is evidence that Parliament is anxious to examine what steps can be taken to support and develop rural economies. In his recent evidence to the committee, The Secretary of State for Environment, Food and Rural Affairs, Michael Gove, stated that his department's mission was to ensure not just that the rural economy provides rewarding jobs for individuals but that these jobs have resilience. He went on to praise local businesses and those who champion them. It is a fact that many livestock auction markets have risen to the challenges and by relocating to new, purpose-built sites have become catalysts for rural business hubs.

Hubs are defined as areas where businesses cluster together and they are now recognised as having significant economic advantages, including serving as the driving force for local economies. The benefits arising from the concentration of businesses that have a common industry focus e.g. agriculture, go beyond the perhaps obvious benefits of

bringing buyers and sellers together in close proximity. Studies find consistent evidence that clusters enable businesses to reduce their costs. Locating near suppliers or customers saves transport costs but clusters also attract and employ suitably qualified individuals and they facilitate the sharing of pertinent information and ideas relating to the common business and their individual contributions. A strong cluster will draw on the local economy's strengths and specialisations, it will not only include upstream suppliers as well as downstream customers for the hubs catalyst business but also suppliers of specialised services in areas such as finance and insurance. For small and developing businesses, locating in a cluster of associated businesses, is likely to aid resilience and growth. Most importantly, hubs enable local authorities and development agencies to focus their policies and activities. Clusters of businesses pack a greater economic punch and are therefore more likely to gain support from local governments,

ROSEHILL INDUSTRIAL HUB

The Rosehill industrial estate is located about one mile east of Carlisle city centre and is located adjacent to Junction 43 of the M6. It has a total area of more than twenty hectares and at its centre is the Harrison & Hetherington livestock auction market which is one of the largest in the UK. The City Council is the ground landlord for part of the estate, the remainder is privately owned.

The Harrison & Hetherington Group started out as a livestock business in 1877 with its Borderway Mart at Carlisle. In the ensuing 141 years, it has developed to become one of the largest livestock markets in the UK. It has also diversified so that today, in addition to its livestock auction business, the group has eight operating companies encompassing Machinery and Vehicle Auctioneers, Brokers and Valuers, Auction Rooms, Commercial Printers, Chartered Surveyors, Insurance Brokers and Estate Agents.

Not surprisingly with Harrison & Hetherington

livestock auction market at its centre, the Rosehill estate has become an industrial hub attracting many businesses associated with agriculture to the site including suppliers of feeds and farm machinery, a veterinary practice, land agents, surveyors and valuers, accountants, insurers and solicitors. But the site has also attracted many businesses that are not directly involved in livestock farming. For example, the site is home to a pet shop, car dealers, plumbers' merchants and dental technicians as well as food outlets, restaurants and a pub called the Auctioneer.

Harrison & Hetherington is continuing to grow its involvement with the Rosehill Industrial Estate. On land it acquired from Carlisle City Council it has just completed the building of a new food hall with eleven industrial units. Pioneer Foodservice, a family run firm, has plans to open a new retail store on the site and it intends to sell a wide variety of locally-sourced produce and include a butcher, baker, charcuterie and a coffee shop.

have a more influential voice in matters of interest and become an attraction for local communities.

Clusters do not just happen. Like any business venture they require a catalyst and livestock auction markets have proved adept at creating the infrastructure and facilitating interest from local business and mustering support from local governments. Many local authorities have not wanted to own and maintain a town centre livestock market site and have been keen to see markets moved to new, out of town sites. Although the development of an out of town site may be eligible for some public funding new markets have been largely funded by a range of private operators including farmers who have come together to finance the new development, based on the belief that a livestock market is not only essential for the local agricultural economy but also for the wider rural business economy. The

potential contribution of livestock auction markets as the catalyst for creating and sustaining rural business hubs is aided by the fact that all livestock markets are located within or on the edge of rural towns and cities where by definition surrounding farms contribute significantly to the local economy. A good example is Harrison & Hetherington Farmstock Auctions which is located close to the city of Carlisle. Casual inspection of the companies located in the close proximity of the auction market shows that they are broad based and display a mixture of established and start-up businesses.

Sensitivity to the needs of the local economy is a vital ingredient for the success of a business hub and this is admirably demonstrated by Bagshaws Auctioneers whose livestock market is located at the heart of Bakewell's Agricultural Business Centre, in the Derbyshire Dales. The Agricultural Business

Centre is the venue for a host of regular events, including a 70 stallholders' farmers market that attracts more than 5000 visitors. That said, it is significant that many of the rural businesses clustered around the livestock market are aligned with the area's attractiveness for recreational and training events. The role of the livestock market as the catalyst for the hub is demonstrated by a new lease agreement between Derbyshire Dales District Council and Bagshaws Auctioneers. Under the new lease, responsibility for the running of the Centre switches from the council to Bagshaws; a move that has been hailed as guaranteeing the future of the Agricultural Business Centre for at least the next 25 years. The lesson is clear, livestock markets are a natural catalyst for rural business hubs not only because of their association with surrounding farms but also because they align naturally with the surrounding area's characteristics and specialisms.

END PIECE

While livestock auction markets are steeped in history, their ability to survive and make a valuable contribution to local economies depends critically on a willingness and ability to continually develop. Over recent years livestock markets in England and Wales have not only invested in improvements to the livestock side of their businesses to the benefit of animal welfare and higher standards in general. but also, they have sought to expand the boundaries of their operations to include a broad range of rural businesses. It is with the development of these

business supporting activities that livestock markets can help secure their futures and, in the process, contribute to the development of their proximate rural economies.

These developments are a welcome and necessary strategy in the face of growing challenges. While the commission livestock auctions receive on sales will remain a major source of income it is unlikely to prove sufficient to fund the development of modern, high-tech markets. But auction markets have limited control over their incomes. Commission income

can vary markedly depending on livestock prices and numbers. This risk can be mitigated by widening the business boundaries of livestock markets to provide alternative and more stable sources of revenue. The concept of multifunction auction markets acting as a catalyst for a broad range of additional business activities offers not only new income earning opportunities for livestock markets but also realistic and valuable scope for the generation of rural incomes and employment.

APPENDIX I: LIVESTOCK MARKETS' MULTIPLIERS

Expenditure multipliers:

Auction markets, in carrying out their business activities generate turnover. This revenue is then used to fund expenditures necessarily incurred by the markets in operating their business. It is these expenditures that inject money into the economy but importantly the total amount of expenditure actually generated in the economy is greater than the auction markets expenditure. The total expenditure generated exceeds the auction markets' original expenditure because the direct effect of this expenditure is augmented by indirect and induced effects as described below:

- Direct effects: these are the immediate effect of an injection of spending into an economy. In carrying out their business activities, auction markets necessarily make payments to livestock sellers, purchase goods and services from other businesses, pay wages and salaries to their employees as well as dividends to their owners along with required taxes and fees. In addition to these operational expenditures which are normally measured on an annual basis the markets will, from time-to-time make investments involving expenditure on capital items i.e. the purchase of buildings, plant and machinery. All these expenditures are ultimately financed by the revenue generated though investment could in the short run be financed by borrowing.
- Indirect effects: these are subsequent rounds of expenditure generated by the livestock sellers and 'front-end' businesses supplying goods and services to auction markets. These sellers and front-end businesses will, in turn, devote the revenues they receive from the auction markets to purchasing materials and services from other businesses, paying their employees' wages and owners' dividends as well as business rates and taxes and as necessary from time-to-time invest in capital items to meet the auction market's demands. These expenditures by sellers and front-line business become revenues for their suppliers of goods and services and hence another round of expenditure is generated and so on down the supply chain
- Induced effects: these are attributable to the auction market's employees' and shareholders spending their wages and dividends on household items that contribute to the standard of living. These will be broad based ranging from rents and mortgages to food and entertainment and the expenditure involved in meeting these household demands will generate demands on predominantly local businesses e.g. retailers and restaurants.

Thus, the total expenditure finally generated is given by:

Total expenditure = Direct expenditure + multiplier effects

That is:

Total sales = Direct sales + Indirect sales + Induced sales

Supplier linkage effects or Type I multipliers cover direct and indirect effects only. These multipliers underestimate the effect on the economy as they do not include induced effects. When multipliers also include induced effects (sometimes referred to as income effects) they are known as Type II multipliers. As calculating multipliers involves the collection and analysis of massive amounts of underlying input-output data – i.e. the flow of funds associated with every sector or industry's that auction markets' farmer and business suppliers and employees purchase goods and services – it is beyond the scope of this impact assessment to examine in detail the extent of supplier linkages and income multiplier effects arising from the activities of auction markets. Instead, we have adopted

the most common approach; namely, to use secondary data on multipliers provided by the Government.

The Office for National Statistics publishes multipliers for 94 Standard Industrial Classification divisions i.e. broad sectors of the economy, for the UK as a whole. , though the latest estimates relates to 2014 which can be found at https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesdetailed

As the ONS does not calculate multipliers for micro sectors, such as auction markets, we are forced to use a proxy. Consequently, the SIC division, 'Wholesale trade services (excluding motor vehicles and motorcycles)' was selected as the most appropriate proxy. This SIC division includes wholesale trade on own account or on a fee or contract basis (commission trade) related to domestic wholesale trade and includes 'agents involved in the sale of agricultural raw materials and live animals'. According to the ONS calculations, the Type I expenditure multiplier for this SIC division is 1.7. That is direct expenditure of £1 million by a business in this division generates indirect expenditure of some £700,000 thus the combined direct and indirect increase in total expenditure £1.7 million.

The ONS does not publish Type II multipliers but the Scottish Government does. Comparing their estimates of Type I and Type II multipliers for SIC division, 'Wholesale trade services (excluding motor vehicles and motorcycles)' in Scotland and applying the differential to the ONS estimate would raise the Type I multiplier for 'Wholesale trade services (excluding motor vehicles and motorcycles)' from 1.7 to 1.94.

Employment multipliers

Type I employment multipliers, on a full-time equivalent basis, are provided by the ONS for SIC divisions. The estimate for 'Wholesale trade services (excluding motor vehicles and motorcycles)' is 1.66 which can be found at

https://www.ons.gov.uk/economy/ nationalaccounts/supplyandusetables/



