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# Farm Business Income by type of farm in England, 2017/18

Data on farm business incomes are used to monitor and evaluate Government and EU policies and to inform wider research into the economic performance, productivity and competitiveness of the agricultural industry. The data are provided to the EU as part of the Farm Accountancy Data Network (FADN) and are widely used by the industry for benchmarking.

This release provides survey results of Farm Business Income for 2017/18 covering the **2017 harvest** and including the 2017 Basic Payment (which is included within total farm output and therefore contributes to Farm Business Income). These results replace the forecast estimates published on 28 February 2018. All figures are for March/February years. A time series showing this and other measures of income can be found <u>here</u>.

# Key results

- In 2017/18, average Farm Business Income increased for all farm types except for specialist pig farms. The exchange rate was an influencing factor leading to price rises for a number of commodities and an increase in the value of the Basic Payment.
- The average Basic Payment in 2017/18 was £31,700, a 13 percent increase on 2016/17, reflecting the weaker pound in September 2017 when the exchange rate was determined.
- On cereals and general cropping farms crop output increased, influenced by a combination of higher yields, prices and areas for most crops. This was offset to a certain extent by rises to input costs. The average income for these farm types increased by 49 percent and 33 percent respectively.
- Average income on dairy farms more than doubled to £119,700 per farm, driven by an average rise of 23 percent to the price of milk and higher volumes of production.
- On grazing livestock farms, increased incomes (36 percent for lowland and 5 percent for those in the LFA) were driven by firmer prices for cattle.
- On specialist pig farms average incomes almost halved. Increased revenue from pigs was offset by reduced crop output and a reduced closing valuation due to lower pig prices at the year end. Input costs increased, particularly for feed.

A more detailed analysis of the results will be published on 13 December 2018 in Farm Accounts in England see <u>https://www.gov.uk/government/collections/farm-business-survey</u>. Forecasts of income by farm type for the year ending February 2019 (covering the 2018 harvest) will be published in February 2019.

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# SUMMARY BY FARM TYPE

£64,200

£93,300

£119,700

£21,900

£28,300

£31,300

£96,000

£41,800

£47,700

**Cereals** Higher crop output due to increased cereal prices and yield. Basic Payment also went up, driven by the weaker pound. Whilst variable costs were higher, notably seed and contracting, there was little change in fixed costs.

**General cropping** Increased output for wheat, sugar beet and horticultural crops partially offset by a fall in potato output. Costs rose, particularly for crop protection and labour. Increased income from agri-environment and Basic Payment Scheme.

**Dairy** Increased output from milk (driven by rises in both production and price) was only partially offset by higher fixed and variable costs.

Grazing livestock (lowland) Tighter supplies led to firmer prices for finished cattle, increasing output. Small increase in costs with reductions in crop costs offsetting increased cost of feed. Increased income from diversified activities.

**Grazing livestock (LFA)** Increases to the Basic Payment and agri-environment payments together with a rise in output from sheep and cattle were offset by higher costs, particularly for feed and machinery.

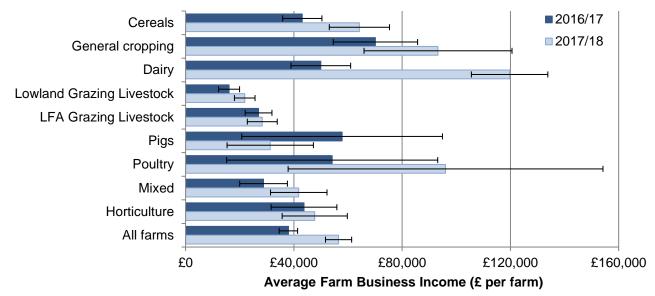
**Pigs** Crop output fell. Increased revenue from pigs was offset by a reduced closing valuation due to lower prices at the year end. Input costs were higher (particularly for feed). Reduced Basic Payment reflecting smaller average farm size.

**Poultry** Firmer prices for eggs and increased poultry meat production led to a rise in output partially offset by increased costs, notably feed. Output from diversification activities (particularly renewable energy) also rose.

**Mixed** Higher output from crops, livestock, the Basic Payment and diversification were only partially offset by increased costs.

**Horticulture** Reduced output from potatoes, glasshouse flowers, bulbs and nursery stock and contract work on other farms offset increases from other crops. Diversified output increased, notably building rental and food processing/ retailing. Costs also fell.

# Figure 1: Average Farm Business Income (£ per farm) by farm type, with 95% confidence intervals, England 2016/17 and 2017/18



The 95% confidence limits are shown as ranges around the averages. For more guidance on how to interpret these results, please see <u>Accuracy and reliability of results</u> in the Technical Note at the end of this Notice.

# **Detailed results**

On cereal farms, average Farm Business Income increased by 49 percent in 2017/18 to £64,200 (Table 1). This was primarily due to increased output. A combination of higher prices for wheat and barley (driven by a weakening of sterling) and increased average yields due to more favourable growing

conditions resulted in a 13 percent increase in crop output. Variable costs rose by 4 percent, with increases particularly to seed and contracting costs. Fixed costs rose by 1 percent. For the first time since 2012/13 cereal farms achieved a positive, albeit small, return from agriculture of £1,600 (Figure 3). Diversified activities, particularly renting out buildings, continue to form a major source of income along with the Basic Payment which increased by 12 percent in 2017/18.

Average Farm Business Income on general cropping farms increased by 33 percent to £93,300 (Table 1). Total crop output was 16 percent higher than in 2016/17, largely driven by increased areas, yields and prices for wheat and increased oilseed rape and sugar beet production. These increases were partially offset by a fall in the value of the 2017 potato crop; plentiful supplies due to higher yields and a rise in crop area resulted in lower prices. Input costs also rose but to a lesser extent. Variable costs rose by 14 percent, reflecting larger crop areas, while fixed costs increased by 9 percent (notably for regular labour, general farming and property costs). On average there was a positive return of £16,000 from the agricultural cost centre compared to £6,000 in 2016/17. Output from agri-environment activities rose and the average Basic Payment went up by 15 percent, partially influenced by a larger average farm area.



On dairy farms the average Farm Business income more than doubled to  $\pm 119,700$  in 2017/18 (Table 1). Production increased by 8% (reflecting a rise in average dairy cow numbers rather than yield) whilst the average milk price was 29.6 pence per litre, 23 percent higher than in 2016/17. There is a wide variation

in milk prices with some farmers receiving considerably more or less than the average. Agricultural costs (both variable and fixed) also rose. For variable costs this was notable for purchased feed, due to firmer cereal prices and increased cow numbers, while for fixed costs increases were most marked for labour, machinery running costs, general farming costs and rent. Income from agri-environment payments and diversified enterprises were also higher than a year earlier. The average Basic Payment increased by 13 percent in 2017/18, accounting for around a quarter of Farm Business Income (Figure 3).

Farm Type	2012/13	2013/14	2014/15	2015/16	2016/17		% Change 2016/17 to 2017/18
At current prices							2011/10
Cereals	67,700	49,600	45,000	35,500	43,100	64,200	49%
General cropping	89,200	67,600	52,000	62,600	70,100	93,300	33%
Dairy	52,600	87,800	83,800	43,900	50,000	119,700	140%
Grazing livestock (Lowland)	16,100	15,100	18,500	12,000	16,100	21,900	36%
Grazing livestock (LFA)	18,700	14,500	14,600	19,000	27,000	28,300	5%
Specialist pigs	41,700	65,200	49,400	21,600	57,800	31,300 (a	a) -46%
Specialist poultry	90,200	157,200	126,800	106,700	54,200	96,000 (a	a) 77%
Mixed	37,300	29,600	21,600	18,400	28,800	41,800	45%
Horticulture	25,800	33,900	31,500	34,400	43,800	47,700	9%
All types	44,900	43,100	39,600	31,600	38,000	56,500	49%
In real terms at 2017/18 prices <sup>(b)</sup>	)						
Cereals	73,300	52,700	47,100	36,900	44,000	64,200	46%
General cropping	96,500	71,900	54,300	65,200	71,500	93,300	30%
Dairy	56,900	93,400	87,500	45,700	51,000	119,700	135%
Grazing livestock (Lowland)	17,500	16,000	19,300	12,500	16,400	21,900	33%
Grazing livestock (LFA)	20,300	15,400	15,300	19,700	27,500	28,300	3%
Specialist pigs	45,200	69,400	51,600	22,500	59,000	31,300 (a	a) -47%
Specialist poultry	97,700	167,200	132,600	111,000	55,200	96,000 (a	a) 74%
Mixed	40,300	31,500	22,600	19,200	29,400	41,800	42%
Horticulture	28,000	36,100	32,900	35,800	44,600	47,700	7%
All types	48,600	45,800	41,400	32,900	38,700	56,500	46%

(a) The sample size for specialist pig and poultry farms are relatively small with average incomes subject to greater variation. There also continues to be an influential poultry farm. Further details on the impact of this farm can be found on page 9.

(b) Uses GDP deflator



On lowland grazing livestock farms average income increased by 36 percent to £21,900 (Table 1). Cattle output, the main revenue source for this farm type, increased as the exchange rate and tighter supplies led to higher prices for finished cattle. Store prices were also higher than in 2016/17.

Increased fat lamb prices helped to increase sheep output although this was tempered by a smaller increase in value of stock than in the previous year. Agricultural costs rose by 1 percent, with greater feed costs largely offset by reduced crop costs resulting from a lower tillage area. Despite the increase in agricultural output, on average these farms failed to generate a positive return on their farming activities although their losses were reduced

compared to the previous year (Figure 3). Output from diversified activities rose by 28 percent, primarily due to increases in food processing/retailing and building rental (for nonfarm use). The average Basic Payment was 7 percent higher than a year earlier.



Average income on LFA Grazing Livestock farms increased by 5 percent to £28,300 between 2016/17 and 2017/18. Farm Business output rose by 7 percent due to increased output from agriculture, agri-environment schemes and a 13 percent rise in the average Basic Payment. Sheep and cattle output were both

greater than a year earlier. Both sales and prices for fat lambs were higher than in 2016/17 whilst revenue from ewes and hoggs also increased despite prices being similar to or lower than the previous year. However, costs also rose in 2017/18, particularly for purchased feed and fodder, more than offsetting the increased output. This farm type again failed to make a positive return from the agricultural cost centre (Figure 3) with a greater average loss than in 2016/17.



For mixed farms the average income increased by 45 percent between 2016/17 and 2017/18 to £41,800 (Table 1). A 21 percent increase in total farm business output was driven by higher crop and livestock output together with a 20 percent increase in the average Basic Payment. Output from diversified activities was also higher, particularly for building rental, although revenue from food

processing and retailing fell. Variable costs rose by 16 percent and fixed costs went up by 20 percent. Whilst there was an increase in Farm Business Income, on average mixed farms failed to generate a positive return on their farming activities in 2017/18, although losses were reduced compared to 2016/17 (Figure 3).



On Horticulture farms average Farm Business Income increased by 9 percent in 2017/18 to £47,700. Overall, agricultural output remained at a similar level to 2016/17. Reduced output from potatoes, glasshouse flowers, bulbs and nursery stock and contract work on other farms offset increases from other

crops. Agricultural costs fell by 1%. Output from diversified activities, an important source of revenue for horticulture farms (Figure 3), increased by 4 percent with food processing/retailing and building rental contributing most to the rise. The net income from this cost centre increased by 17 percent in 2017/18.

The FBS samples for both specialist pigs and specialist poultry farms are relatively small, meaning that individual farms can have a large influence on the results. Results for poultry farms including and excluding outliers can be found in the appendix here.



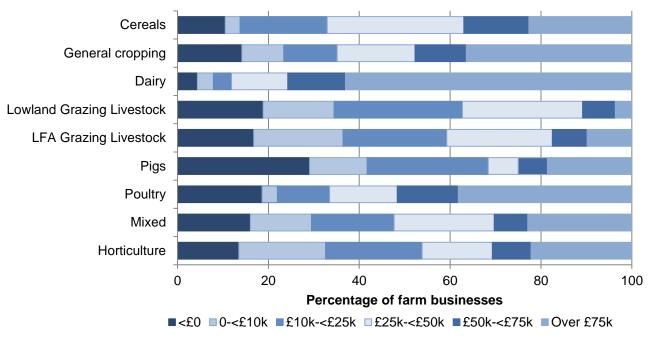
In 2017/18 the average income for specialist pig farms fell by 46 percent to £31,300. Agricultural output was 2 percent lower, largely due to reduced crop output due to a lower tillage area. Pig revenue increased by 8% in 2017/18 as lower throughput was offset by an increase in finished pig prices. However,

there was a considerable fall in the closing valuation as both pig prices and numbers were lower than at the beginning of the year. The opposite occurred in 2016/17, meaning that this large change in the difference between opening and closing stocks offset the increased output. Both variable and fixed costs increased by 3 percent with the largest rises for purchased feed and fodder and land and property costs, partially offset by reductions in

crop and labour costs. The average Basic Payment was lower than in 2016/17 reflecting a reduction in the average size of pig farms within the sample.

For specialist poultry farms average incomes increased by 77% to £96,000. Output from eggs rose by 7% driven by an increase in price but, as in 2016/17, this is in contrast to the trends seen in UK statistics that show an increase in egg production and a small fall in prices. There was a substantial increase in output from birds for poultry meat. However, the size of this increase should be treated with some caution as it is largely due to a change in the sample composition. For farms that were in the sample in both years there was a small increase in output. These rises were partially offset by increases to both variable and fixed costs. Income from diversification activities also increased (by 36 percent) largely driven by an increase in revenue from renewable energy. Note that these changes should be treated with caution because of the small sample size and the range of enterprises covered by this farm type. For example there are farms producing broilers, turkeys, ducks and geese and for laying flocks the systems cover organic and conventional free range enterprises as well as enriched cages. A time series showing the impact of removing a particularly influential farm from the results can be found <u>here</u>.

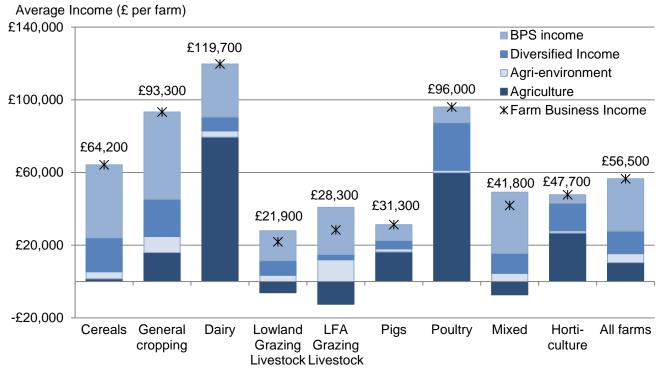
For more information about the weighting and reliability of results please see the annex and technical note at the end of this release.



#### Figure 2: Distribution of Farm Business Income by farm type, 2017/18

The average values mask the considerable variability in incomes at the farm level both between and within farm types (Figure 2). In 2017/18 at least 10 percent of each farm type except dairy failed to make a profit. For dairy farms, 4 percent failed to make a profit whilst 63 percent had an income of more than £75,000. The variation in incomes within farm type reflects different production costs between farms which are influenced by a number of factors such as size, location, soil type etc.

More detailed analysis of farm incomes based on farm performance is provided in Farm Accounts in England. This will be updated with 2017/18 data on 13 December 2018 and published <u>here</u>.



## Figure 3: Farm Business Income by Cost Centre<sup>1</sup> 2017/18

<sup>1</sup> The data shown are the averages across all farms in the sample including those that do not have any income within some of the cost centres. The resulting Farm Business Income is shown by the star and in text at the top of each column.

Farm Business Income can be broken down by cost centre (Figure 3) to illustrate the relative contribution to average total Farm Business Income (shown as text at the top of each column). The underlying data can be found in Table 2 in the annex to this Notice. Further information about the methodology adopted for allocating costs across cost centres can be found in Appendix 3 of Farm Accounts in England.

In 2017/18, the Basic Payment accounted for a significant proportion of average Farm Business Income for all farm types apart from horticulture and poultry farms. Across all farm types, the average Basic Payment received was approximately £31,700, 13 percent higher than the previous year. This reflects the weaker pound when the conversion rate was set at the end of September 2017.

On average, cereal, general cropping, dairy, specialist pig, specialist poultry and horticulture farms generated a positive return from farming activities in 2017/18. For LFA grazing livestock farms income from agri-environmental activities are particularly important, contributing around £14,400 per farm to the average Farm Business Income. These activities are of less significance for the other farm types, particularly the intensive livestock and horticulture sectors.

# Annex

Table 2 provides the data used in Figure 3 in the main body of this release.

Farm Type	Agriculture	Agri- environment payments	Diversified income	Basic Payment Scheme	Farm business income
Cereals	1,600	3,800	18,700	40,200	64,200
General cropping	16,000	8,800	20,600	47,900	93,300
Dairy	79,500	3,400	7,700	29,200	119,700
Grazing livestock (Lowland)	-6,100	3,400	8,100	16,500	21,900
Grazing livestock (LFA)	-12,500	12,000	2,900	25,900	28,300
Specialist pigs	16,300	1,700	4,600	8,700	31,300
Specialist poultry	59,900	1,300	26,200	8,600	96,000
Mixed	-7,300	4,600	11,000	33,600	41,800
Horticulture	26,700	1,200	15,200	4,600	47,700
All types	10,400	4,900	12,400	28,800	56,500

#### Table 2 Farm Business Income by Farm Type and Cost Centre (£ per farm)<sup>2</sup>

<sup>2</sup> Figures may not appear to add to totals due to rounding

#### Availability of results

All Defra statistical notices can be viewed on the Gov.UK site at: <u>https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics</u>.

Results from the Farm Business Survey including time series in spreadsheet format can be found at:

https://www.gov.uk/government/collections/farm-business-survey

#### Revisions

Forecasts of Farm Business Income for 2017/18 were published in February 2018. These forecasts were based on information available in early February 2018 for prices, animal populations, marketings, crop areas, yields and input costs and were intended as a broad indication of how incomes for each farm type were expected to move compared with 2016/17.

The outturns published here are based on actual survey results from the Farm Business Survey 2017/18. For cereals, general cropping, grazing livestock LFA, specialist poultry and mixed farms the forecasts were within the confidence intervals of the survey outturns.

The average income for dairy farms was higher than expected. This was largely due to under estimations of the value of output from cattle and the volume of milk production. For lowland grazing livestock farms average incomes were also higher than predicted, due to a small over-estimation of output (3%) and a similar small under-estimation of inputs. Both outputs and costs were over-estimated for specialist pig farms, this was partly due to changes in the composition of the small sample size for this farm type.

	201	7/18	95%		
Farm Type	February 2018	October 2018	Confidence	Change	
	Forecast	Outturn	Limits		
At current prices					
Cereals	64,000	64,200	+/- 11,100	200	
General cropping	78,000	93,300	+/- 27,300	15,300	
Dairy	99,000	119,700	+/- 14,100	20,700	
Grazing livestock (Lowland)	16,000	21,900	+/- 3,800	5,900	
Grazing livestock (LFA)	25,000	28,300	+/- 5,500	3,300	
Specialist pigs	61,000	31,300	+/- 15,900	-29,700	
Specialist poultry	57,000	96,000	+/- 58,200	39,000	
Mixed	33,000	41,800	+/- 10,400	8,800	

# Table 3 Revisions to Farm Business Income by Type of Farm in England

#### Poultry Influential points

The FBS sample for specialist poultry farms is relatively small, meaning that individual farms can have a large influence on the results. Table 4 and Figure 4 show the results for this farm type including and excluding an influential farm that has been in the survey since 2012/13.

# Table 4: Average Farm Business Income for Poultry farms, including and excluding outlier

	Average F	BI	95% CI		
	Including	Excluding	Including	Excluding	
	outliers	outliers	outliers	outliers	
2012/13	90,200	76,000	43,100	36,000	
2013/14	157,200	99,800	110,800	34,200	
2014/15	126,800	83,600	87,800	38,500	
2015/16	106,700	56,100	98,000	29,000	
2016/17	54,000	37,400	39,000	23,000	
2017/18	96,000	67,600	58,200	24,600	

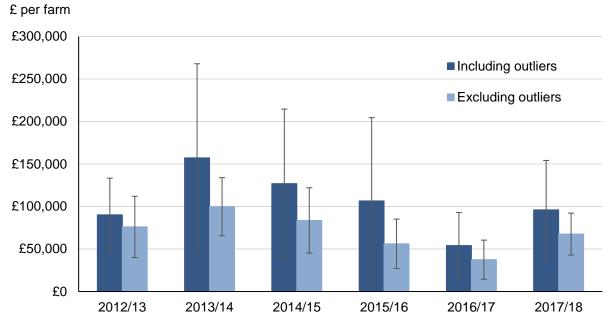


Figure 4: Average Farm Business Income for Poultry farms, including and excluding outliers

# User engagement

As part of our ongoing commitment to compliance with the Code of Practice for Official Statistics (<u>http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html</u>), we wish to strengthen our engagement with users of these statistics and better understand the use made of them and the types of decisions that they inform. Consequently, we invite users to make contact to advise us of the use they do, or might, make of these statistics, and what their wishes are in terms of engagement. Feedback on this statistical release and enquiries about these statistics are also welcome.

Please contact Charles Mbakwe at <u>fbs.queries@defra.gsi.gov.uk</u>.

# Technical Note

# Survey coverage and weighting

The Farm Business Survey (FBS) is an annual survey providing information on the financial position and physical and economic performance of commercial farm businesses in England. It covers all types of farming in all regions of the country and includes owner-occupied, tenanted and mixed tenure farms. The FBS only includes farm businesses with a Standard Output of at least €25,000, based on activity recorded in the previous June Survey of Agriculture and Horticulture. In 2017, this accounted for approximately 54,700 farm businesses. In 2016 the sample was reduced from1800 to 1750 farm businesses. Data are collected by face to face interviews with farmers, conducted by highly trained researchers.

Each record is given a weight to make the sample representative of the population. Initial weights are applied to the FBS records based on the inverse sampling fraction. These weights are then adjusted by calibrating certain totals to match published totals from other

surveys<sup>1</sup> so that they can be used to produce unbiased estimators of a number of different target variables.

More detailed information about the Farm Business Survey and the data collected can be found at <u>https://www.gov.uk/farm-business-survey-technical-notes-and-guidance</u>

## Farm type classification

From 2012/13, the classification of farms is based on 2010 standard output coefficients. The results published here are therefore not directly comparable with those published in earlier years. Please see the explanatory document on our <u>web site</u> for further details.

### Farm Business Income

For non corporate businesses, Farm Business Income represents the financial return to all unpaid labour (farmers and spouses, non-principal partners and their spouses and family workers) and on all their capital invested in the farm business, including land and buildings. For corporate businesses it represents the financial return on the shareholders capital invested in the farm business.

In essence Farm Business Income is the same as *Net Profit*, which as a standard financial accounting measure of income is used widely within and outside agriculture. Using the term *Farm Business Income* rather than *Net Profit*, gives an indication of the measure's farm management accounting rather than financial accounting origins, accurately describes its composition and is intuitively recognisable to users as a measure of farm income.

### Accuracy and reliability of the results

In common with other statistical surveys, the published estimates of income from the Farm Business Survey are subject to sampling error, as we are not measuring the whole population.

We show error bars based on 95% confidence intervals for mean Farm Business Income as a measure of uncertainty that may apply to the estimated means. These signify that we are 95% confident that this range contains the true value. They are calculated as the standard errors multiplied by 1.96 to give the 95% confidence interval.

- The smaller range of possible values that could apply to grazing livestock, dairy, cereal and mixed farms types reflects relatively large sample sizes and the relative homogeneity of these sectors in terms of the range of income levels across the farms in each of these types.
- The range of values that could apply to general cropping and horticulture farm types reflect a more diverse range of agricultural activities, e.g. general cropping is made up of arable crop and field scale vegetable producers, while horticulture includes specialist fruit producers, hardy nursery stock and fruit and vegetables grown in glasshouses. As a result these sectors are less homogeneous in terms of income levels.

<sup>&</sup>lt;sup>1</sup> Further information on calibration weighting can be found in the 'Statistical Issues' document here <u>https://www.gov.uk/guidance/farm-business-survey-technical-notes-and-guidance</u>

• Confidence limits for specialist pig and poultry farms are affected by the relatively small samples and a huge range in scale of production. Figure 1 shows the presence of farms at opposite ends of the income scale.

For the Farm Business Survey, the confidence limits shown are appropriate for comparing groups within the same year only; they should not be used for comparing with previous years since they do not allow for the fact that many of the same farms will have contributed to the Farm Business Survey in both years.

Standard errors (and therefore confidence intervals) only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias.

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