

The UK coffee market and its impact on the economy

A report for the British Coffee Association

BUSINESS IN CONFIDENCE

April 2018

Cebr

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London, April 2018

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Executive summary

This is a summary of the Centre for Economics and Business Research's (Cebr) 2018 study for the British Coffee Association which seeks to assess the industry's contributions and its impacts on the UK economy.

Scope and methodological overview

The research presented herein provides an examination of the role that coffee plays in the UK economy. A range of statistical data is produced in demonstrating different aspects of the value brought to the economy through coffee including:

- **The direct contribution** made to the Gross Domestic Product (GDP) and employment through all segments of the coffee market in the UK.
- **The indirect multiplier impacts** that arise through the activities stimulated in the supply chains of those engaged directly in the production, supply and serving of coffee.
- **The induced multiplier impacts** that arise through the activities stimulated in the wider economy when the employees associated with the direct and indirect coffee activities spend their earnings on domestic goods and services.
- These three types of impacts are considered for four economic indicators – turnover (or gross output), Gross Value Added (GVA) contributions to GDP, employment, and employee compensation.

Overview of the coffee industry - highlights

- Given that coffee is only successfully grown close to the equator, the domestic value chain begins with importers and sales agents at the point of entry into the UK.
- Imported coffee products thereby trickle down through various channels to the consumer – retail and in-home consumption (incl. the various contraptions that can be used to make coffee) as well as out-of-home at coffee shops, restaurants, bars etc.
- The largest single coffee category imported into to the UK is green coffee. Yet the supply chain arrangements in place mean that the imports from the EU, primarily roasted coffee and soluble coffee, are of greater value than that from the rest of the world.
- A large share of retail coffee is sold through hypermarkets and supermarkets, accounting for 35 per cent and 37 per cent of all coffee retailing, respectively.
- The UK is traditionally known for the consumption of instant coffee. Regular instant coffee generated a turnover of **£810 million in 2017**, equivalent to 54 per cent of the total turnover of **£1.5 billion** generated by all coffee products sold in the retail sector. Despite this, volume sales of instant coffee are declining following the introduction of wider products into the market, such as coffee pods, roast and ground, and filtered coffee.
- Fresh ground coffee pods generated a turnover of **£305 million in 2017**, second only to regular instant coffee. While standard fresh ground coffee stood at a turnover of **£214 million in the same year**. This trend is influenced by the growing coffee shop culture in the UK and a growing desire for 'barista quality' coffee at home.

- The out-of-home segment is a growing market and represents about **33 per cent of the volume sales of all coffee products**. In 2017, the total estimated turnover generated from coffee products alone in the food service sector stood at **£3.2 billion**, a 9 per cent increase from the £2.9 billion in 2016. While the average growth rate between 2012 and 2017 was 6 per cent.

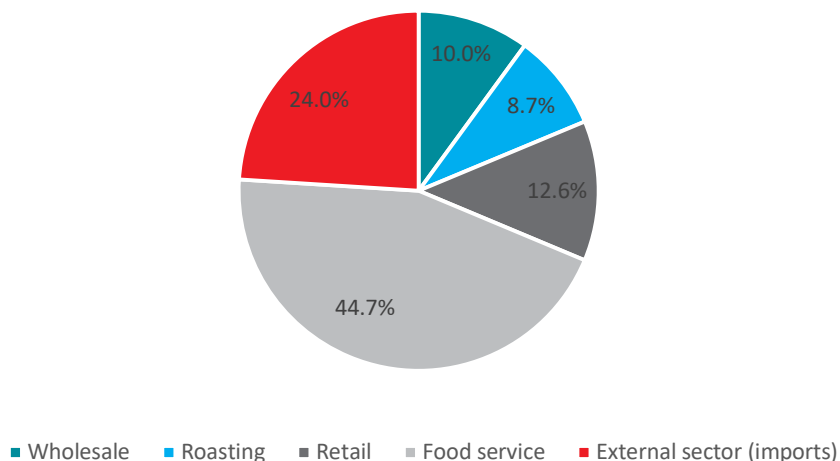
Macroeconomic contributions and impacts of the coffee industry

Direct impacts

Aggregating all activities of coffee yields the following macroeconomic contributions:

- Total estimated **GVA contribution to the UK's GDP of £3.7 billion in 2017**, equivalent to one-ninth of the GVA of the entire foodservice sector.
- For an average cup of coffee consumed in the UK, **up to 76 per cent of its value is estimated to be produced in the UK**. Given the high profit margins in the out-of-the home market, the largest sector within the coffee industry in terms of GVA is the food service sector (45 per cent).

Figure 1: Breakdown of the size of the UK's coffee industry sub-sectors by contribution to GVA



Source: Cebr analysis

- Total estimated **turnover of £7.2 billion in 2017** for the UK coffee industry, representing an annual average growth of 7 per cent in the 2012-2017 period.
- Total estimated **employee compensation of £2.5 billion in 2017** for the UK coffee industry, accounting for 68 per cent of the total estimated GVA in the same year.
- Total estimated **full-time equivalent employees of 133,965 in 2017** for the UK coffee industry, equivalent to 7.5 per cent of the workforce of the entire foodservice sector.

Multiplier impacts

The analysis of coffee related activities within the national accounting framework and within Cebr's input-output modelling reveals the following:

- Total estimated **GVA contribution**, including direct, indirect and induced impacts, **of £9.1 billion in 2017**.
- Total estimated **output contribution**, including indirect and induced multiplier impacts, **of £17.7 billion in 2017**.
- Total estimated **employee compensation** supported by coffee related activities **of £5.2 billion in 2017**, including direct, indirect and induced impacts.
- Total estimated employment supported by coffee related activities **of 210,325 jobs in 2017**, including direct, indirect and induced impacts.

Estimates of number of cups of coffee consumed per day in the UK

Based on results from an omnibus survey, involving a sample size of 2,000 people across the UK population, commissioned as part of the study. The following key findings are reported:

- **The average number of cups of coffee consumed per day in the UK is two cups of coffee.**
- **On average, 95 million cups of coffee are consumed in the UK on a daily basis.**
- **Among the coffee drinkers, the average number of cups of coffee consumed per day in the UK is two cups of coffee at home, one cup of coffee in the workplace or place of study, and one cup of coffee in coffee shops, restaurants, or bars etc.**
- Approximately 64 per cent of the survey participants indicated that they drink the same amount of coffee as they did two years ago. 25 per cent indicated that they drink less coffee now than they did two years ago; while 12 per cent of the participants suggested that they drink more coffee now than they did two years ago. The net decline in volume is likely due to the fall in instant coffee consumption as more and more households in the UK substitute this in favour of more expensive coffee formats.

Outlook for 2018 and Brexit implications

- The implications for the coffee industry and how its economic footprint unfolds in the UK's rapidly shifting political and economic landscape is uncertain.
- The most pressing issue for the coffee industry is the impact of Brexit and the value of the pound. Manufacturers and suppliers have absorbed cost increases for some time, but this may no longer be possible. The effect has already been felt in the marketplace, with the consumer price of coffee increasing in 2017.
- In the long-run, the growing coffee culture in the UK, fuelling the current surge in the out-of-home coffee and sales of specialised coffee products in the retail sector, hinges on macroeconomic factors related to jobs and disposable income. If the Brexit transition process or its final settlement places household budgets under pressure, necessitating a more cautious approach to discretionary spending, this trend could slow down.

1 Introduction

This is a report by the Centre for Economics and Business Research (Cebr) for the British Coffee Association. The purpose of this study is to capture the commercial activities involved in the ‘bean-to-cup’ value chain that are carried out in the UK, while assessing the economic footprint of coffee.

1.1 Background and aims of the study

The coffee market in the UK is considered to have a traditional trade structure in which a wide network of importers link suppliers in coffee-producing countries to roasters operating in the UK¹. Coffee products are then sold through various channels – retail, dedicated coffee shops, and non-dedicated venues including restaurants, hotels, pubs, department stores, supermarkets, bookstores, fast food outlets, motorway services, petrol stations, and even vending machines.

1.2 Scope of the study

The coffee market straddles many industries as defined under the standard industrial classification of economic activities (SIC), but the specific coffee-related activities are usually buried within broader categories of activity. The specific industries in which coffee appears and are the focus of this study include:

- Manufacturing industry 10.832: Processing and roasting of coffee.
- Distributive trades 46.370; wholesale of coffee, tea, cocoa and spices.
- Distributive trade 47: Retail, which includes some coffee specialists as well as non-specialists who also trade in large volumes.
- Food service industry 56: Food and beverage serving activities, which again includes coffee-related specialists but also many non-coffee specialists.

The deepest level of industry disaggregation for which official data on value is available is the 5-digit level (E.g. 10.832, above). Sometimes, employment, turnover and GVA estimates are available at the 5-digit level but none of the activities above have distinguishable 5-digit codes to many other non-coffee related activities. The only exception is manufacturing 10.832 which distinguishes coffee processing from tea processing (10.831) and we are able to access specific employment, turnover and GVA estimates for this segment of the coffee industry.

Coffee also appears in SIC categories related to manufacturing, wholesale and retailing of domestic and commercial coffee machines. These related activities are captured through the wider supply-chain linkages of the ‘bean-to-cup’ coffee industry.

¹ <https://www.cbi.eu/market-information/coffee/uk/>

1.3 Overview of approach and methodology

To undertake the analysis of the macroeconomic contributions and impacts of coffee, we first provide an overview of the various segments within the coffee industry based on proprietary data sources provided by Euromonitor International and Mintel, as well as data available from official sources. Through these data sources, we are able to measure the economic characteristics of the coffee industry and its direct macroeconomic contributions and impacts on the economy. We then conform the data produced to the national accounting framework by establishing an explicit role for coffee-related activities within the models we use to estimate economic contribution. For this purpose, we use the Office for National Statistics (ONS) supply-use tables², which facilitate the estimation of a number of *direct impacts*:

- Turnover (gross domestic output in national accounting terms)
- Gross Value Added (GVA)
- Employee compensation
- Number of jobs supported by coffee activities

The third step involves establishing the same explicit role for coffee within our input-output framework³, which facilitates the estimation of indirect and induced multiplier impacts on output, GVA, employment and employee compensation. These multiplier impacts are explained as follows:

- *Indirect impacts*: increases in employment and economic activity along the supply chains supporting the direct activities of (in this case) all coffee-related activities.
- *Induced impacts*: increases in employment and economic activity generated through the consumer spending that arises when the employees of coffee-related businesses spend their earnings on the wider economy.

In this third step double-counting is avoided by extracting upstream coffee-related activities like roasting (for which we would already be estimating direct impacts) from the supply chains of downstream coffee-related activities like coffee shops, so that the direct impacts of roasting are not double-counted in the multiplier impacts for coffee shops.

The multipliers, applied to the direct impacts of coffee-related activities, result in estimates of the total gross economic impact of coffee in the UK in monetary terms.

² The supply-use tables provide the most detailed official record of how the industries of the economy interact with other industries, with consumers and with international markets in producing the nation's GDP and national income.

³ This is known as the Leontief matrix multiplier approach and is the standard method for mapping the wider footprint of a particular company or sector. It is based on the Nobel Prize-winning work of Wassily Leontief.

2 Overview of the coffee industry

This section provides a high-level overview of the various segments within the UK coffee industry. The key objective is to establish the ingredients required to undertake the economic impact assessment in section 3. The idea is to capture as many of the activities involved in the ‘bean-to-cup’ value chain that are carried out in the UK by establishing metrics such as turnover or total consumer spending (which should, in theory, be the same), the GVA for all of these activities, as well as estimates for employment.

2.1 Wholesale

Given that coffee grows close to the equator, a large part of the UK value chain begins with importers and sales agents at the point of entry into the UK. The importers trade in a wide range of coffee beans from various origins and tend to act as supply-chain managers, establishing trade links between producers in exporting countries, and roasters in the UK⁴.

Wholesale traders either act as intermediaries between coffee importers and roasters, or between roasters and the end-markets such as retail or the food service sector. These agents might also be involved in re-exporting activities in which coffee bean imports are re-channelled to other EU countries such as Ireland and, to lesser extents, Germany and France⁵. In addition, in recent years, some roasters have become involved in direct trade with producers in the exporting countries, making their supply chain shorter by bypassing sales agents and wholesalers.

Within the SIC codes, the economic activities of the coffee wholesale market segment is primarily captured in the broader sector of wholesale coffee, tea, cocoa and spices. By apportioning the economic data that sits within this broader category by the turnover share of coffee products, we are able to present a series of metrics on the direct economic contribution of wholesale agents in the coffee industry⁶.

Figure 2, below, presents the estimated turnover generated by UK’s wholesalers of coffee. Between 2012 and 2017, the estimated turnover grew rapidly from £403 million in 2012 to £1.5 billion in 2017. This rapid increase in turnover is likely due to the growing trend of retailers and even some coffee shops expanding into the wholesale sector and involved in trading commodity-type coffees in bulk volumes^{7,8}.

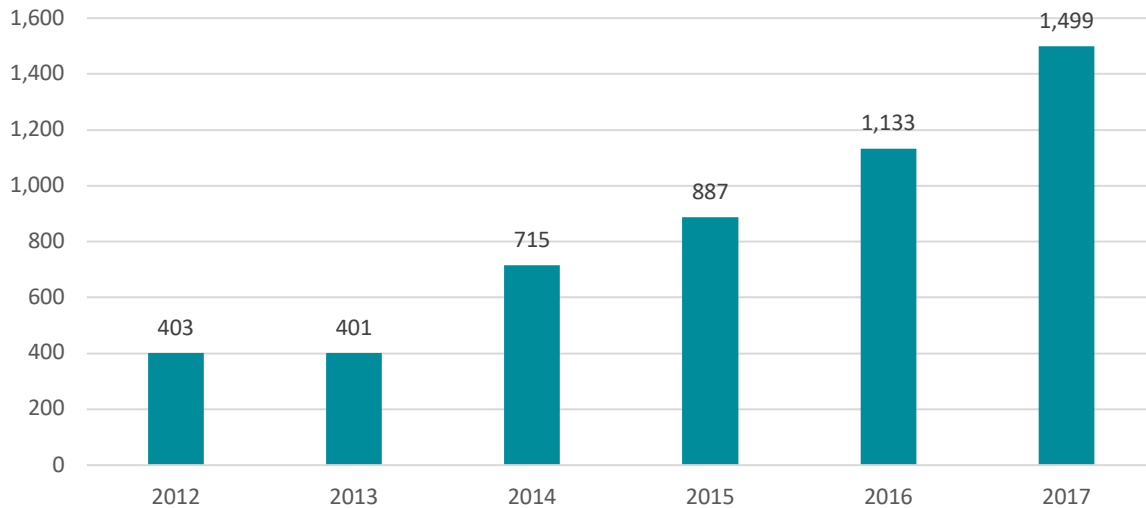
^{4, 5} <https://www.cbi.eu/market-information/coffee/uk/>

⁶ The share of import sales values are based on data from IBIS World available in the public domain

⁷ <https://uk.businessesforsale.com/uk/search/food-and-drink-businesses-for-sale/articles/wholesale-coffee-an-extra-revenue-stream-for-coffee-shops>.

⁸ <https://www.cbi.eu/market-information/coffee/uk/>

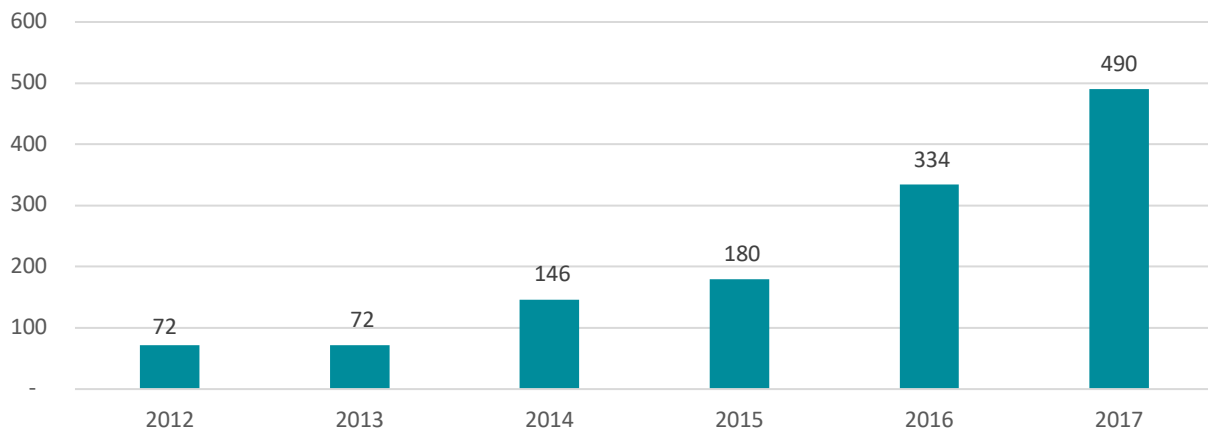
Figure 2: Estimated turnover generated from wholesale of coffee in the UK, 2012-17, £ million current prices



Source: ONS Annual Business Survey 2012-17, Cebr analysis

Turning to GVA in Figure 3, which can be thought of as a measure of the value created through domestic UK economic activities, estimated GVA generated in this sector rapidly increased between 2012 and 2017, from £72 million to £490 million. However, this increase is starting from a low base, and given the size of this sector, the estimated GVA displays a volatile trend.

Figure 3: Estimated GVA generated from wholesale of coffee in the UK, 2012-17, £ million current prices



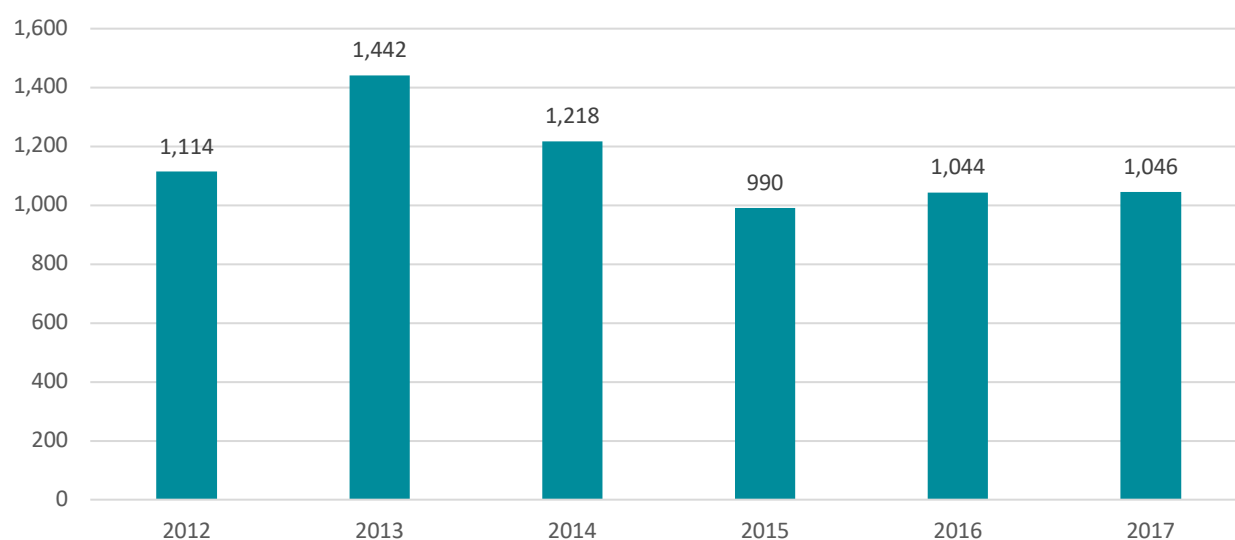
Source: ONS Annual Business Survey 2012-17, Cebr analysis

2.2 Coffee roasting

Coffee products imported into the UK trickle down through various channels to the consumer – retail and in-home consumption (incl. the various contraptions that can be used to make coffee) as well as out-of-home at coffee shops, restaurants, bars etc. Unlike most other coffee related activities which are buried within broader categories of activity, coffee roasting activity has a defined disaggregation in the national accounts for which official statistics on turnover, GVA and employment are available. Below a series of statistics for this subsector is presented.

Figure 4 illustrates the turnover generated by the coffee roasting sector from 2012-17. In 2017, this sector generated £1.05 billion in turnover. The steady growth between 2015 and 2017 followed a sharp drop between 2013 and 2015. The 2013 peak in turnover was likely due to the penetration of ground and speciality coffee products in the UK coffee industry.

Figure 4: Turnover generated from roasting of coffee in the UK, 2012-17, £ million current prices

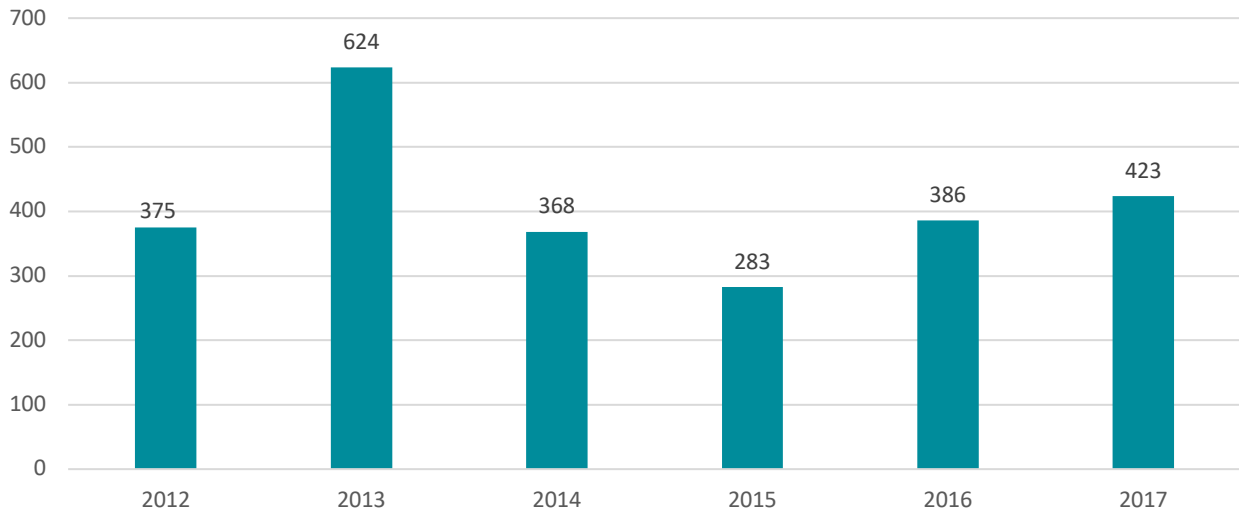


Source: ONS Annual Business Survey 2012-17, Cebr analysis

Figure 5 illustrates that the GVA contribution of coffee roasting amounted to £423 million in 2017, a 10 percent growth from the 2016 figure of £386 million. This followed a fall of 23 per cent in 2014 from £368 million in 2013, and an even sharper fall of 41 per cent from £624 million in 2012. This trend seems to suggest that increased demand for high-quality coffee roasting resulted in the high margins seen in 2013. Since then, margins have stabilised due to increased competition from speciality roasters, some importing directly from coffee producing, or origin, countries⁹.

⁹ <https://www.cbi.eu/market-information/coffee/uk/>

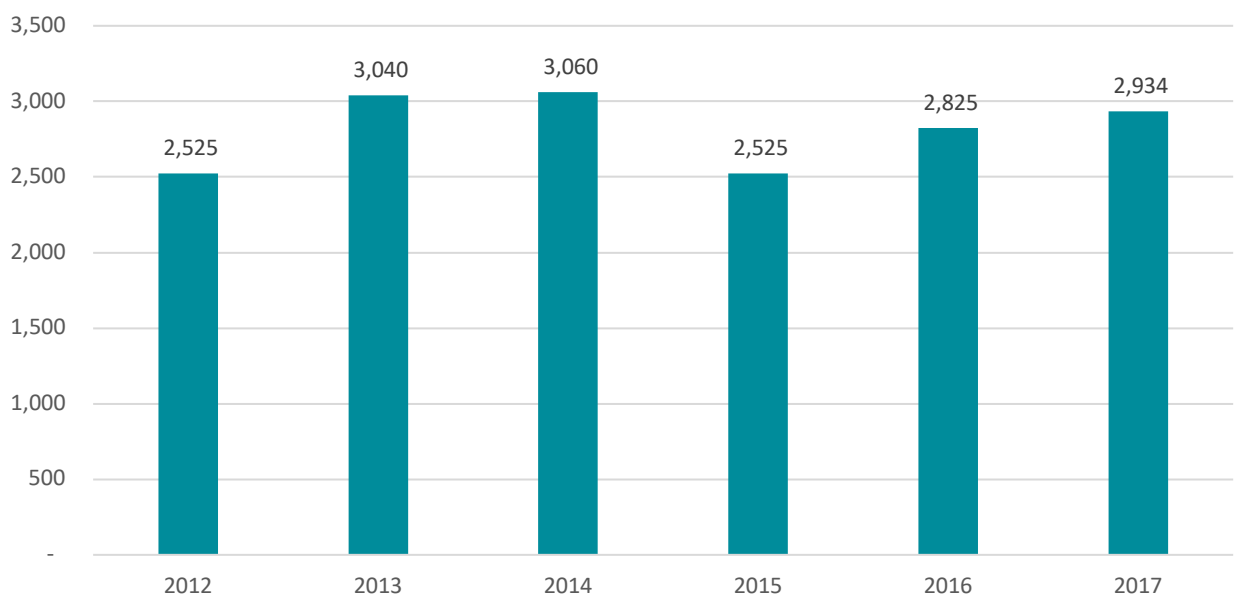
Figure 5: GVA generated by coffee roasting enterprises in the UK, 2012-17, £ million current prices



Source: ONS Annual Business Survey 2012-17, Cebr analysis

Figure 6 illustrates that these businesses employed a total of 2,825 people in the UK, an increase of 12 per cent from the 2,525 workers in 2015. This followed a 17 per cent decline in the number of employees between 2014 and 2015. While employment in the coffee roasting industry was estimated to 2,934 workers in 2017.

Figure 6: Employment in the coffee roasting sector in the UK, 2012-2017



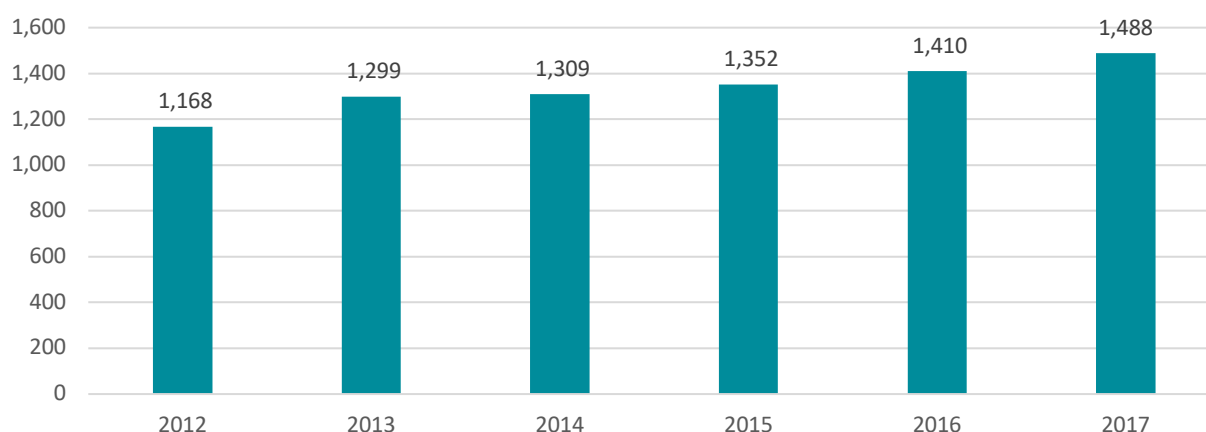
Source: ONS Business Register and Employment Survey (BRES), 2012-17, Cebr analysis

2.3 In-home market: retail

In this section, we present turnover (total consumer spending) and estimated GVA¹⁰ generated from coffee sold in the retail sector, as well as estimated employment. The analysis presented in this section draws on proprietary data provided by Euromonitor International.

Figure 7 illustrates that the total estimated turnover generated from coffee sold through retailing, an aggregation of store-based and non-store based (online) retailing. This covers sales of coffee products to the general public for personal or household consumption, excluding foodservice sector (separately presented in section 2.5) and wholesale, e.g. Cash and Carry (separately presented in section 2.1). The total turnover between 2012 and 2017 increased steadily from £1.2 billion in 2012, to £1.5 billion in 2017. This trend is likely due to the rising value of sales of ground coffee and coffee beans in the retail sector, supported by the growing out-of-home consumption of coffee which has been instrumental in driving in-home demand for 'barista quality' coffees¹¹.

Figure 7: Estimated turnover generated by coffee sold in the retail sector in the UK, 2012-17, £ million current prices



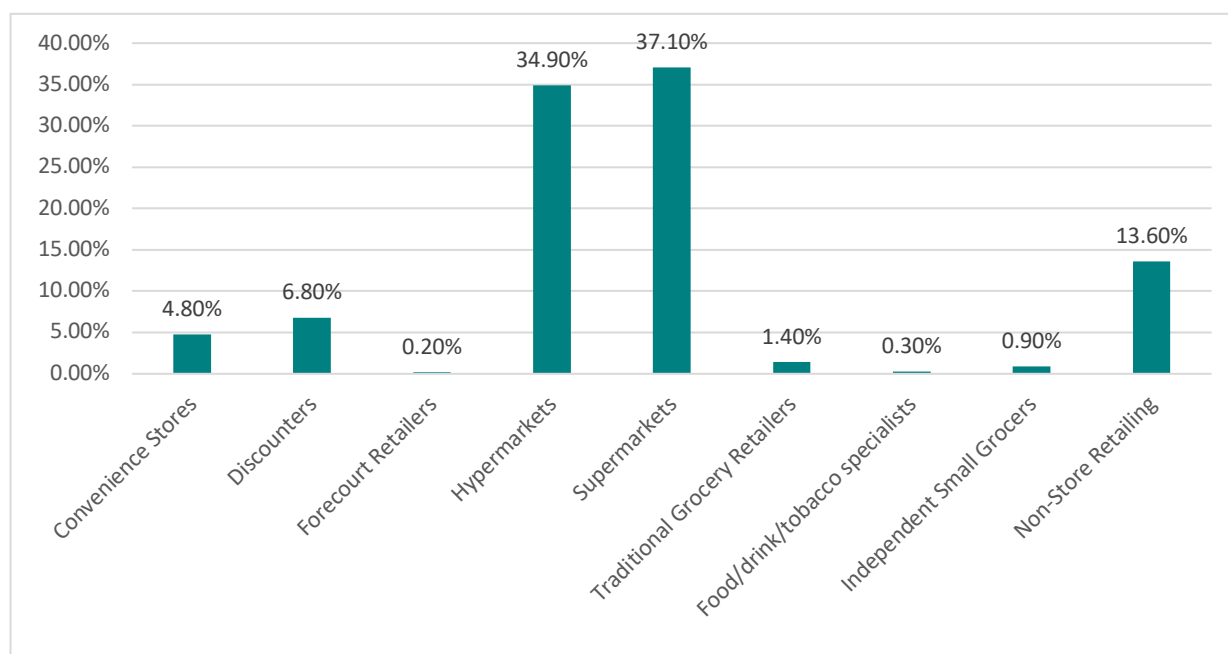
Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Figure 8 displays a percentage breakdown of coffee sold through all channels in the retail sector. A large share of retail coffee is sold through hypermarkets and supermarkets, accounting for 35 per cent and 37 per cent, respectively; while non-store retailing (an aggregation of vending, direct selling, home shopping and internet retailing) accounted for 14 per cent of the coffee retail market in 2017.

¹⁰GVA is estimated by taking the difference between the retail selling price (RSP) and the manufacturer whole sale price (MPS) and multiplying the margin by the total volume of coffee sold in the retail sector. General and administrative expenses are then deducted from the resulting gross profit margin. RSP is based on the recommended sale price which excludes any temporary sales. MPS is the sale at ex-factory price and excludes retailer and wholesaler mark-ups.

¹¹ Mintel report, UK coffee market, August 2017.

Figure 8: Percentage breakdown of coffee sold through all channels in the retail sector, 2017



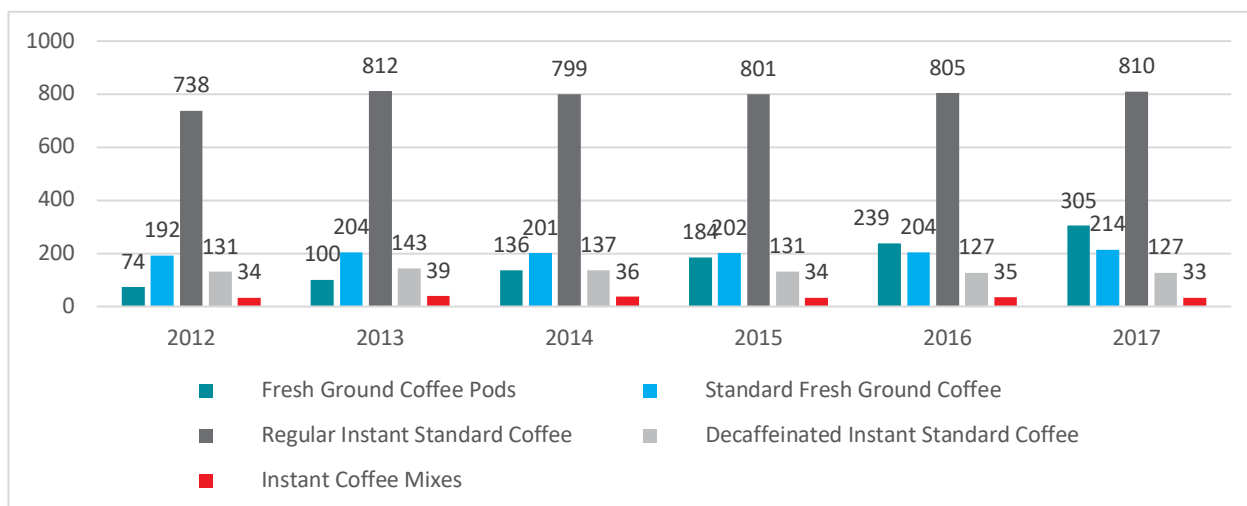
Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Furthermore, in Figure 9, the coffee retail market is broken down into five categories: fresh ground coffee pods, standard fresh ground coffee, regular instant standard coffee, decaffeinated instant standard coffee, and instant coffee mixes (including standard and decaffeinated). Regular instant coffee generated the largest turnover: this amounted to £810 million in turnover in 2017, equivalent to 54 per cent of the total turnover generated by all coffee products sold in the retail sector. This is somewhat expected since British consumers traditionally drink more instant coffee, compared to the other European countries¹². Despite the rapid growth of coffee pods and filtered coffee, sales values of instant coffees seem to be fairly stable. Decaffeinated instant standard coffee generated a turnover of £127 million. While instant coffee mixes accounted for the lowest turnover figure and generated £33 million in turnover in 2017.

During the period under consideration, fresh ground coffee pods grew from a turnover of £74 million in 2012 to £305 million in 2017, second only to regular instant coffee. While standard fresh ground coffee stood at a turnover of £214 million in 2017. This is likely due to the rapidly-growing coffee shop culture in the UK which has fuelled in-home demand for 'barista quality' coffees, including ground coffee and coffee beans.

¹² <https://www.cbi.eu/market-information/coffee/uk/>

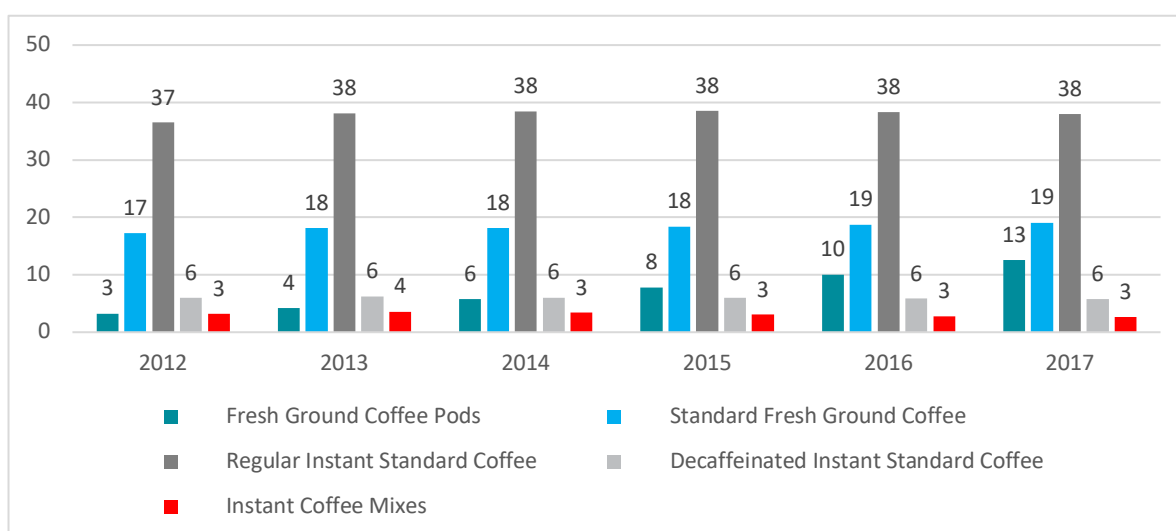
Figure 91: Estimated turnover generated by the five main coffee categories, 2012-17, £ million current prices



Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Figure 10 illustrates the volume sales of the five main coffee categories in the retail sector. Fresh ground coffee pods grew rapidly between 2012 and 2017, from three thousand tonnes in 2012 to 13 thousand tonnes in 2017. While standard fresh ground coffee increased by 11.8 per cent, from 17 thousand tonnes in 2012 to 19 thousand tonnes in 2017. Over the same period, individually the three instant coffee categories in the retail sector have stayed constant; regular instant standard at 38 thousand tonnes, decaffeinated instant standard coffee at 6 thousand tonnes and instant coffee mixes at three thousand tonnes, respectively. In terms of volume sales, instant coffee products (regular, decaffeinated and mixes) declined relative to fresh coffee products (standard and pods).

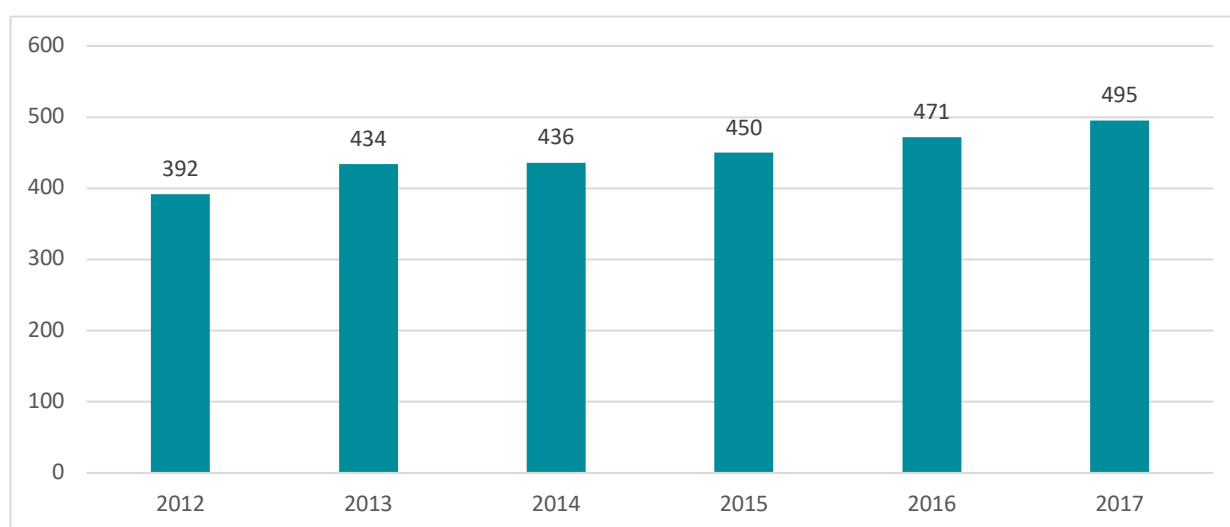
Figure 102: Volume sales of the five main coffee categories in thousand tonnes, 2012-17



Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Turning to GVA, Figure 11 illustrates the estimated GVA generated by coffee sold in the retail sector in the UK. Similar to the trend seen in the turnover, the GVA generated from coffee products sold through the retail sector steadily grew between 2012 and 2017. In 2017, all coffee products in the retail sector generated an estimated GVA of £495 million. The trend in GVA of coffee retail is relatively stable in comparison to the trend seen in the GVA generated in the roasting sector.

Figure 11: Estimated GVA generated by coffee sold in the retail sector in the UK, 2012-17, £ million current prices



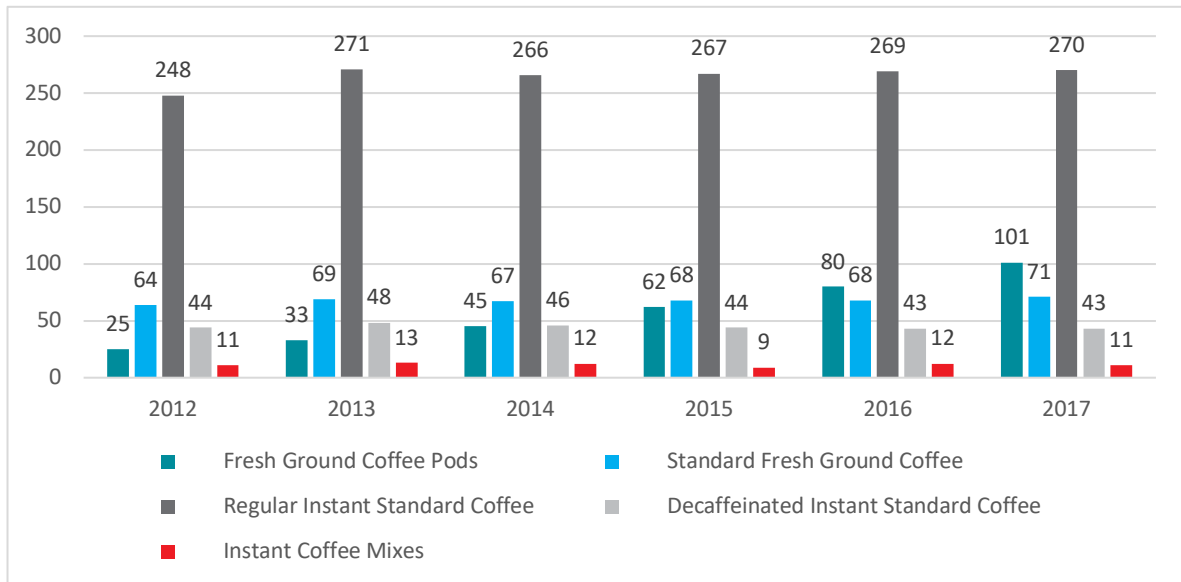
Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Figure 12 illustrates the estimated GVA contributions of the five main coffee products in the retail sector. Consistent with the turnover figures, regular instant standard coffee was the largest contributor, accounting for £270 million in GVA in 2017. Yet the retail coffee market segment in the UK is becoming more diverse, as more and more consumers are also interested in ‘barista quality’ coffee at home¹³.

During the period under consideration, fresh ground coffee pods increased from having the second lowest GVA at £25 million in 2012, to having the second highest GVA at £101 million in 2017. Instant coffee mixes accounted for the lowest GVA contribution between £9-13 million. Decaffeinated instant standard coffee had the third largest GVA contribution between 2012 and 2014, but has been overtaken by fresh ground coffee pods since then.

¹³ <https://www.cbi.eu/market-information/coffee/uk/>

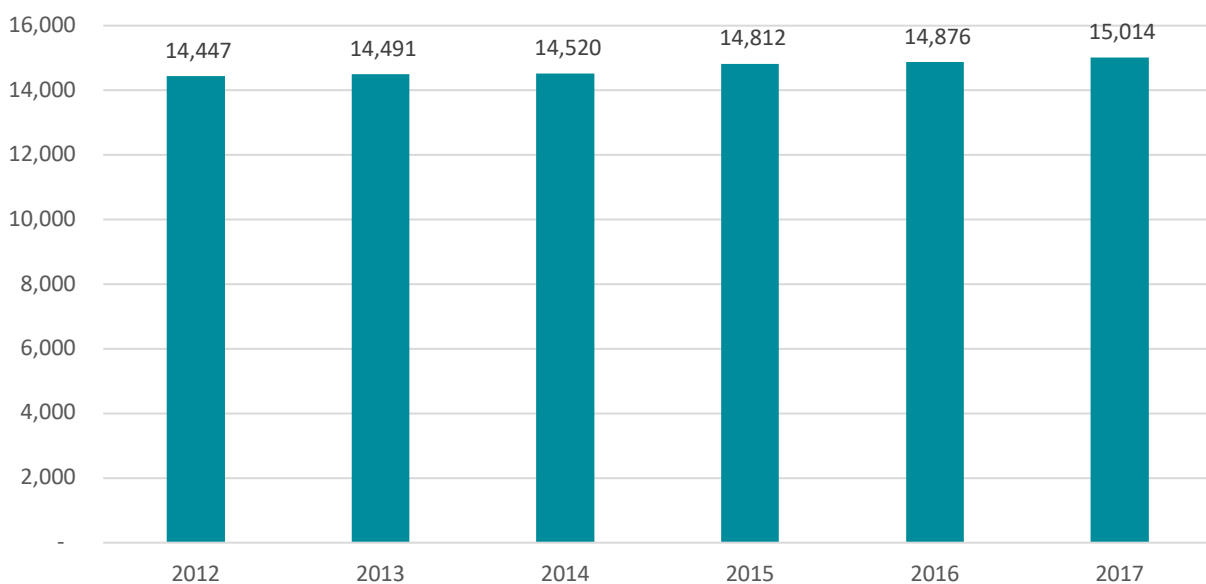
Figure 12: Estimated GVA generated by the five main coffee categories in the retail sector, 2012-17, £ million current prices



Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Since an exhaustive list of goods are sold in the retail sector, employment figures in the retail sector cannot be attributed to coffee products alone. Figure 12 illustrates that based on the GVA share of coffee in the wider retail industry, on a full time equivalent basis, coffee was estimated to support around 15,000 retail workers in the UK in 2017. This employment number has steadily increased between 2012 and 2017, proportionate to the growth of GVA share of coffee in the retail sector.

Figure 13: Estimated full-time equivalent employment supported by coffee in the retail industry, 2012-17



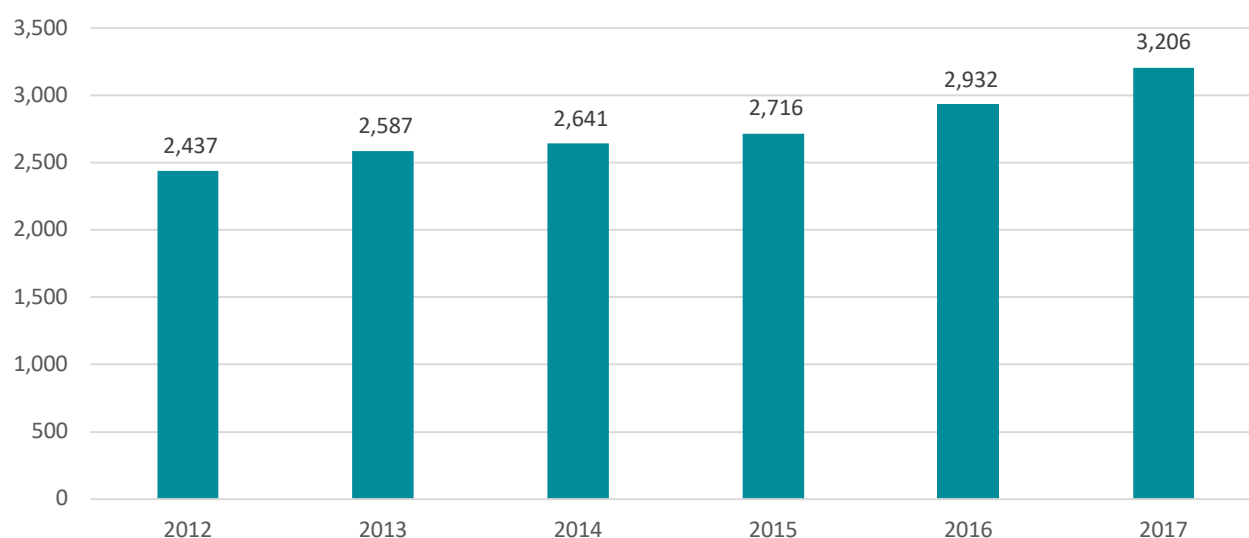
Source: ONS Business Register and Employment Survey (BRES)/Euromonitor International, coffee market 2012-17, Cebr analysis

2.4 Out-of-home market: food service

The analysis presented in this section draws on proprietary data sources supplied by Euromonitor International and Mintel. The analysis covers the wide range of sectors within the food service sector including major branded chains such as Costa and Caffè Nero and independent chains serving coffee beverages as core products; as well as other establishments that sell coffee, such as restaurants, hotels, tea shops, traditional cafés and sandwich shops. The out-of-home segment is a growing market and represents about 33 per cent of the UK coffee market¹⁴.

Figure 14 illustrates that given the increasing number of coffee shops in the UK, turnover generated from coffee products sold in the food service sector has steadily grown over the past few years. In 2017, the total estimated turnover generated from coffee products alone in the food service sector stood at £3.2 billion, a 9 per cent increase from the £2.9 billion in 2016. While the average growth rate between 2012 and 2017 was 6 per cent.

Figure 14: Estimated turnover of coffee products sold in the food service sector, 2012-17, £ million current prices



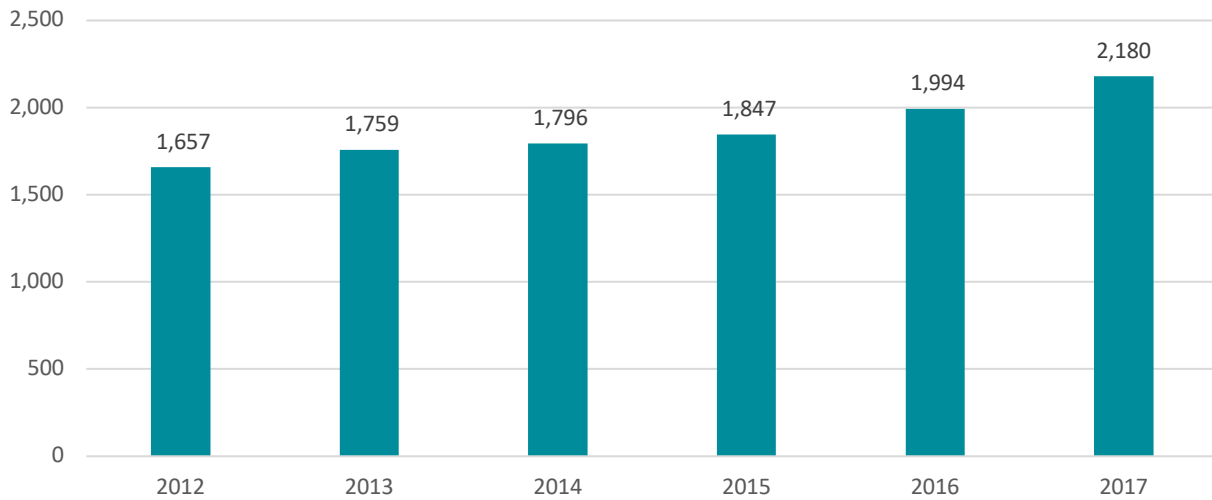
Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Furthermore, Figure 15 illustrates the estimated GVA generated from coffee sold in the food service sector¹⁵. Consistent with the turnover figure, the estimated GVA generated from coffee products in the food service sector steadily increased between 2012 and 2017. In 2017, the GVA generated from coffee products stood at £2.2 billion.

¹⁴ Based on total volume of coffee. Euromonitor International, Coffee market, 2018

¹⁵ The GVA figure is based on a gross profit margin of 90 per cent and draws on insights from Ellis, M., 2011; *The coffee-house: a cultural history*. A recent 2017 research conducted by Jonathan Margolis of Financial Times also reports that coffee sells close to 90 per cent gross profit in the UK's out-of-home market segment.

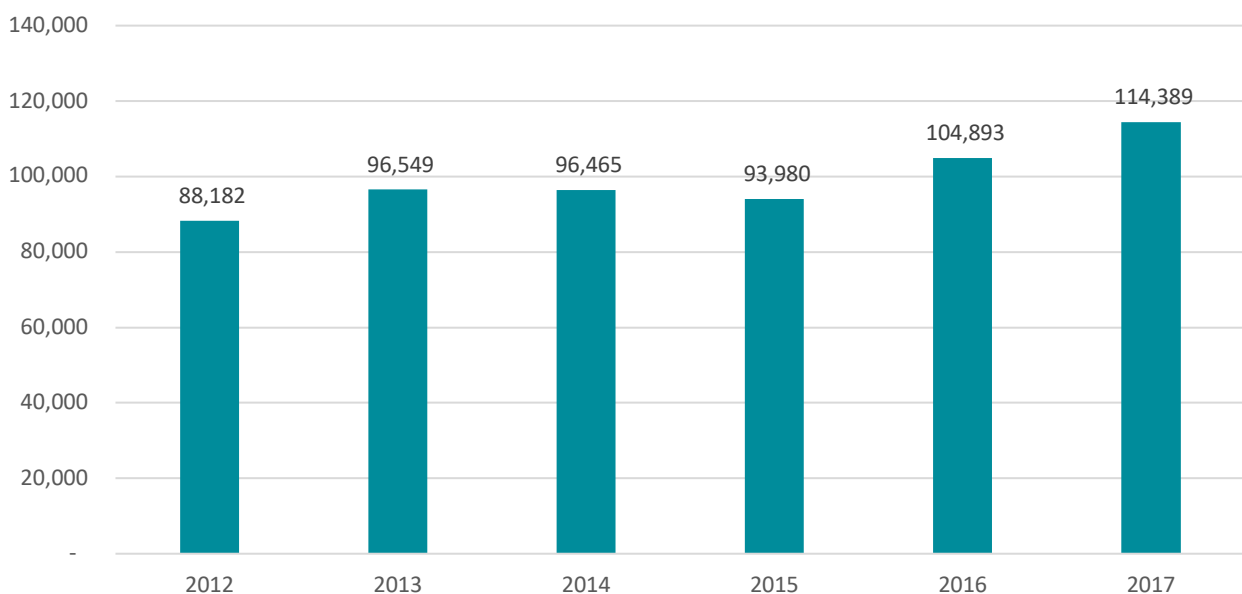
Figure 15: Estimated GVA generated by coffee sold in the food service sector in the UK, 2012-17, £ million current prices



Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

Similar to the retail sector, we present estimated employment on a full-time equivalent basis, which is based on the GVA share of coffee in the wider food service sector. Figure 16 illustrates that in 2017 employment supported by coffee in the food service sector was estimated to be around 114,389 workers in the UK, a 9 per cent increase from the 104,893 workers in 2016. Between 2012 and 2017, the estimated employment number gradually increased as the GVA share of coffee in the wider food service sector continued to rise.

Figure 16: Estimated full-time equivalent employment supported by coffee in the food service industry, 2012-17



Source: ONS Business Register and Employment Survey (BRES)/Euromonitor International, coffee market 2012-17, Cebr analysis

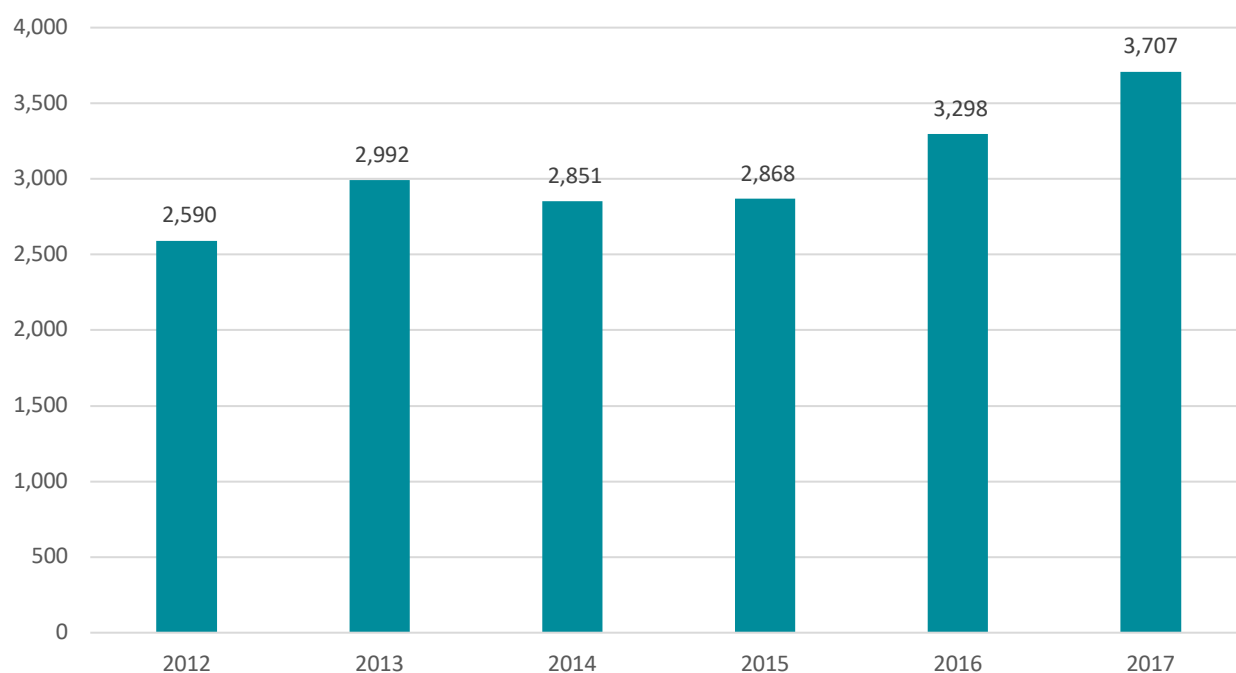
3 Macroeconomic contributions and impacts of coffee in the UK

In the section, we outline the ways in which coffee interacts with the rest of the economy through its supply chain including indirect and induced multiplier impacts. These macroeconomic impacts are produced for the key economic indicators of turnover (gross domestic output in national accounting terms), GVA, employee compensation and employment.

3.1 GVA impacts

Aggregating the GVA of all coffee related activities summarised in section 2, we estimate a total GVA of approximately £3.7 billion in 2017, a 12 per cent increase from the £3.3 billion in 2016. This GVA estimate is the direct economic contribution made by coffee to the UK economy. Our analysis suggests that a large share of the GVA of coffee is generated through gross profit margins in the out-of-home market segment.

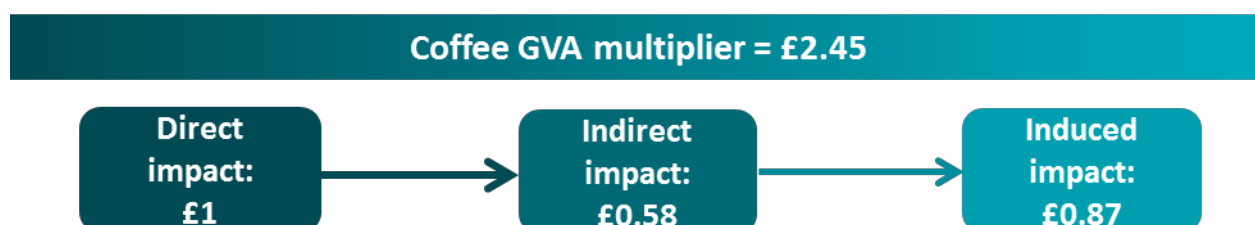
Figure 17 Estimated GVA generated by coffee in the UK, 2012-17, £ million current prices



Source: ONS Annual Business Survey/Euromonitor International, Coffee market 2012-17, Cebr analysis

Our input-output modelling has also produced estimates of the indirect and induced multiplier impacts of coffee contribution to GVA. This is presented in deconstructed form in Figure 18.

Figure 18: GVA multiplier for coffee in the UK



Source: Cebr analysis

We estimate that for every £1 of GVA generated by the coffee market in the UK, an additional £1.45 of GVA is supported in the wider economy through indirect and induced multiplier impacts. Based on the coffee direct GVA impact of £3.7 billion in 2017, we estimate that its aggregate GVA contribution, including direct, indirect and induced impacts, amounted to approximately **£9.08 billion in the same year**.

Impact multipliers vary across different sectors of the economy depending on the mix of labour and other inputs and the propensity of each sector to buy goods and services from within the region¹⁶. Coffee activities, particularly in the end-markets, tend to be labour intensive and yield induced impacts larger than the indirect impacts.

3.2 Output impacts

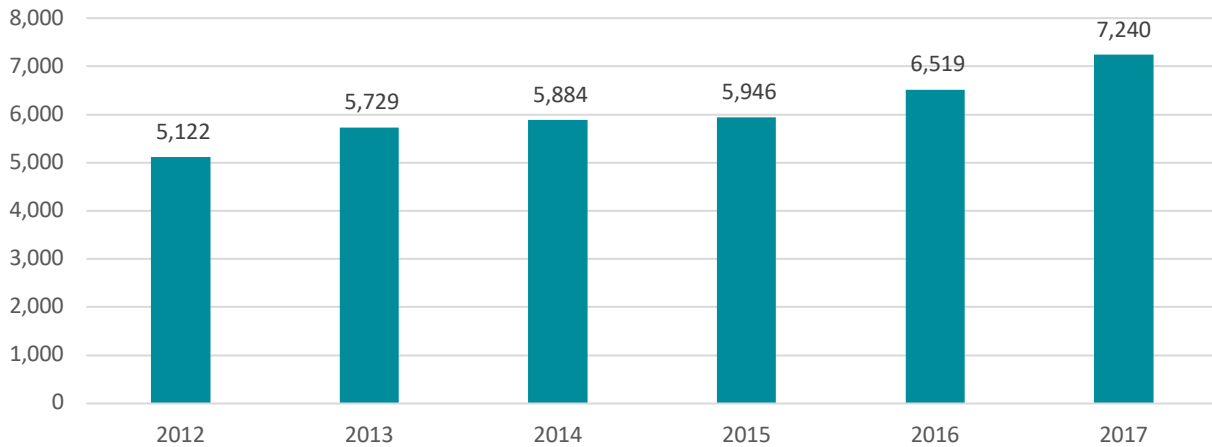
Conceptually, 'industrial' output is similar to turnover in business accounting. It is comprised of all revenues earned before any costs are subtracted. Excluding taxes and subsidies, these revenues must cover wages paid to employees, a reasonable rate of return on capital, and what is paid to suppliers for the inputs required for the relevant industry's production process.

This measure is much larger than GVA as it still includes the costs of inputs and, within an integrated supply chain, it includes an unavoidable element of double-counting, since revenues have to cover cumulative costs at each stage of the supply chain. For these reasons, the total turnover numbers for the coffee industry are very much higher than GVA.

As shown in Figure 19, the total turnover of all the segments of the coffee market is estimated to be approximately £7.24 billion in 2017, an 11 per cent increase from the £6.16 billion in 2016.

¹⁶ <https://msu.edu/course/prr/840/econimpact/multipliers.htm>

Figure 19: Estimated turnover of coffee products in the UK, 2012-17, £ million current prices



Source: ONS Annual Business Survey/ Euromonitor International, Coffee market 2012-17, Cebr analysis

The coffee industry draws upon inputs from many sectors of the economy. Our input-output modelling suggests that the coffee output multiplier is 2.44, as illustrated in Figure 20. This means that for every £1 increase in coffee turnover, the economy-wide links (including direct, indirect and induced impacts) come to £2.44.

Figure 20: 'Industrial' output multiplier for Coffee in the UK



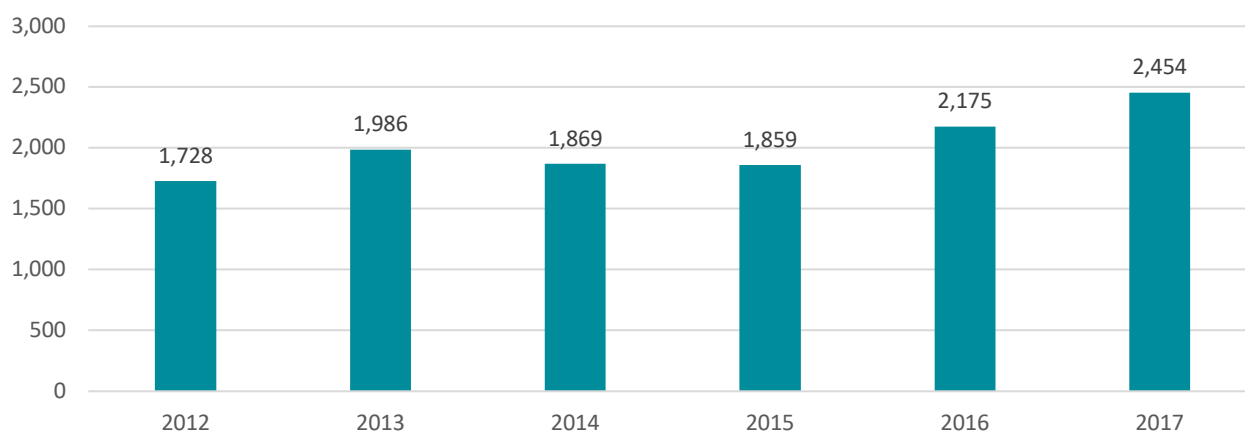
Source: Cebr analysis

Based on this multiplier effect, the coffee direct output contribution to the UK economy of £7.24 billion in 2017 is consistent with an aggregate output supported contribution, including indirect and induced multiplier impacts, of approximately £17.67 billion.

3.3 Employee compensation impacts

GVA is also known as income from production and the principal recipients of this income are labour (through employee compensation), capital (through profits and depreciation) and government (through taxes on production like business rates). The principal beneficiary in most businesses and in most sectors of the economy are employees. Figure 21 illustrates that the estimated aggregate employee compensation in the coffee industry amounted to £2.45 billion in 2017, accounting for 66 per cent of the total estimated GVA in the same year. The 2017 figure represents a significant growth of 13 per cent from the £2.18 billion in 2016. The high share of employee compensation is largely driven by the labour intensive segments within the coffee industry, namely the food service sector.

Figure 21: Estimated employee compensation in the coffee industry, £ million current prices, 2012-17



Source: ONS Annual Business Survey/Euromonitor International, coffee market 2012-17, Cebr analysis

Our input-output analysis of the coffee industry suggests that for every £1 of employee compensation in the coffee industry, another £1.1 of pay is supported in the wider economy due to the coffee industry's indirect and induced multiplier impacts. This is illustrated in Figure 22 below. This wider multiplier impact produces an estimated aggregate employee compensation supported by coffee related activities of about £5.15 billion in 2017.

Figure 22: Employee compensation multiplier for coffee in the UK

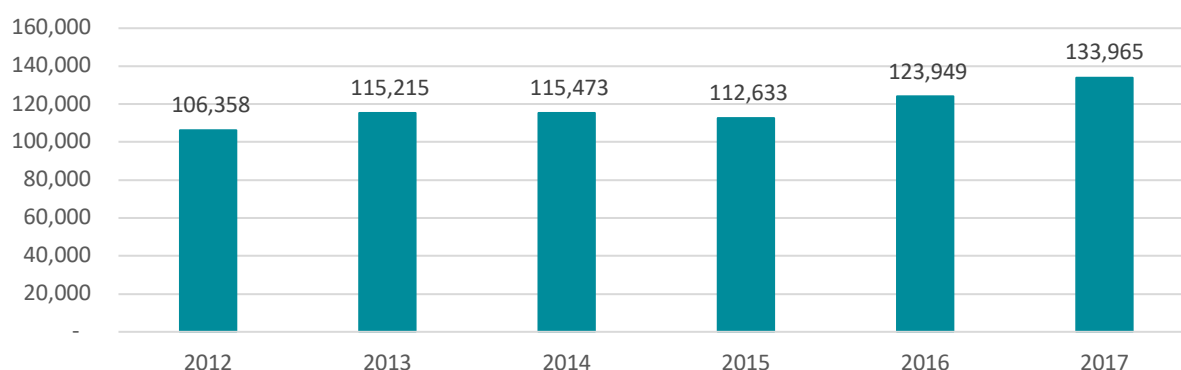


Source: Cebr analysis

3.4 Employment impacts

Aggregating the estimated employment figures of all coffee activities summarised in section 2, Figure 23 illustrates that, on a full-time equivalent basis, and coffee supported approximately 133,965 workers in the UK in 2017, an 8 per cent increase from the 123,949 workers in 2016.

Figure 23: Estimated full-time equivalent employment supported by coffee in the UK, 2012-17



Source: ONS Business Register and Employment Survey (BRES)/Euromonitor International, Coffee market 2012-17, Cebr analysis

Again, the employment impact of coffee related activities is not confined to the above direct contributions alone. As illustrated in Figure 24, using our input-output models, we find that coffee has an employment multiplier impact of 1.57. This means that for every job directly supported by coffee, an additional 0.57 jobs are supported in the wider economy, through indirect and induced multiplier impacts. This employment multiplier produces an estimated aggregate employment impact of about 210,325 jobs in 2017.

Figure 24: Employment multiplier for coffee in the UK



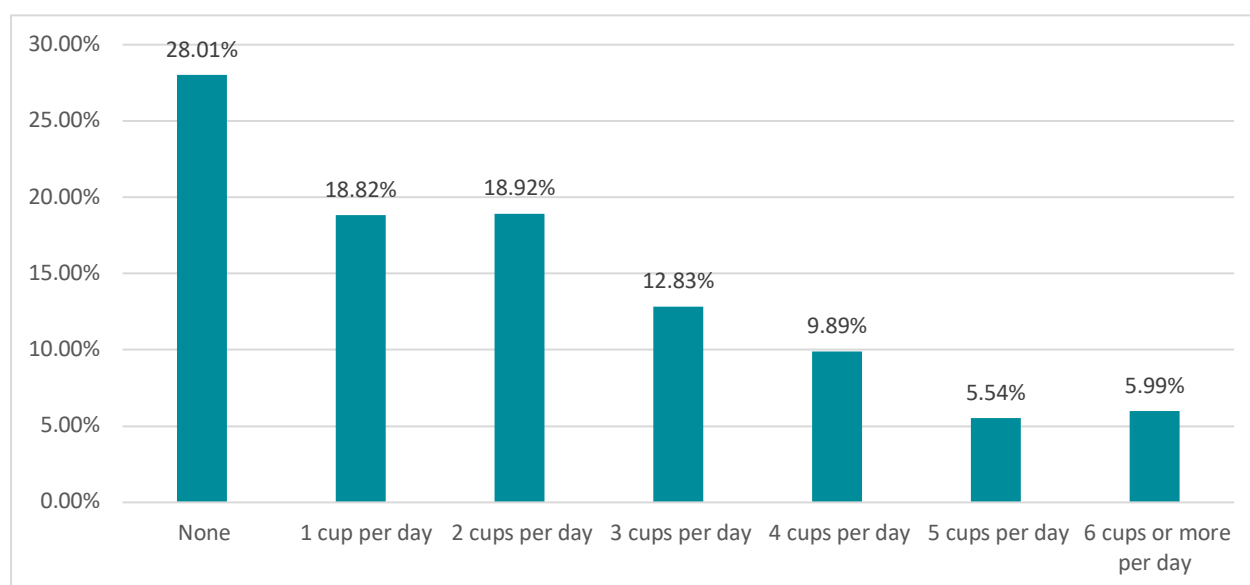
Source: Cebr analysis

4 Estimates for number of cups of coffee consumed per day in the UK

This section draws upon results from an omnibus survey commissioned as part of the study. The survey, conducted by Opinium Research, involved a sample size of 2,000 people across the UK. The key finding from this survey is that the average number of cups of coffee consumed per day in the UK is two (rounded up from a mean of 1.98). Applying this to the total population of the UK, on average, 95 million cups of coffee is consumed on a daily basis.

Figure 25 illustrates the distribution of the number of cups of coffee consumed per day from the survey participants. 28 per cent of the participants indicated that they consume zero cups of coffee per day, 18.8 per cent consume one cup per day and 18.9 per cent consume two. Interestingly, 6 per cent of the survey participants indicated that they consume six cups of coffee or more per day.

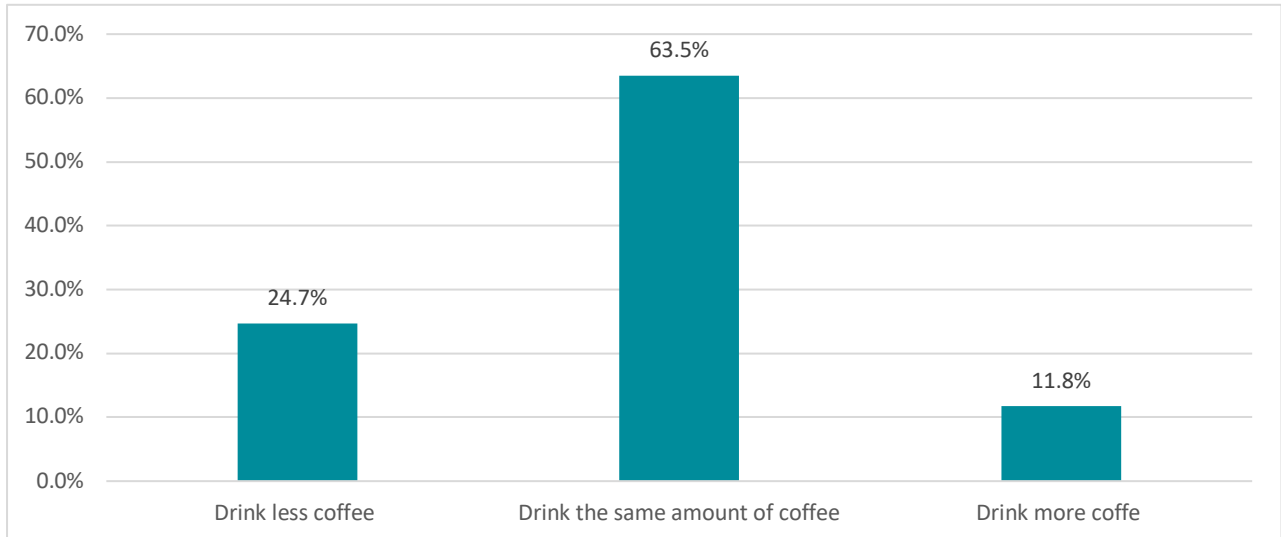
Figure 25: Number of cups of coffee consumed per day



Source: Opinium Research Omnibus Survey, March 2018, Cebr analysis

The survey participants were also asked to describe the change in their coffee consumption behaviour over the last two years. Figure 26 illustrates that approximately 64 per cent of the survey participants indicated that they drink the same amount of coffee as they did two years ago, suggesting a stable preference towards coffee consumption. 25 per cent indicated that they drink less coffee now than they did two years ago; while 12 per cent of the participants suggested that they drink more coffee now than they did two years ago.

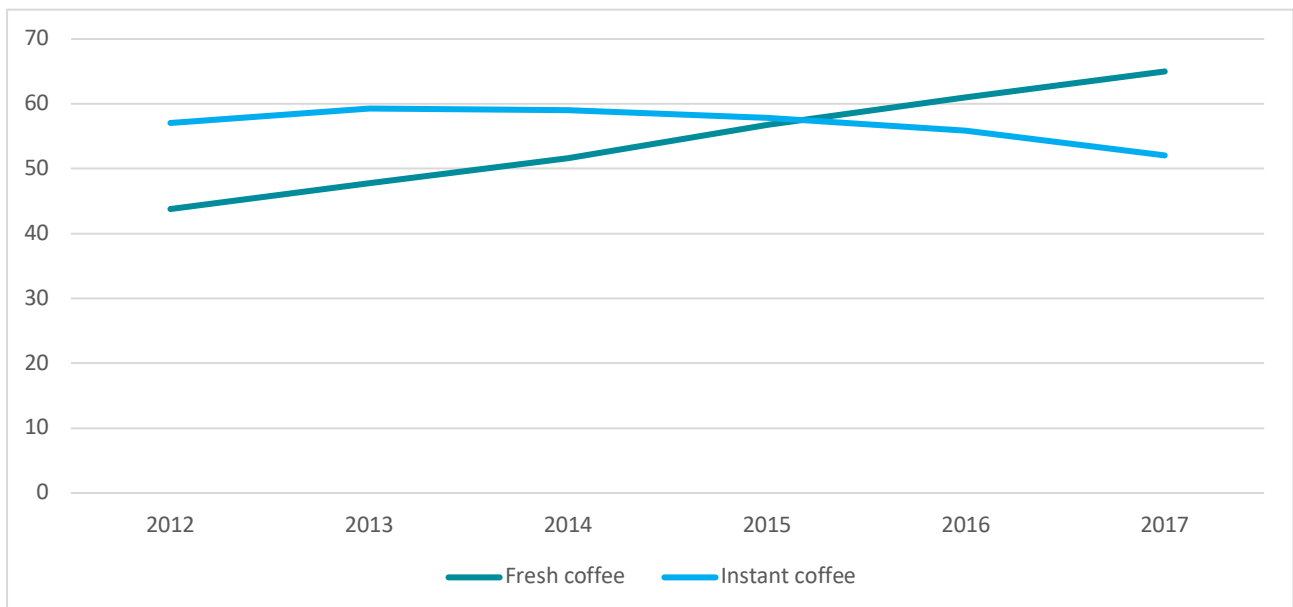
Figure 27: Change in coffee consumption over the last two years



Source: Opinium Research Omnibus Survey, March 2018, Cebr analysis

As illustrated in Figure 26 and discussed in section 2, the net decline in volume is likely due to the fall in instant coffee consumption as more and more households in the UK substitute towards more expensive coffee, while rising prices are propping up values¹⁷.

Figure 263: Volume sales of fresh coffee and instant coffee in thousand tonnes, 2012-17



Source: Euromonitor International, Coffee market 2012-17, Cebr analysis

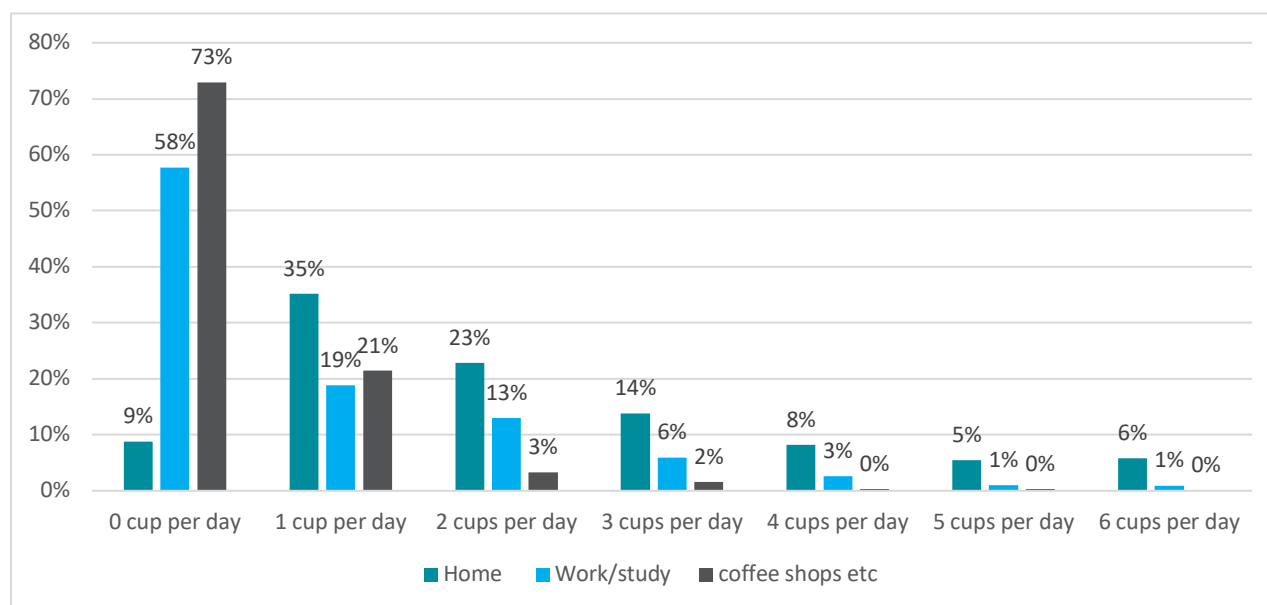
¹⁷ Mintel coffee report, August 2017.

Extending the analysis further, survey participants were asked to indicate the number of cups of coffee per day they consume at home, work/study or out-of-home at cafés, restaurants, bars etc. The key finding is that, among the coffee drinkers, the average number of cups of coffee consumed in the UK is two cups of coffee (mean of 2.2) at home, one cup of coffee (mean of 0.84) at work/study and one cup of coffee (mean of 0.36) out-of-home in coffee shops, restaurants, bars etc.

Figure 27 illustrates the breakdown between cups of coffee consumed at home, at work/study, and in cafés, restaurants, bars etc. 73 per cent of the survey participants indicated that they do not consume coffee out of home at cafés, restaurants, bars, etc.; 21 per cent consume one cup of coffee; while only 3 per cent consume two cups of coffee and 2 per cent consume three cups of coffee within these venues. Similarly, a majority of 58 per cent of survey participants indicated that they do not consume coffee at their work or study place; 19 per cent consume one cup of coffee; while 13 per cent consume two cups.

In terms of in-home consumption, the emerging pattern seems to be somewhat different. Only 9 per cent of survey participants indicated that they do not consume coffee at home. 35 per cent of the participants indicated that they consume one cup of coffee per day at home. 23 per cent consume two cups of coffee per day at home. Interestingly, 6 per cent suggested that they consume six cups of coffee or more per day at home. The more coffee people consume, the more likely it is that they will be consuming it at home, which makes a great deal of intuitive sense given the cost difference between the two.

Figure 27: Number of cups of coffee consumed at home, workplace/study and in coffee shops etc.



Source: Opinium Research Omnibus Survey, March 2018, Cebr analysis

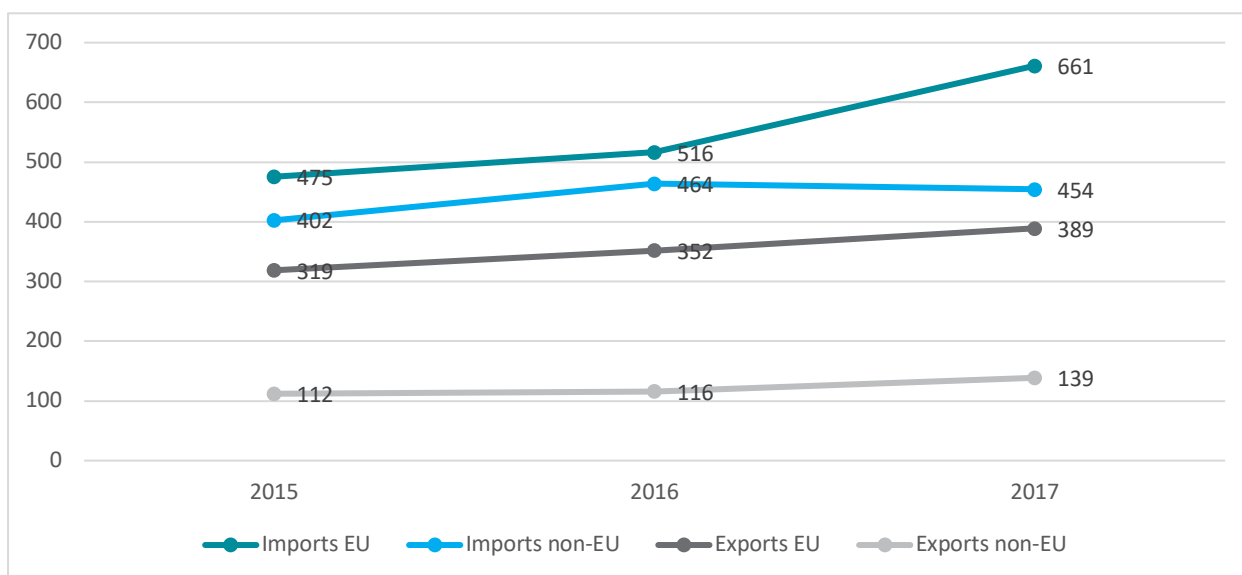
5 Outlook for 2018 and Brexit risks

Coffee is one of the world's most widely traded commodities. In addition to the supply chain actors directly involved in the physical trade, coffee is bought and sold by investors and price speculators as a tradable commodity on global exchanges. By the end of 2018 the UK's departure from the EU will be less than three months away and there is uncertainty about the post-Brexit settlement and its impacts. The implications for the coffee industry and how its economic footprint unfolds in the current rapidly shifting political and economic landscape is uncertain. What we do know is that an unfavourable Brexit outcome is likely to have a considerable impact on the coffee industry.

UK coffee trade with other European countries dates back hundreds of years and has steadily evolved into the current, complex supply chain arrangements¹⁸. In the immediate aftermath of the Brexit referendum, the value of the pound drastically dropped against the euro and US dollar. This ramped up prices of imported goods and particularly impacted coffee, as a dollar commodity.

The total UK trade in coffee is illustrated in Figure 28. Despite the fact that the largest single coffee category imported into to the UK is green coffee, the supply chain arrangements in place mean that the imports of coffee and coffee products from the EU are of greater value than that with the rest of the world. In 2017, coffee imports from the EU stood at £661 million, a 28 per cent increase from the 2016 figure of £516 million. While the total value of coffee and coffee products imports from the rest of the world was at £454 million in 2017, a 2 per cent decline from £464 million in 2016.

Figure 28: UK trade in coffee, £ million, 2015-17

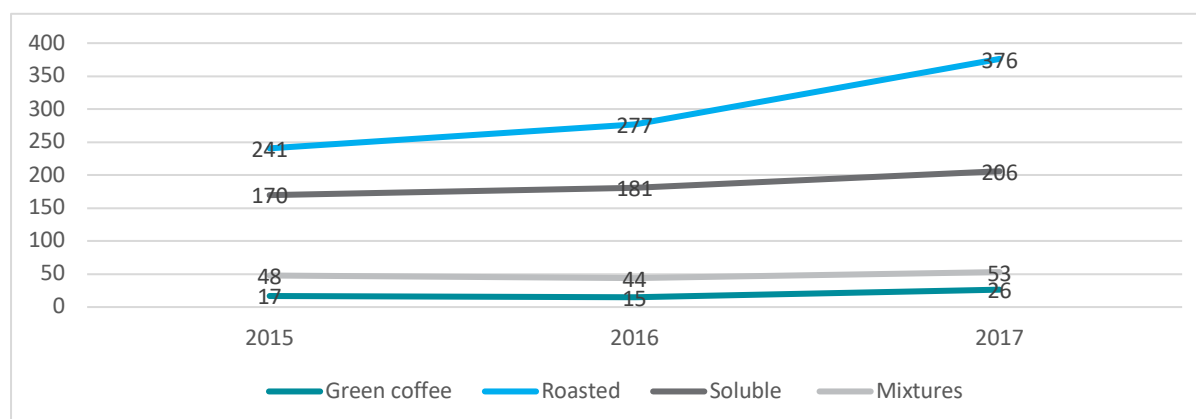


Source: HMRC/Infostat, Cebr analysis

Figure 29 illustrates that UK's coffee imports from the EU are predominantly roasted coffee and soluble coffee.

¹⁸ British Coffee Association (BCA)

Figure 29: UK coffee imports from the EU, £ million, 2015-17



Source: HMRC/Infostat, Cebr analysis

If the UK leaves the EU without reaching a free trade agreement with the EU, the most likely scenario would be a UK-EU trade relationship governed by the terms of the World Trade Organization (WTO). WTO regulations place upper bounds on the allowable tariff rates and also require each member to grant the same 'most favoured nation' market access, to all other WTO members. This will, for example, see EU tariffs of 7.5 per cent on roasted coffee and 9 per cent on instant coffee in the UK¹⁹.

A WTO solution is a worst-case scenario likely to disrupt the free flows of coffee and coffee products from and to the EU at the UK's borders and by extension throughout the entire supply chain of the coffee industry. The contentious issue of a hard border between the UK and the Republic of Ireland is also of great concern to the coffee industry as it would subdue trade flows of goods across the Irish border. On a long term basis, the existence of tariffs and major trade distortions are likely to manifest in terms of reduced supply and higher prices that affect the end users.

Even if the UK reaches a frictionless free trade agreement with the EU, restrictions on the free movement of EU workers might have a knock-on effect on the coffee industry. At an operational level, a high percentage of workers in the food service industry are from the EU, particularly baristas. A stringent immigration policy is likely to increase the costs of recruiting, retaining and compensating workers in the food service industry. This will in turn increase coffee prices for end users and may even subdue demand and ultimately harm the industry's output and its economic footprint.

In conclusion, the Brexit referendum marked the first time a country voted to end its EU membership. Given the unprecedented nature of this decision, leading up to the exit date, it is difficult to predict the types of relationships with Europe and the rest of the world the UK will secure. The most pressing issue for the coffee industry is the impact on the value of the pound.

Manufacturers and suppliers have absorbed cost increases for some time, but this may no longer be possible. The effect of this is already being felt in the marketplace, with price of coffee steadily increasing. Considering the long-term, the growing coffee culture in the UK, fuelling the current surge in the out-of-home coffee and sales of specialised coffee products in the retail sector, hinges on macroeconomic factors related to jobs and disposable income. If the Brexit transition process or its final

¹⁹ <http://www.ico.org/documents/icc-107-7e-tariffs-trade.pdf>

settlement places household budgets under pressure, necessitating a more cautious approach to discretionary spending, this trend is likely to slow down.