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Who is interested in retail education? The (mis)match between the leading universities' offerings and job demand in the UK

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Purpose. Retail management have acquired the attention of scholars and practitioners, with many international and prestigious journals specifically relating to the topic. Also, top-tier journals in other disciplines have proposed special issues on the new advances in retailing, with emphasis on the role of new and smart technologies. On the one hand, the research in retailing seems to be prolific, on the other hand, the interest in retail education (from a research and university perspective) seems to be more limited. The aim of this paper is to capture the (mis) match between the leading universities' offerings and job demand in UK. In this way, the paper identifies opportunities for educators and researchers to educate future career-ready professionals in retailing, and improve research in retail education.

Design/Methodology/Approach. The research evaluates the offer of UK retail education in terms of programmes/courses, focusing on the Russell Group universities for the academic year 2020/2021 (September starts), and the demand of certain skills and competences by the largest retailers in UK. The study utilizes secondary data based on the courses/programmes specifically related to the retail sector, and on the job opportunities through the leading UK grocery retailers.

Findings. Findings reveal the extent of the gap between the university educational offerings and the requirements from retailers.

Originality/value. To the best of our knowledge this research is the first attempt to capture and compare multiple evidence bases related to academic curriculums and employers' requirements for specific retail competencies.

Keywords: Retail Education; employability; retailing; Russell group; Higher Education

1. Introduction

The retailing industry is characterized by a fast pace of innovation dictated both by advances in technology and supply chain management, and in consumer behaviour (Roggeveen and Beitelspacher, 2018; Grewal et al., 2020; Feng and Fay, 2020). Furthermore, Deloitte confirms the continuous re-invention of retailing through the use of new technologies by highlighting the key role of digital experiences and competences (Deloitte, 2020). Specifically, the UK retail industry was calculated to be worth £390bn in 2020 (Office for National Statistics, 2020), representing an important industry for the UK economy. Despite the effect of the Covid19 outbreak, the level of retail sales in June 2020 recovered to reach near pre-pandemic levels (Office for National Statistics, 2020). The top four supermarkets, by value represented 57.4% of UK retail sales in 2016 (Mintel, 2018).

Accordingly, retail management has gained the attention of scholars and practitioners over time, with many international and prestigious journals specifically relating to the topic, including the *Journal of Retailing* and the *Journal of Retailing and Consumer Services* by Elsevier, *International Journal of Retail and Distribution Management* by Emerald, and *International Review of Retail, Distribution and Consumer Research* by Taylor and Francis. These are all listed as being retail specific in many academic journal guides (i.e., CABS in the UK, ANVUR in Italy, etc.).

Also, many top-tier journals in other disciplines have proposed special issues on the new advances in retailing, with emphasis on the role of new and smart technologies, such as (i) *Technological Forecasting and Social Change* which published a special section on Managing consumers' dynamics within the emerging smart retail settings in 2017 (Pantano *et al.,* 2017), and (ii) *Computers in Human Behaviour* which published a special issue on Innovation in consumer-computer interaction in smart retail settings (Pantano and Gandini, 2017).

On the one hand, research in retailing seems to be prolific; on the other hand, the interest in retail education (from a research and university perspective) seems to be more limited. For instance, Ketron et al. (2017) conducted research aimed at identifying the most prominent retail authors and institutions in the global academia to 2015. Surprisingly, the large amount of research published in the retail field has not stimulated a corresponding emphasis on retail education. Hence there is a gap

between the amount of knowledge generated by research in retailing and the evolution of retailing education. One relevant exception is provided by a special issue within the *Journal of Marketing Education (JME)* in April 2018, which focusses on innovative teaching methods that can be adopted for an effective transfer of knowledge within retailing to the retail managers of the future. However, apart from the significant contribution by this JME special issue, recent literature seems to have virtually overlooked the extent to which retail education, beyond the teaching methodologies adopted by educators in class, is aligned with the demand by the retailing industry, both from a qualitative and quantitative standpoint.

Nevertheless, employability has been largely used as a measure of the importance attributed by both current graduates and of taught education (Honea *et al.,* 2017; Jayasingam *et al*., 2018). For instance, the prevalence of deep knowledge in the discipline and specific skills improves students' employability (Romgens et al., 2019). Recent studies in marketing education uncovers a gap between the academia offering and business demand, raising questions about the purpose of a specific degree and the graduates' readiness to work (McArthur *et al.,* 2017; Towers et al., 2020). Therefore, in terms of retail education it is not yet clear whether the industry is looking for the competencies currently provided by education institutions, or if a re-alignment is required between the demand and supply of retail education. Accordingly, the aim of this paper is to capture the (mis) match between the leading universities' offerings and job demand in the UK, and to clearly identify implications for retail and retail education research and retail educators. To this end, the paper evaluates the actual research in retail education, university offerings of specific programmes/courses, and the demand for professionals with retail management knowledge. This will help in identifying opportunities for educators and researchers in order to educate future career-ready professionals in retailing, whilst also improving research in retail education.

The research focuses on the UK as it is one country which is able to compete with the US in terms of the number of universities in the leading positions of the QS top universities ranking (see https://www.topuniversities.com/university-rankings/world-university-rankings/2019). Specifically,

the research evaluates the offer of the Russell Group universities for the academic year 2020/2021 (September start), and the job vacancies of the largest (grocery) retailers in the UK. Findings provide useful suggestions for universities to enhance marketing courses/programmes in order to develop the competences and knowledge to incorporate retail management with the marketing curriculum which would improve students' employability. To the best of our knowledge this research is the first attempt to capture and compare multiple evidence bases related to academic curricula and employers' requirements for specific retail competencies.

The remainder of the paper is organized as follows: the next section will review the actual retail literature with emphasis on the emergent research topics and retail education. The subsequent section will provide the actual retailers' demand for specific skills and competences of new graduates. Finally, the paper will present the university offerings in terms of courses/programmes across the UK Russell group universities, and discuss the implications for the sector within academia and beyond.

2. Theoretical Background

Retailing literature has traditionally received a strong impulse from knowledge innovation spanning the multiple and rapid changes in technology, supply chain management, retail channels and consumer behaviour (Grewal *et al.*, 2020; Cai and Lo, 2020; Reinartz *et al*., 2019; Pantano, 2020). This has resulted in a comprehensive understanding of the significant innovations that affect and likely to affect the retail industry over the short to medium term (Paul and Rosenbaum, 2020). Surprisingly, this significant amount of interest in research within retail innovation has not coupled with a corresponding emphasis on retail education, with just a few, though non-negligible, exceptions, such as the special issue dedicated to Retail Education by the *Journal of Marketing Education* in April 2018.

2.1 Research in retailing

Within the editorial introducing the 2017 special issue about "The Future of Retailing" in the *Journal of Retailing,* Grewal *et al.* (2017) define five macro areas that are more likely to receive priority attention in scholarly research over the coming years: i) Technology and Tools to facilitate decision making; ii) Big Data Collection and Usage; iii) Analytics and Profitability; iv) Consumption and Engagement; and v) Visual Display & Merchandise offer decisions. The research agenda determined by the identification of these macro areas favors the alignment of research in retailing with the relevant tools and practices emerging from the industry. Also, these five macro areas are not intended to be an exhaustive view of the topics and approaches within the field of research in retailing. To the contrary, it provides a framework which the contributions of the literature can be referenced through, allowing the emerging topics of research over the last decade to be viewed, combined with current trends and state of the art practices.

Specifically, there has been a growing debate over the last decade on the impact of various technological innovations in the field of retailing. These technologies span a wide range of tools including, though not limited to (i) self-service technologies such as self-scanning devices (Lee and Yang, 2013) or self-checkouts (Orel and Kara, 2014), (ii) mobile applications (Shankar *et al.,* 2010) that provide location-based services (Kang *et al.,* 2016) favored also by RFDI tags (Grewal *et al.,* 2011), (iii) artificial intelligence (AI)-based tools affecting the way customer assistance is performed by means, for instance, of chatbots (Hill *et al.,* 2015; Davenport *et al*., 2020; Shankar, 2018) or robots (Bertacchini *et al.,* 2017), and (iv) augmented (Javornik, 2016) or virtual (Pizzi *et al.,* 2019) reality. In an era of profound transition towards a technology infusion of services in general (Huang and Rust, 2017), retail research seems to be incorporating the many opportunities favored by technological innovations.

In order to assess the relative contribution of a stream of research to advance scholarly knowledge, a systematic review can be an effective methodology (Tranfield, Denyer, & Smart, 2003), since it provides a quantitative assessment of the impact of a research topic on an academic journal through

the identification of topics which contain new knowledge. Furthermore, they significantly contribute to scholarly debate by generating a downstream body of citations (Khan, 2011). The "Scopus" search engine was chosen as a research tool as it contains a large publication database spanning a variety of research fields (e.g. computer science, management, engineering, etc.), and was also adopted in other marketing-related papers (see, for instance, Zhang and Banerji (2017) or Kemper and Ballantine (2019)).

Following Snyder and colleagues' work (2016), inclusion and exclusion criteria were defined for published articles to be eligible for inclusion in the systematic review analysis. These met criteria were the article (1) main focus was on retail technology innovation, (2) came from peer-reviewed empirical or conceptual papers, (3) was published in the English language, and (4) had full text access. A closer inspection of the publication trends in the selected research papers dealing with Technological Innovation in Retailing (keyword "Technological Innovation" in the Abstract, Title and Keywords limited to publication years > 2008 and domain of "business, management and accounting" or "computer science") performed on Scopus following the aforementioned inclusion and exclusion criteria reveals, from one perspective, an increasing trend in the total volume of papers published on the topic. From another perspective, traditional journals dealing with retailing topics (for instance, *The Journal of Retailing*, *The Journal of Retailing and Consumer Services*, *The Journal of Retail and Distribution Management*) are being increasingly challenged by other journals with a traditionally lesser focus on retailing (e.g. the *International Journal of Production Economics*, or *Technological Forecasting and Social Change*). The publication trends of papers related to technological innovation listed by source (Scopus) are reported in Figure 1:

[FIGURE 1ABOVE HERE]

Figure 1: The publication trends of papers related to technological innovation listed by source in Scopus.

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Next, in line with the categorization proposed by Grewal and colleagues (2017) and similarly to the methodology by Snyder and colleagues (2016), we created categories containing a number of objects that are considered equivalent in terms of innovation type. The following briefly describes the different categories emerging from the literature as relevant streams of the latest wave of technological innovation.

Such a new wave of technological innovation has fostered the proliferation of a multiplicity of data coming from sensors connected through the Internet of Things (IoT) (Balaji and Roy, 2017), in-store activities and paths followed by consumers (Hui *et al.,* 2009), and – more generally – from the multiple touchpoints encountered by consumers throughout their entire shopping experience (Li and Kannan, 2014). Big data provide retailers with various opportunities and possibilities since they allow for a higher predictive power at the individual-level (Wong and Wei, 2018; Pantano *et al*., 2019; Giglio *et al.*, in press; Klostermann *et al.*, 2018; Humphreys and Wang, 2018) on the numerous interactions between retailers and consumers across multiple and different channels (Verhoef *et al.,* 2015). Acknowledging the changing nature of the relationship with customers in an omni-channel environment is a challenge of paramount importance (Jocevski *et al.,* 2019) with retailing literature and practice being focused on the quality beyond the quantity of Big Data (Pantano *et al.*, 2019). This, together with the identification of the most effective modelling, helps to fully utilize these data to support the effective deployment of omni-channel strategies (Wedel and Kannan, 2016; Kumar *et al.,* 2017).

Regardless of the specific channel(s) used by retailers to manage the relationship with their customers, there has been a renewed emphasis on consumer engagement (Grewal *et al.,* 2009; Lemon and Vehoef, 2016), which has been regarded as one of the major sources of differentiation in a competitive retail environment (Verhoef *et al*., 2009) both offline (Puccinelli *et al.,* 2009) and online (Rose *et al.,* 2012). With respect to the former, literature has highlighted the pivotal role played by store atmospherics in generating superior experiential value for the customer (Ballantine *et al.,* 2010).

In this regard, many innovations dealing, for instance, with store signage (Wansink, 2017; Roggeveen *et al.,* 2016; Giesen and Leenheer, 2019) and interactive kiosks (Varadarajan *et al.,* 2010), have been proven to positively contribute to the creation of enhanced store experiences for consumers. With regards to the latter, social media has been found to heavily influence how consumers gain experience of the retail environment by creating higher degrees of interactivity (Hamilton *et al.,* 2016), and a richer information content (Roggeveen and Grewal, 2016). These utilitarian and hedonic sides of customer engagement tools are not just relevant for the short-term purpose of driving store traffic, but also contribute to long-term customer loyalty (Scarpi *et al.,* 2014). With regards to customer loyalty, the role of "traditional" loyalty tools such as loyalty programmes has continued to be under the lens of retail research, aiming to disentangle the "true" effect of these loyalty programmes on customer engagement and loyalty (Kopalle *et al.,* 2012) whilst highlighting the challenges posed to loyalty programmes through advances in information technology (Breugelmans *et al.,* 2015).

Finally, there has been a renewed interest in retailing research in the way merchandise is shelved and displayed. This growth can be ascribed to the tremendous number of items and offers that customers are exposed to in store environments, in that visual salience of the merchandise can be an effective tool for retailers to facilitate and stimulate customers' choices both in online (Kahn, 2017) and offline (Deng *et al.,* 2017) retail stores. Such an interest in the sorting criteria underlying the shelf layout (Pizzi and Scarpi, 2016) is strongly linked to the study of category management which provides a framework to manage product assortments by taking the category as a unit of analysis (Mantrala *et al.,* 2009). With these regards, literature has attempted to observe the pros and cons of category management on consumer choice in multicategory purchase contexts (Hong *et al.,* 2017), and to identify the "ideal" level of assortment to be provided for each channel (Ma, 2016). Hence, literature is also benefiting from the adoption of innovative research tools provided by new technologies, such as virtual reality, that enables a better understanding of how consumers approach visual search tasks when confronted with a given assortment (Sarantopoulos *et al.,* 2019).

In summary, retailing research seems to be producing a significant number of studies following the major challenges facing the retail industry. Figure 2 summarizes the results of a Scopus analysis of the keywords emerging from the literature review. It clearly outlines the trends in the volume of published studies of the topics on the frontier of research in retailing which is also the perspective noted by Grewal and colleagues (2017) on the future of retailing.

[FIGURE 2 ABOVE HERE]

Figure 2. Scopus analysis on the keywords.

2.2 Research in retail education

Despite the call to better integrate the demand (i.e. the industry) and the supply (i.e. research) within retail management education (Richey *et al.,* 2007), analysis of how the transfer of knowledge through retail education demonstrates that scholarly understanding seems to be scant. This lack of integration is witnessed by the skill gap reported in previous studies, highlighting the shortages introduced by the rapid shifts in the hard and soft skills required by retail organizations as a consequence of the rapid evolution of the labour market (Hart *et al*., 2007) and changes in technology (Lewis *et al.,* 2014). It could be argued that a retail management career does not look particularly attractive to prospective managers, and educators are still challenged to generate awareness of retail education and related retail careers (Gunn *et al.,* 2017).

A relevant and meaningful exception to such an apparently chronic lack of investigation on retail education is represented by the special issue devoted to the topic by the *Journal of Marketing Education* in 2018 (Volume 40, issue 1). In this special issue, authors acknowledge the importance of retail education in preparing retail managers, given the fast pace of innovation both in technology and consumer behaviour which characterizes the industry (Roggeveen and Beitelspacher, 2018). However, this rapid pace of innovation can be only partially captured by textbooks (Grewal *et al.,*

2018), where publication times might be significantly slower than changes in the industry. Consequently, the contributions included in the JME special issue revolve around the teaching methods that can be put in place in order to improve the quality and effectiveness of retail education. To this end, some authors proposed and developed a specific retail track, incorporating multiple workshops and company visits to understand how activities could achieve the Intended Learning Outcomes (ILOs) of the programme (Lange *et al.,* 2018). This was complemented by practical activities performed in a Retailing Laboratory (Valdez and Cervantes, 2018) or through the experiential learning platform of a retail consulting class (Oh and Polidan, 2018). At the same time, from a pedagogical point of view, authors proposed the introduction of digital tools, such as mobile devices, to enhance retailing education (Fischbach and Guerrero, 2018), and stimulation of creativity in problem-solving (Sternquist *et al.,* 2018) in order to better prepare the retail managers of tomorrow to the challenges posed by the innovation in the industry.

Hence, educators can be equipped with a plethora of educational tools in order to stimulate students' learning in the discipline. Beyond the teaching methods, educators should also face the major challenge of better aligning the course contents to the actual demand of the industry (Harrigan and Hulbert, 2011; Fredericksen, 2015), to further support employability. However, the industry perspective seems to have been chronically underexplored in the extant literature, thereby leaving scholars with a relatively scarce knowledge on the extent to which the skills provided by educators are effectively matching the skills sought by retailers. Also, there might be a difference in demand for retail expertise from industry versus the supply provided by universities. Such a misalignment might, at least partially, explain the necessity for retailers to promote the internal development of human resources (Maxwell and Miller, 2006). For this reason, some contemporary studies are shedding light on the importance of retail education to design the competences of future retail designers (Quartier et al., 2020), and to nurture career-ready graduates (Towers et al., 2020; Gunn et al., 2020).

3. Methodology of Research

The current study uses a qualitative approach comprising of aspects of secondary data collection from both the perspective of the industry (demand of retail expertise) and universities (supply of retail expertise). The method adopted is rooted within job market analysis, which builds on a classic topic in human capital economics (Welch, 1975), exploring the matches (or mismatches) between the skills provided by academic education (Hartog, 2000) and the skills sought by companies (e.g. Anastasiu *et al.*, 2017). The analysis of the skills demand in the labor market has received a considerable boost since the recent work by Zhu and colleagues (2016) which analyzed job skills popularity from online job posting platforms. Similarly, Boselli (2018) and colleagues adopted job vacancy titles and descriptive texts in order to infer the popularity of job skills required in the labor market over time. Data from online postings of job vacancies have been used to monitor the skills sought in the job market in a wide variety of domains spanning from medical surgery (as in Decker *et al.*, 2013) to business (as in Ahmad *et al.*, 2012).

Research into the graduate roles available at the top four retailers within the UK and the top universities in UK was carried out using secondary data (internet search and official statistics). Secondary data analysis has also been considered a powerful method for conducting research in the field of education (Logan, 2020; Rees, 2019). Based on this study, it is possible to identify the (i) expertise having the greater demand by industry, and (ii) university offering in terms of courses and single modules, hence evaluating if the university courses equip graduates with the skills desired by the industry. Thus, the research follows three main stages, two stages account for the data capture, and one for the final data analysis (Figure 3).

[Figure 3 above here]

Figure 3: Research pipeline

4. Demand of retail expertise

The present research builds on the increasing trend in the methodology adopted by the literature to assess the relevance of skills in the labor market, and presents the results of the academic requirements of the four largest grocery retailers in the UK (by value sales) in terms of the graduate programmes on offer. In particular, the top four retailers selected for the purposes of this analysis accounted for a 57.4% of UK retail sales (by value) in 2016 (Mintel, 2018) and were, respectively, (i) Tesco (23.2%), (ii) JS Sainsbury's (13.0%), (iii) Asda (12.1%), and (iv) Morrisons (9.1%). A search was carried out on the Indeed job search site using the following Boolean search criteria: Job = ("graduate" OR "retail") AND company = "NAME" (Search undertaken November 2018). Also, a search was carried out directly on the websites of the four largest retailers (stated earlier) using the terms "graduate roles". The search was updated in December 2019 to highlight any differences from the search carried out in 2018 (no specific order).

4.1 Tesco

Findings yielded several routes for graduates to enter Tesco, given a pre-requisite undergraduate qualification. Each graduate route was of a similar nature. Among the common areas were sections giving a "job introduction", overview of "the role", some information "about the company", and the compensational "package description". Also included were two sections which are focal to this study, namely "the ideal candidate", giving a brief description of the person required and also "what you need", giving the degree requirements for entry. The below summarises the two fields for each of the graduate routes on offer for Tesco (a synopsis of the academic requirements is given below of each graduate programme):

- Marketing: Degree with a minimum of 2.2. No subject stipulation

- Food: No academic degree level stipulated

- Online: No academic degree level stipulated

- Stores: Degree with a minimum of 2.2. No subject stipulation

- Procurement: Degree with a minimum of 2.2. No subject stipulation

- Finance: Degree with a minimum of 2.2. No subject stipulation

- Distribution and Fulfillment: Degree with a minimum of 2.2. No subject stipulation

- Technology: Degree with a minimum of 2.2. No subject stipulation

- Technology management: Degree with a minimum of 2.2. No subject stipulation

There are no specific requirements associated with any academic discipline, let alone any requirements for a retail element. The Technology Product Graduate Programme encourages graduates from outside the computer science graduate community. All but two programmes state a minimum of a 2.2 degree though none state subject requirements for the degrees. These programmes were also advertised under the graduate entry programme on the Tesco website.

The structure for the 2019 upstate is similar to that of the original 2018 search. However, the main change is the expansion of the technology pathways, by adding:

- Technology Cyber Security: Degree with a minimum of 2.2. No subject stipulation

- Technology Product: Degree with a minimum of 2.2. No subject stipulation

- Technology Software Engineering: Degree with a minimum of 2.2. No subject stipulation

4.2 JS Sainsbury's

The search suggested the Sainsbury website as a source of recruitment. Hence data were taken from this Sainsbury's dedicated website (http://early.careersatsainsburys.com/Home/Graduates). From the information available, there is a graduate programme which Sainsbury's run internally. Successful applicants to the programme are given a six month placement in various areas of the business, "in HR, Marketing, General Merchandise, Trading or Digital and Technology to name just a few" (Sainsbury's, 2018). The programme offers training to manage a team within the six month programme. The programme pairs the graduate with an employee on the same programme the previous year, also with a mentor and additional support from the early careers team.

The "essential requirements" are summarized as it follows:

- 2:1 Degree in any discipline.

- Some relevant work experience.

- Natural leadership skills.

- Outstanding communication and people skills.

A range of additional skills are stated with networking being emphasised, also, influencing skills, presentation skills and commercial acumen (Sainsbury's, 2018). In addition, verbal, numerical and inductive/abstract reasoning tests are carried out and finally, a personality questionnaire. Hence there are no specific academic requirements for a retail-based degree. However, the people skills stated arguably would receive more emphasis from certain degree courses than others at University level. The upper second-class degree requirement is higher than the lower second-class requirement that Tesco had stipulated.

An important point to be noted here is the inclusion of "some relevant work experience" being stated in the "essential requirements" section. It is not stated how relevant this experience should be or what nature it should take (e.g. an industry placement or working part time in a store). It is interesting that Sainsbury's may feel that this experience is more important than academic training within the sector, or it may be an acknowledgement of the lack of academic courses offering this experience.

In December 2019, the one difference is based the qualification requirement (now also stipulate A level requirements (ABB) and grade B GCSE requirements for maths and English).

4.3 Asda

Similar to Sainsbury's, the graduate programme was located through the Asda website. (https://www.asda.jobs/graduates/). Unlike the Sainsbury's programme, there is a six month shop floor secondment followed by two years within one of five sectors of the organisation. Hence there is a significant commitment made by both employer and employee undertaking this programme. The graduate is offered several pathways of access:

- Operations: Continue to build on the six months. No formal degree requirements are stipulated

- Commercial: No stipulation is given as to the nature of the degree, though the recruit is required to be "data-driven" and "commercially savvy".

- Technology: No stipulation for the type of degree is given. Skills required are analytical and organisational skills. Also, an interest in future technologies and a strong desire for project management skills.

- George: No degree stipulated though a passion for fashion (though no formal qualifications are required) and a desire to work in marketing and social media.

- Finance: Here there is a stipulation for a minimum 2.1 degree in a business or finance related degree. Also, during the two year period, graduates will be studying towards CIMA qualifications.

The general criteria from an academic perspective is to be on track to gain a degree in 2019. There are no specific subject or degree level requirements (with the exception of the finance pathway). In 2019, while "George" and "Finance" pathways are the same; while "Technology" is replaced with "Data Science", highlighting the move to a more specific pathway, also indicated through the specific degree preferences. Also, "Operations" and "Commercial" have been replaced with "Buying". Other pathways favour business or digital based degrees which was not prevalent in the 2018 search, as it follows:

- Buying: Any degree is considered, although business/analytical is preferred.

- Data Science: Degrees are sought in Computer Science, Data Science, Business Analysis or any relevant analytical or numerate discipline such as Mathematics and Physics.

4.4 Morrisons

Morrisons also offers a graduate scheme, details of which were accessed through their website (https://www.morrisons.jobs/our-teams/early-careers/graduates/). As with Asda, there are various pathways with the scheme, and each one is supported with a "buddy" mentor and manager. These are briefly stated below with the academic entry requirements per programme. There are various degree

levels required for entry to different programmes. Also, for the Nutmeg role, a fashion based degree is also required. The finance pathway also demands a minimum in A Level (qualifications taken by school children, usually 17-18 years old as a pre-cursor to University entry) and GCSE (General Certificate in Secondary Education, usually taken by schoolchildren aged 16 in specified subjects) qualifications which has not been noted elsewhere:

- Retail: Minimum 2.2 degree. No subject stipulation.

- Manufacturing: Minimum 2.2 degree. No subject stipulation.

- Logistics and Supply Chain: Minimum 2.2 degree. No subject stipulation.

- Buying: Minimum 2.2 degree. No subject stipulation.

- Finance: Minimum 2.1 degree. No subject stipulation. Also, 3A levels at grade B or above, GCSE maths and English at C+.

- Technology: Minimum 2.1 degree. No subject stipulation.

- Corporate: Minimum 2.1 degree. No subject stipulation.

- People Management: Minimum 2.1 degree. No subject stipulation.

- Digital: Minimum 2.1 degree. No subject stipulation.

- Nutmeg: Minimum 2.1 in a fashion related degree.

Morrisons also provide information on the "ideal candidate" for these areas. Morrisons also offer an apprenticeship degree which means that students study for a degree whilst also working for the organisation. The schemes are run through the Sheffield Hallam University (not included in the Russell group). The scheme offers one specific pathway resulting in a BA (Hons) Retail Leadership Integrated Degree. In 2019, we note the absence of a "digital" pathway as it is now combined with "technology". This is a departure to how Tesco has reorganised its pathways in the last year. Also, the more generic "retail" pathway has been dropped. The "logistics and supply chain" pathway has been subdivided into two separate pathways, indicating the increased importance given to these or a more diversified set of learning skills.

Table 1 summarises the qualifications and other attributes required for entry into the retailer graduate roles.

[TABLE 1 ABOVE HERE]

Table 1. Summary of the Industry entry requirements.

5. Supply of retail expertise

Similar to the approach adopted by Cannon and colleagues (2019), the methodology consists of collecting (secondary) data relating to the current level of training provided by higher education institutions in the field of retailing. This information is gained through accessing university curricula from the Russell Group of UK universities (as in Stringfellow *et al.*, 2006; and Centeno *et al.*, 2008). In terms of selecting universities for inclusion in the study, the research focused on the UK, since it is the one country able to compete with the US in terms of the number of universities occupying strong positions within the QS ranking of top universities (see https://www.topuniversities.com/university-rankings/world-university-rankings/2019). Considering the QS World University Rankings 2021, four US universities occupy the first four positions (MIT, Stanford, Harvard, Caltech), followed by one UK universities (Oxford), one Swiss (ETH), two UK (University of Cambridge and Imperial College), one US (Chicago), and another UK (UCL), thus four out of the top ten universities are UK based. Hence the UK can be considered a country delivering a high quality of higher education within the European continent. Moreover, according to the Department for Education at the National Audit Office, (see https://www.nao.org.uk/wp-content/uploads/2017/12/The-higher-education-market.pdf), English universities received a £1.5billion increase in capital investment between 2011/12 and 2015/2016, whilst higher education in the UK received a £3billion increase (including grants and tuition fee loans), bringing the total investment to £9 billion. Due to the UK's strong tradition of retail-focused research and education

(Ketron *et al.*, 2017; Findlay and Sparks, 2010), the research examines the university programmes/programmes and modules at undergraduate and postgraduate level offered by the UK universities. In this vein, it might be useful to distinguish between universities which are members of the Russell Group and those which are not. This Group was formally formed in 1994, incorporating the twenty four leading universities (University of Birmingham, University of Bristol, University of Cambridge, Cardiff University, Durham University, University of Edinburgh, University of Exeter, University of Glasgow, Imperial College London, King's College London, University of Leeds, University of Liverpool, London School of Economics and Political Science, University of Manchester, Newcastle University, University of Nottingham, University of Oxford, Queen Mary University of London, Queen's University Belfast, University of Sheffield, University of Southampton, University College London, University of Warwick, and University of York) competing "on an international stage to attract the brightest minds from around the world to study, research and teach, with the aim to produce the most distinguished contributors to society" (The Russell Group of Universities, 2017). The universities included in the Group are considered to be research intensive, world-class universities playing a key role in the intellectual life of the UK, with significant economic, social and cultural impacts across the UK and worldwide (Furey et al., 20014). Accordingly, the rationale behind the choice of this specific set of universities is that these twenty four universities are considered as the symbol of academic excellence, selectivity in admissions and a degree of elitism in education, scholarship and science. The non-Russell Group universities are considered consistently less influential according to previous studies focusing on higher education (Rutter et al., 2016; Williams and Filippakou, 2010). Specifically, Russell Group Universities teach, on average, over 25,000 students (compared to an average of circa 12,000 at non-Russell Group universities). Also, the Russel Group universities employ on average 7,100 staff (compared to a non-Russell Group average of 1,700), and operate with a ratio of students to academic staff of around 7:1 compared to 14:1 respectively (The Russell Group of Universities, 2017). As a consequence of their mandate, Russell Group universities tend to display a lower tendency toward the development of

sector-specific focus and programming. Although the present study does not deny that non-Russell Group universities might include retail-focused programs in their education offering, this research focuses on Russell Group universities since they have a (a) widely understood (brand) identity, (b) high reputation of quality, and (c) high market proposition (Flavin et al., 2020; Rutter et al., 2016), and accordingly are expected to account for a wide proportion of the supply of retailing skills on the job market.

Consideration was given to the universities offer for the academic year 2020/2021, focusing on undergraduate and postgraduate units, either delivered offline or online. To this end, a search was carried out on the web portal site of each university devoted to the undergraduate and postgraduate course search function, by indicating "retail" as a keyword (Search undertaken March 2020). Each module/programme was manually screened to evaluate the learning objectives, contents and outcomes. Table 2 specifies the actual offer of retail-focused offering per each Russel Group university (in alphabetical order).

[TABLE 2 ABOVE HERE]

Table 2. Retail education offer for the academic year 2020/2021 in Russell Group universities.

This investigation shows that only nine out of the twenty four universities provide at least 1 module in retail, while only 1 university provides a full programme/course (at postgraduate level) in retailing. When looking more specifically on the innovation and technology management for retailing, including emerging retail channels and contemporary issues, seven out of nine universities also added topics related to the evolution of retailing, new forms of retailing, and future trends which is intended to continuously update the education offering based on latest developments within the industry.

6. Discussion and Conclusion

There has been a growing scientific debate in the last decade on the impact of various technological innovations in the field of retailing (Lee and Yang, 2013; Orel and Kara, 2014; Shankar *et al.,* 2018; Kang *et al.,* 2016; Grewal *et al.,* 2020; Hill *et al.,* 2015; Bertacchini *et al.*, 2017; Javornik, 2016; Pizzi *et al.,* 2019; Pantano, 2020). However, the university programmes/courses still scarcely cover these topics. Indeed, only seven out of the twenty four leading universities in the UK provide education in the development of new skills, embracing retail innovation and analytics. Moreover, topics related to the Internet of Things (IoT), artificial intelligence and big data analytics in retailing, which are increasingly investigated in retailing literature (Wong and Wei, 2018; Pantano *et al.*, 2019; Hill et al., 2015; Davenport et al., 2020; Shankar, 2018) are almost ignored completely (only one university devotes one lecture only to consumer and retail analytics).

Despite the importance of educating future retail managers in the rapidly evolving retail sector (Roggeveen and Beitelspacher, 2018; Towers et al., 2020), only a limited number of universities offer this kind of education, mainly focusing on: (i) evolution of retailing and future trends; (ii) store characteristics (i.e. layout, atmosphere, music and light), image and location; (iii) consumer behaviour; (iv) retail channels; (v) retail planning and strategy; (vi) suppliers and merchandise; (vii) distribution management; and (viii) retail marketing mix.

When we analyse the retailers' demand from an expertise perspective, we see there are numerous general competencies which may be applied and potentially demanded by many graduate positions, for example communication skills, influencing skills, drive and determination, team working. We also identify some specific skills which are highly demanded by retailers: (1) data-driven/ comfortable with data/strong analysis skills, (2) commercial savvy, (3) interest in future technology, (4) passion for fashion, (5) passion for food, including quality and safety, and (6) desire to work in marketing and social media. Thus, results highlight a strong retailers' response to the growing technological trend through a growing interest in graduates with technological expertise (e.g. data-driven/ comfortable with data/strong analysis skills and interest in future technology), largely recognizing the increasing impact of both technology in retail settings and the ability to derive value

from new and effective analytical techniques. As a result, acquiring expertise in data (with emphasis on big data) analytics and technology/innovation management will became even more important as a form of competitive advantage. Paul and Rosenbaum (2020) identify four main areas to support future studies in the retail industry, which are (i) new digital channels, (ii) development of best practice to guide service quality, service 4.0 and marketing 4.0 dimensions, (iii) new innovation orientations, and (iv) globalization and international challenges. Our results extend their framework by adding the importance of the challenges prompted by the large availability of data and the subsequent search for data analysts able to collect, interpret and transform data into value for the company.

Thus, Russell Group universities might consider this summary of skills demanded by retailers in the UK to extend their programmes/courses offerings, while non-Russell Group universities might take it into account to evaluate the extent to which the institutional offerings of existing retail-focused programmes/courses actually meet these requirements and revise accordingly.

Our findings further show the extent of the mismatch between the leading university educational offerings and the demand of specific expertise from retailers. Similarly, our research demonstrates that the strong tradition of retail-focused UK programs in the universities is not synthesized in the offer of the Russell Group Universities. Reducing the mismatch would lead to positive consequences for the employability of graduates. Russell Group universities are not currently aligned with the demand for graduates with retail knowledge, which would be addressed by adding retail contents to programs/courses. Given the role of these universities in the generation awareness of retailer research (Gunn *et al.,* 2017), coupled with the significant challenge of better aligning course content to the industry demand (Harrigan and Hulbert, 2011; Fredericksen, 2015), the inclusion of more specific retail programmes and modules would also result in more educated graduates fit for a career in retail management, enabling them to better meet the demand for graduates with retail knowledge.

Thus, our results should bring to the attention of educators and study directors the importance of specific retail education (with emphasis on the role of technology and innovation management) in

order to develop new university programmes/modules that encourage a more complete knowledge transfer from research into future retail professionals.

Finally, our findings posit new challenges for Higher Education, which should integrate the new required expertise into traditional courses/programmes. To this end, Higher Education might develop transformative learning environments, experiential education platforms (Oh and Polidan, 2018) and digital/mobile devices (Fischbach and Guerrero, 2018).

Despite the implications of the study, there are some limitations that should be taken into account. First, the research focused specifically on courses mainly devoted to retailing, excluding others if "retail" was not explicitly mentioned in the title module or contents (e.g. analytics of consumer behaviour). Future research might also include subjects that are relevant to the retail sector, especially those more likely to receive priority attention (Greweal *et al.*, 2017), such as technology and tools to facilitate decision making; big data collection and usage; analytics and profitability; consumption and engagement; and visual display & merchandise offer decisions; as well supply chains and distribution channels, which are well established topics in the operation management field. Thus, future research might expand our search by specifying also these other elements, which would partially provide some knowledge in retail specific sub-topics delivered by non-marketing programmes/courses. Secondly, despite the fewer average number of students studying at non-Russell group universities compared to the Russell Group universities (The Russell Group of Universities, 2017), further research might consider the case of all UK HE establishments including also the remaining 92 universities. This may provide a more comprehensive view of the offerings in retail education at a country level. Lastly, the research is based in the UK, and a comparison with other European countries, or US leading Universities might provide additional insights on the importance of retail education in more general terms.

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Retailer	Role	Area	Higher academic requirement	Discipline	Pre University qualifications	Non-academic requirements
Tesco	Non graduate	Food or Online	none	N/A	Not stated	"ideal candidate" description
	Graduate	All other	Bachelors 2(ii)	Any	Not stated	"ideal candidate" description
Sainsbury's	Internal Graduate programme	All	(2018 & 19) Bachelor's 2(i)	Any	(2018) Not stated (2019) ABB at A Level. GCSE B maths and English	Outstanding communications and people skills / Some relevant work experience
Asda	Internal Graduate programme	(2018) Operations		Any	Not stated	Natural leadership skills
		(2018) Commercial		Any	Not stated	analytical and organisational skills / commercially savvy / data-driven
		(2018) Technology	(2018) Undergraduate degree. For 2019 George, preference for a degree in Business, Digital, Creative and Fashion	Any	Not stated	desire for project management skills / interest in future technologies
		(2018 & 19) George		Any	Not stated	passion for fashion / desire to work in marketing and social media
		(2018 & 19) Finance	(2018) Finance or Management degree at a 2(i) level	Not stated	Not stated	
		(2019) Buying	business/analytical is preferred			
		(2019) Data Science	(2019) Data Science, Finance, Business Analysis or an analytical discipline such as Physics, Maths or Economics is required / sought in Computer Science, Data Science, Business Analysis or any relevant analytical or numerate discipline such as Mathematics and Physics			
Morrisons	Internal Graduate programme	(2018) Retail	Bachelor 2(ii)	Any	Not stated	"ideal candidate" description
		(2018 & 19) Manufacturing	Bachelor 2(ii)	Any	Not stated	"ideal candidate" description
		Logistics and supply chain. For 2019, this is two separate pathways	Bachelor 2(ii)	Any	Not stated	"ideal candidate" description

(2018) Buying	Bachelor 2(ii) For 2019 increased to 2(i)	Any	Not stated	"ideal candidate" description
(2018 & 19) Finance	Bachelor 2(i)	Any	3 A levels at grade B or above GCSE in English and Mathematics, both at grade C or above	"ideal candidate" description
Technology. For 2019 this is Technology and digital	Bachelor 2(i)	Any	Not stated	"ideal candidate" description
(2018 & 19)Corporate	Bachelor 2(i)	Any	Not stated	"ideal candidate" description
(2018 & 19) People	Bachelor 2(i)	Any	Not stated	"ideal candidate" description
(2018 & 19) Digital	Bachelor 2(i)	Any	Not stated	"ideal candidate" description
(2018 & 19) Nutmeg	Bachelor 2(i)	Fashion related	Not stated	"ideal candidate" description

Universities (in alphabetical order)	Courses/Programs on retail management	Modules on retail management	Covered topics
University of Birmingham	-	One (optional) module in Retail Marketing (post graduate)	Evolution of modern retailing and consumption practices; retail change, store characteristics (i.e. layout, atmosphere, music and light); shopping habits; retail channels; problems and opportunities.
University of Bristol	-	-	-
University of Cambridge	-	-	-
Cardiff University	-	-	-
Durham University	-	One (optional) module in Retail and Services Marketing (undergraduate)	Retail Planning and Strategy; store location; store management and merchandise; store image; Locating the store
		One (optional) module in Retail Marketing (post graduate)	Retail planning and strategy; new forms of retailing; consumer behavior; retail organization and human resource management; and operations management; merchandise management; pricing in retailing; retail image management
		Retail Management (post graduate)	Retail management and strategies; omnichannel retailing; Location management and intelligent network planning; retail data analysis; data requirements for market segmentation (geodemographic, psychographic, and behavioral); key metrics (Customer Lifetime Value, Marketing ROI, Scanner Data, EPOS, etc.); Brand management metrics and brand commerce models; financial analytics in retail and distribution management
		One (core) module in Retail Science (post graduate)	management
University of Edinburgh	-	-	-
University of Exeter	-	-	-
University of Glasgow	-	One (optional) module in Retail Marketing (post graduate)	Retail management decisions; retail marketing mix; strategic planning and implementation of retail activities; consumer behavior; suppliers and merchandise; retail marketing theory and practice; future trends in retailing.

University	Programme	Module	Description
Imperial College London	-	-	-
King's College London	-	-	-
University of Leeds	-	One (optional) module in Applied GIS and Retail Modelling (post graduate)	Retail growth strategies and store location decision; store attractiveness; demand estimation.
		One (optional) module in Global Fashion Retail Management (post graduate)	Fashion retailers strategic management; internationalisation and international marketing strategies for fashion retailing; consumer behavior; supply chain and merchandise; physical and virtual retail space management; retail services.
University of Liverpool	-	One (compulsory) module in Retail Marketing (undergraduate)	Consumer behavior with emphasis on store choice; choice of suppliers and merchandise; strategic planning and implementation of retail activities; location and management of a store network; retail marketing mix.
London School of Economics and Political Science	-	-	-
University of Manchester	MSc International Fashion Retailing	One (compulsory) module in International Fashion Retailing (post graduate)	Motivations of international fashion retailers; international fashion retail expansion methods; e-marketing process and techniques; luxury branding process
		One (compulsory) module in Contemporary Retailing (post graduate)	Issues in the contemporary retail environment; factors influence the nature and development of the contemporary retail industry; relevance and applicability of a strategic perspective in the contemporary retail industry.
Newcastle University	-	One optional module in Retail and Investment Banking (postgraduate)	Roles of retail and investment banks within the financial system.
University of Nottingham	-	-	-

University		
University of Oxford	-	-
Queen Mary University of London	-	-
Queen's University Belfast	-	-
University of Sheffield	One (compulsory) module in Retail and Services Marketing (post graduate)	Marketing theories for retail context; retail operations using a retail audit
University of Southampton	One (optional) module on International Retailing (under graduate)	Issues and complexity for international retailers; global retailing activities; financial implications of market entry strategies; retail marketing principles
	One (optional) module in Retailing in the Digital Age (post graduate)	Evolution of retailing; multi-channel retailing and innovation in multichannel retailing; implementation of online stores
University College London	One (optional) module in Retail and Consumer Entrepreneurship (post graduate)	Retail business models; modern commerce; the digital customer journey; multi-sided platforms; retail innovation; consumer and retail analytics; AI, Voice, and Programmatic Shopping.
University of Warwick	-	-
University of York	-	-

Table 2. Retail education offer for the academic year 2020/202\ in Russel Group universities.
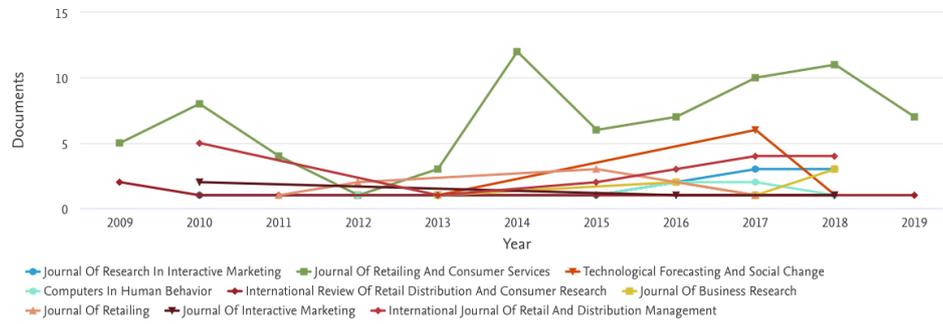
Figure 1: The publication trends of papers related to technological innovation listed by source in Scopus

410x146mm (72 x 72 DPI)
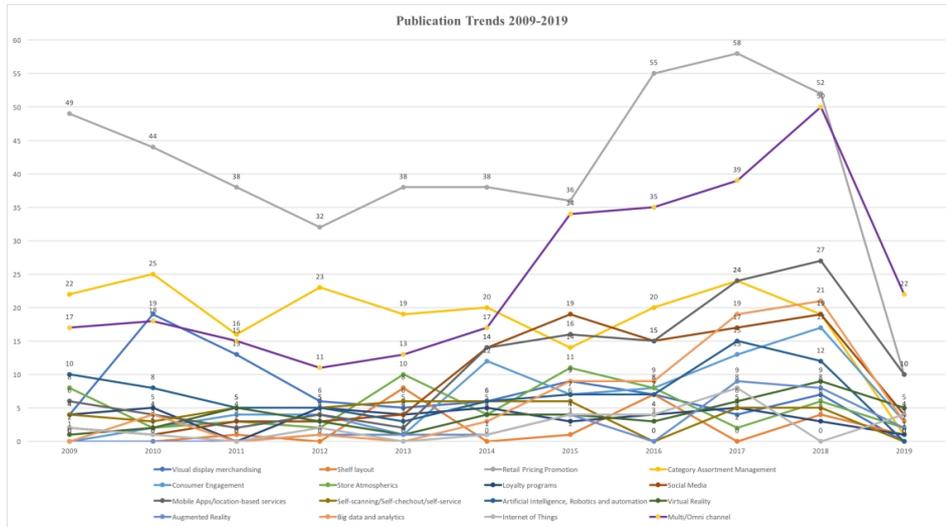
Figure 2. Scopus analysis on the keywords.

826x460mm (72 x 72 DPI)

STEP 1	Identification of top retailers in UK	Identification of main skills/expertise required in job vacancies
STEP 2	Identification of top universities in UK	Identification of main skills/competencies provided in courses/programmes (UG and PG)
STEP 3	Match between retailers' data and universities' data	
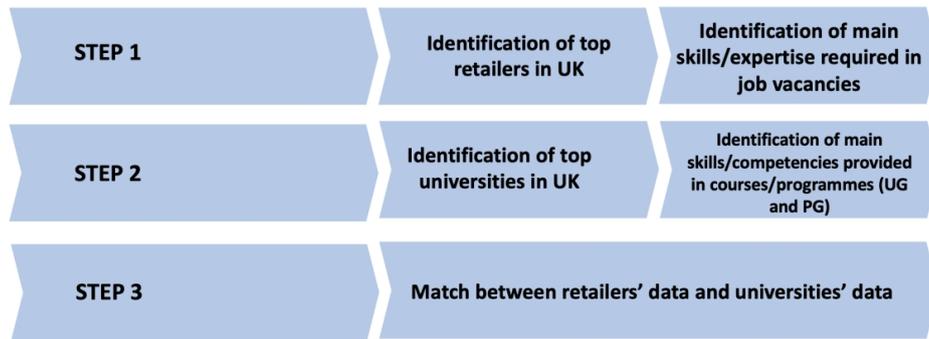
Figure 3: Research pipeline

408x156mm (144 x 144 DPI)