

ASSESSING THE CASE FOR ZERO-RATING VAT ON DIGITAL PUBLICATIONS

A report for the Publishers Association /
Professional Publishers Association

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CONTENTS

Executive Summary	4
Context	4
Our findings	4
1 Introduction	10
1.1 The UK publishing sector	10
1.2 The current VAT position for physical and digital publications	10
1.3 The opportunity for change	11
1.4 The purpose of this report	12
2 Understanding the market	13
2.1 Digital publications in the UK	13
2.2 Characteristics of readers of digital publications	17
2.3 Characteristics of the market and supply-chain for digital publications	23
2.4 Observations	26
3 The economic rationale for zero-rating digital publications	28
4 Impacts of zero-rating digital publications for consumers and suppliers	32
4.1 Prices of digital publications	32
4.2 Impacts for consumers of digital publications	34
4.3 Economic impacts for the digital publications sector	38
4.4 Observations	42
5 Revenue impacts for the Exchequer	44
5.1 Direct revenue impacts for the Exchequer	44
5.2 Indirect revenue impacts for the Exchequer	47
5.3 Enforcement and compliance issues	48
5.4 Observations	49
Annex: Revenue impact assumptions	51

EXECUTIVE SUMMARY

Context

In the UK, printed books, newspapers, journals and magazines (or 'periodicals') are zero-rated for VAT. In contrast, digital versions of these publications are subject to standard-rate VAT of 20%.

VAT is subject to various European Commission (EC) Directives which attempt to harmonise, to a degree, the rates and structure of VAT across Member States. As the UK already had a zero rate for physical books prior to 1991, this could continue; however, a zero rate could not be applied to new products, including digital publications.

There are new opportunities to revisit the VAT position of digital publications. The UK has invoked Article 50 and begun a two-year process to withdraw from the European Union. While the relationship that the UK will have with the EU after March 2019 is not yet clear, it is possible that after this point the UK will have the opportunity to change and amend its VAT structure without reference to EC Directives. Even if the post-Brexit arrangements mean that the UK is still constrained by these Directives, the EC has agreed proposals allowing member states to apply reduced VAT rates for digital publications. The new rules, announced in October 2018, will allow Member States to apply the same rate of VAT to digital publications as to physical publications.

In light of these developments, Frontier Economics were commissioned by the Publishers Association (PA) and the Professional Publishers Association (PPA) to assess the economic case for introducing a zero rate of VAT for digital publications in the UK, and the likely impacts. We focus principally on the digital publications of the sectors represented by the PA and PPA: books, journals and magazines. We also include analysis of digital newspaper publications for completeness.

Our findings

We find that there is a strong case for introducing a zero rate of VAT for digital publications. This reflects the economic case for harmonising the tax treatment of similar products, the expected benefits for consumers and the UK publishing sector, and the modest costs to the Exchequer in reduced tax revenues.

Harmonising the tax treatment of digital and physical publications

Digital and physical publications are very similar products. In many cases, the content is identical. The main differences relate to the format and functionality of digital publications, and the need to read them on a device such as a Kindle or tablet. Given these similarities, there is a strong case for bringing the VAT treatment of digital publications in line with that of physical publications.

The reasons for applying a zero rate for physical publications are just as valid for digital publications

The zero-rating of VAT for physical publications is designed to help facilitate access to information and knowledge. This in turn leads to well established spillover benefits through educational value, improved literacy, and cultural enrichment. The wider economic impacts from these benefits are substantial. For example, estimates suggest low literacy rates in the UK cost the taxpayer £2.5 billion every year and could cost £32 billion in GDP growth by 2025.

The same reasons are valid for a zero rate of VAT on digital publications. The benefits from reading relate to the content of what is being read, rather than its format. Digital publications typically provide access to exactly the same information and knowledge as their equivalent physical publications, just in a different format. Digital publications also have the added advantage of providing readily adjustable formats for those with accessibility needs.

Simplifying the tax system

Harmonising the VAT on digital publications in line with the treatment of physical publications would also simplify the tax system for consumers, businesses and retailers. This has two key dimensions:

- **Removing complexity in the tax system:** the difference in VAT treatment between physical and digital publications adds complexity to the current tax system. This is especially the case where business models often involve bundles of physical and digital content. For example, a magazine subscription could provide a reader with access to both a physical and digital magazine. The supplier must then apportion value between the physical and digital aspects of the subscription, when in practice much of the creative process is common to both. Similar issues also arise for books and journals. This makes the tax system harder to understand for consumers and businesses, and harder and more costly to comply with. Moving to a single zero rate for publications would remove this complexity, and reduce the associated compliance costs for publishers and digital content businesses.
- **Fairness.** It is fairer to apply the same VAT rate to both digital and physical publications. This fairness applies to consumers of digital publications in general, who are likely to be paying higher prices than they otherwise would have to if a zero rate were also applied to digital publications. Issues of fairness also apply particularly to those consumers who require digital publication formats because of accessibility needs, such as larger font sizes or text-to-speech functions. The current tax differential means these consumers are paying VAT while those able to use physical publications are not.

Impacts for consumers and the UK publishing sector

Zero-rating VAT on digital publications would have important impacts for consumers and the UK publishing sector.

Benefits for consumers

Consumers will benefit from lower prices where VAT reductions are passed-through into final prices. The likely extent of pass-through is market-specific and difficult to reliably predict. For consumer e-books, we anticipate that a high degree of pass-through is likely. This reflects the price competition between publishers, self-publishers and different retailers in the digital market. Pass-through into prices is also expected for journals and magazines but could be more partial because of the more complex pricing models for these publications, such as the use of subscription models that bundle both physical and digital products.

Where prices are reduced, this would help expand the economic and social benefits of reading, especially among those that are more budget constrained. This includes low income households, younger readers, public libraries, and students and academic libraries. Younger readers aged 13 to 24 account for only 14% of e-book sales compared with 21% of physical book sales. For university students, academic books can be a significant expense: some estimates put the cost between £450 and £1,070 per year including VAT. Lower prices could therefore help enhance access to digital publications for budget constrained readers.

Investment in quality content and innovation

A reduction in VAT would provide a stimulus for greater investment at a challenging time in the UK publishing sector.

The UK publishing sector is facing significant long-term structural challenges. Physical magazine and newspaper sales are in long-term decline, affecting both direct sales revenues and advertising revenues. Online content faces competition from freely-available material and broader online channels such as social media. A recent review into the future of high-quality journalism in the UK found that total press industry revenues declined by more than half over the last ten years, and the number of full-time journalists has fallen by over 25% since 2007.¹ Whilst book publications have performed relatively strongly in recent years, challenges remain.

A reduction in VAT could provide a stimulus for greater investment as the publishing sector adapts to these challenges. Our interviews with publishers highlighted key areas where investment is needed. There is a need for investment to keep pace with innovative new online platforms, which are important for attracting readers and advertising revenues. Investment in skilled staff is also important to attract and retain staff in the face of growing competition from other sectors. This investment is important for the future sustainability of quality journalism in the UK.

¹ <https://www.gov.uk/government/news/tackling-the-threat-to-high-quality-journalism-in-the-uk>

Market expansion

The publishing sector already makes a significant contribution to the UK economy. The books and journals publishing sector generates up to £7.8 billion GVA for the wider UK economy and supports more than 70,000 jobs in direct, indirect and induced impact.² The value of the UK magazine sector is estimated at around £4 billion.³ The UK news media industry contributes a further £5.3 billion in GVA.⁴

Zero-rating VAT on digital publications would expand the publishing market in the UK. This could be as a direct result of lower prices, as consumers increase their demand for digital publications; and indirectly as a consequence of increased investment in quality content and innovation in the sector, as described above. Market expansion will also benefit authors through increased sales, with digital publications offering another route to market. The full economic impact would be larger still, reflecting the direct, indirect and induced impacts of the publishing sector on the UK economy noted above.

Evidence from economic studies and our stakeholder interviews shows that the growth of digital publishing would expand the overall size of the publishing market: the majority of new digital sales would be additional, rather than coming at the expense of physical publications. This reflects that digital and physical markets serve different consumer types, particularly in books. Interviews with magazine publishers also suggested that while there has been a long-run trend from print to digital, future digital growth is likely to come more from wider digital media than physical magazine sales. The degree of substitution between digital and physical publications is likely to fall over time as markets mature, suggesting limited substitution in mature markets such as the UK.

Costs to the Exchequer

Applying a zero rate of VAT to digital publications would involve a modest direct cost to the Exchequer. This would be offset in part by reduced costs for publicly funded institutions buying digital publications, and increases in broader tax receipts as a result of expansion in the UK publishing sector.

Direct costs to the Exchequer

We estimate an annual cost to the Exchequer in terms of reduced VAT revenues of approximately £210 million in 2019/20, rising to £250 million in 2023/24. This is a direct cost, and does not factor in potential savings to the public sector which might come from zero-rating digital publications (which as a conservative estimate could be £50 million to £55 million per year, see below) or additional tax revenues from market expansion of the digital publications sector.

The estimates reflect data and market intelligence on the current size of the digital markets for books, journals, magazines and newspapers. The estimated costs

² Frontier Economics (2017), *The Contribution of the Publishing Industry to the UK Economy*, available at <https://www.publishers.org.uk/policy-research/value-of-uk-publishing/>

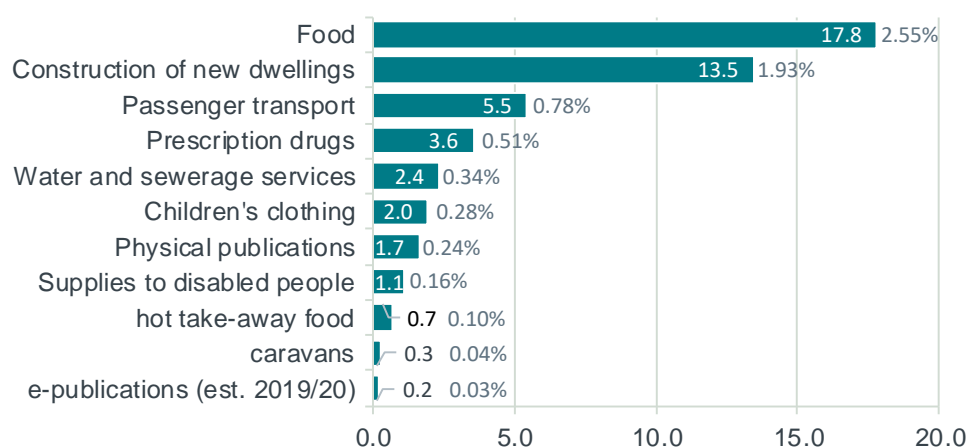
³ Professional Publishers Association

⁴ Deloitte (2016), 'UK News Media: an engine of original news content and democracy'

increase over time as a result of expected future growth in the digital publication sector.

This cost to the Exchequer is small relative to wider tax receipts and other goods and services that are zero-rated for VAT. Our estimate of the cost of zero-rating digital publications is 0.03% of the total forecast UK tax take in 2019/20, or 0.14% of total VAT receipts. The costs are also small compared with other zero-rated goods and services (Figure 1).

Figure 1 Estimated cost of zero-rating e-publications in 2019/20 compared with estimated cost in 2017/18 of other zero-rated goods and services (£ billion and % of total tax receipts)



Source: Frontier Economics estimates for e-publications based on industry data and industry interviews; Costs for other goods and services from HMRC Estimated Costs of Tax Reliefs (January 2018)

Note: Figures rounded to nearest £100 million. Figures for e-publications are 2019/20 forecasts; figures for hot take-away food and caravans are tax base estimates from Budget 2012; figures for other goods and services are 2017/18 forecasts

Indirect impacts for the Exchequer

There are also indirect impacts that we anticipate would partially offset the reduction in VAT from digital publications.

Savings for some publicly-funded institutions

A proportion of digital publications are sold to institutions that are funded at least in part through public funding, such as universities, libraries, government departments and the NHS. There is a cost saving for these institutions if prices of digital publications fall as a result of zero-rating. Evidence on the scale of these sales is limited, but we estimate that the savings could amount to around £50 million to £55 million per year, or one-quarter of the total estimated Exchequer cost. This may be an underestimate, as it does not fully capture digital sales to government departments or the NHS, for example. There would also be broader savings from reduced administrative costs, because of the complexities faced with the current structure of differential VAT rates.

Wider tax revenues as a result of market expansion

Wider tax revenues would also increase from the expansion in the size of the UK publishing sector following a VAT reduction. This market expansion would be expected to increase revenues for publishers, authors, retailers, the supply chain

and businesses using digital content, which could increase corporation taxes as a result. Increases in wages or numbers of jobs in these sectors could also increase income tax and National Insurance Contributions receipts. And where consumers save money because of lower digital publication prices, they may spend this money elsewhere in the economy, increasing VAT receipts from other types of goods and services. Quantifying the net size of these revenue benefits was beyond the scope of this report, but could help further offset the direct Exchequer cost.

1 INTRODUCTION

1.1 The UK publishing sector

The publishing sector makes a significant contribution to the UK economy. The books and journals publishing sector generates £3.2 billion in gross value added directly and potentially up to £7.8 billion for the wider UK economy, supporting up to 70,000 jobs in direct, indirect and induced impact.⁵ The value of the UK magazine sector is estimated at around £4 billion.⁶ The UK news media industry contributes a further £2.2 billion in direct GVA and £5.3 billion including indirect and induced effects.⁷

Digital publications have been growing in importance across the UK publishing sector. Collectively e-books and audio books were around 19% of the UK consumer book market in 2017. Electronic journals accounted for 86% of journal subscription income in the same year. The share of magazine sales that are digital has grown from 3% in 2012 to 16% in 2016.

The UK publishing sector can play an important role in contributing to the goals of the UK's Industrial Strategy. The sector is high skilled, with productivity levels around twice the UK average⁸ and has a strong export focus, with total exports of books and journals totalling £2.6 billion.⁹ The growth of digital publications is building on the strengths of the UK sector and contributing to the Industrial Strategy's digital agenda.

DEFINITION OF DIGITAL PUBLICATIONS

For the purpose of this report, we refer to 'digital publications' to capture all digital formats of books, journals, magazines (or 'periodicals') and newspapers. Our focus is principally on the first three of these categories as their publishers are represented by the Publishers Association and the Professional Publishers Association, but we also include newspapers to provide an assessment of the sector as a whole.

1.2 The current VAT position for physical and digital publications

In the UK, printed books, newspapers, journals and magazines (or 'periodicals') are zero-rated for VAT.¹⁰ By contrast, digital versions of these publications are subject to standard-rate VAT of 20%. VAT is subject to various European

⁵ Frontier Economics (2017), 'THE CONTRIBUTION OF THE PUBLISHING INDUSTRY TO THE UK ECONOMY'

⁶ Professional Publishers Association

⁷ Deloitte (2016), 'UK News Media: an engine of original news content and democracy'

⁸ GVA per worker in UK books and journals publishing, Frontier (2017)

⁹ The Publishers Association, Publishing Yearbook 2016

¹⁰ See <https://www.gov.uk/government/publications/vat-notice-70110-zero-rating-of-books-and-other-forms-of-printed-matter/vat-notice-70110-zero-rating-of-books-and-other-forms-of-printed-matter> for details. Zero-rating means that no VAT is liable on the sales of books but that VAT charged on inputs can still be reclaimed. The zero-rating also applies to newspapers, journals and periodicals.

Commission Directives which attempt to harmonise, to a degree, the rates and structure of VAT across Member States:

- A minimum 5% rate of VAT applies to all goods and services, except for those where lower or zero rates already applied before 1991.¹¹
- Reduced rates of VAT (including zero) can be applied to specific categories of goods and services, including ‘books on all physical means of support’.¹²

As the UK already had a zero rate for physical publications prior to 1991, this could continue; however, it could not be applied to new products, including digital publications.

1.3 The opportunity for change

There have been growing calls for the VAT treatment of digital publications to be brought in line with that of physical publications.

Some Member States have attempted to unilaterally apply reduced rates of VAT to digital publications on the basis of ‘fiscal neutrality’ – that the tax system should not treat essentially equivalent goods and services differently. These have been challenged and defeated in European Courts, on the grounds that physical and digital publications are functionally different products.¹³ In particular, digital publications were viewed as digital services rather than physical goods, and require another device in order to be used.

There are new opportunities to revisit the VAT position of digital publications in the UK. The UK has invoked Article 50 and begun a two-year process to withdraw from the European Union. While the relationship that the UK will have with the EU after March 2019 is not yet clear, it is possible that after this point the UK will have the opportunity to change and amend its VAT structure without reference to EC Directives. Even if the post-Brexit arrangements mean that the UK is still constrained by these Directives, the EC has agreed proposals allowing member states to apply reduced VAT rates for digital publications. The new rules, announced in October 2018, will allow Member States to apply the same rate of VAT to digital publications as to physical publications. The rules will apply temporarily, pending the introduction of a new ‘definitive’ VAT system that has been proposed to provide greater flexibility to Member States on VAT rates more broadly.¹⁴

In either case, the UK government will soon have new freedoms to set the VAT rate on digital publications which it previously has not had.

¹¹ Directive 2006/112/EC, Articles 98 and 110

¹² Directive 2006/112/EC, Annex 3

¹³ <https://curia.europa.eu/jcms/upload/docs/application/pdf/2017-03/cp170022en.pdf>

¹⁴ <https://www.consilium.europa.eu/en/press/press-releases/2018/10/02/electronic-publications-council-agrees-to-allow-reduced-vat-rates/>

1.4 The purpose of this report

Frontier Economics were commissioned by the Publishers Association and the Professional Publishers Association to assess the case for applying a zero rate of VAT to digital publications in the UK.

We draw on a combination of evidence sources to provide this assessment: quantitative data on the UK publishing sector, and evidence from the relevant UK and international literature including economics, humanities, and ‘grey’ literature. We also interviewed sector experts to provide further insights. This included roundtables with publishers of consumer books, academic books and journals, and magazines; and interviews with wider stakeholders such as the DAISY Consortium.¹⁵

The remainder of this report covers the following areas:

- Section 2 explores key trends and characteristics of the UK digital publications market;
- Section 3 assesses the economic rationale for zero-rating VAT on digital publications;
- Section 4 explores the impacts for consumers and suppliers of digital publications; and
- Section 5 provides estimates of the implications for the Exchequer of zero-rating VAT on digital publications.

¹⁵ DAISY are a global consortium with the objective “to develop global solutions for accessible publishing and reading, in partnership with civil society, publishing and technology industries, standards bodies and governments.” www.daisy.org/mission

2 UNDERSTANDING THE MARKET

This section outlines the nature of the market for digital publications in the UK. We consider recent sales growth, and key characteristics of digital publication consumers and the supply-chain.

2.1 Digital publications in the UK

Recent trends in the markets for digital publications vary by publication type:

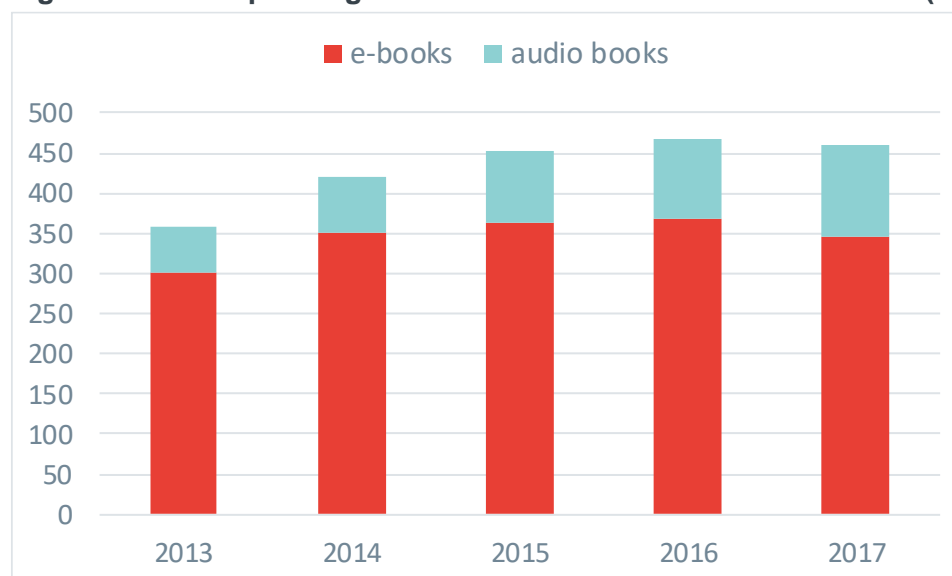
- E-books experienced strong growth historically but have since been on a broadly flat trend, while audio books sales are growing rapidly. These formats make-up around 19% of the total consumer books market.
- Digital penetration in the journals market is very high, with digital journals constituting some 82% of publisher income from learned journals.
- Digital sales of magazines have grown strongly from a relatively low base, and now make-up around 16% of the market.

These trends are outlined in more detail below.

2.1.1 E-books and audio books

Spending on e-books by UK consumers was £345 million in 2017. Spending growth has been relatively flat in recent years after a period of more rapid growth from 2013 to 2015. Audio book spending was somewhat lower at £114 million in 2017, but has been growing more rapidly, doubling over the period since 2013. Collectively e-books and audio books were around 19% of UK consumer book spend in 2017.

Figure 2 UK spending on consumer e-books and audio books (£m)



Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018

Over the same period, there has been steady growth in the physical books market, growing by an average of 9% per year from 2013 to 2017.¹⁶ This suggests the market for books as a whole has expanded, rather than there being a direct substitution between the two formats over this period.

Sales of e-books in the academic and professional sector totalled £147 million in 2017. These sales showed strong growth from 2013 to 2017 and steadier growth in recent years.

Spending on academic textbooks can be a burden for some students (although collective licensing solutions are available to help in some cases), with costs of academic books thought to be in the region of £450 to £1,070 per year.¹⁷

Figure 3 UK publisher sales of academic and professional digital books (£m)



Source: *Publishers Association Yearbook*

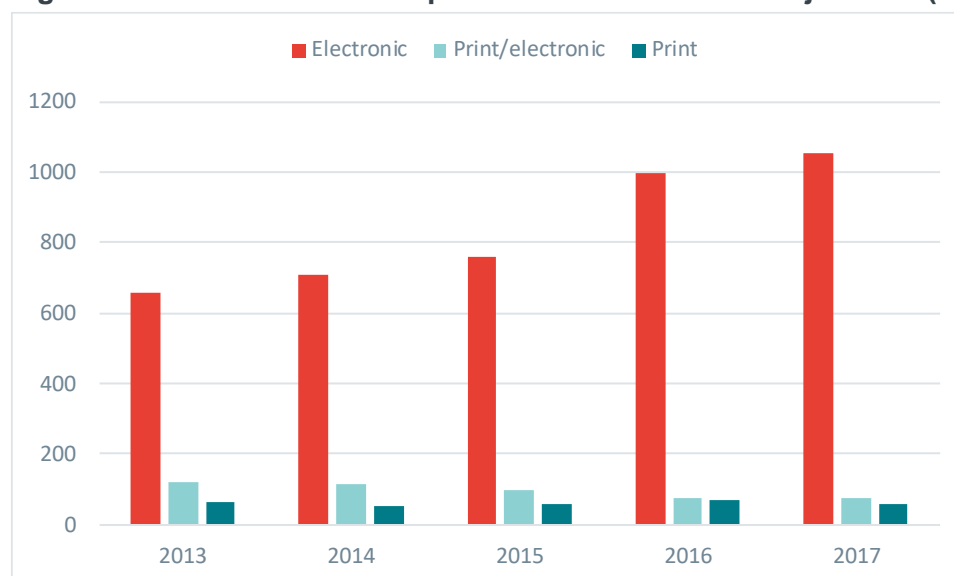
2.1.2 Journals

Publisher subscription income from electronic journals reached £1,055 million in 2017 after a period of strong growth. This compared to subscription income of £75 million from bundles and £58 million from print in 2016, both of which have been steadily declining as electronic journal sales have grown. Electronic journals accounted for 82% of subscription income in 2017.

¹⁶ Publishers Association Yearbook

¹⁷ <https://online.essex.ac.uk/blog/630-per-student-the-cost-of-paper-textbooks/>

Figure 4 Publisher subscription income from learned journals (£m)



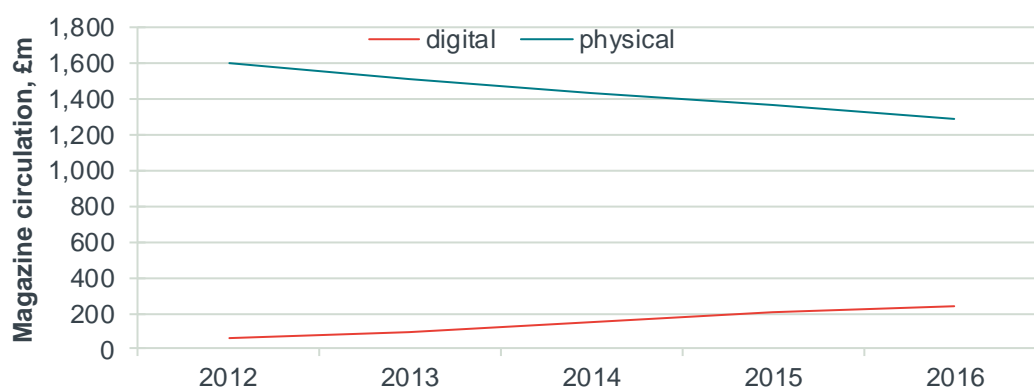
Source: Publishers Association Yearbook

As well as subscription income, total publisher incomes from journals also include some article processing charges, advertising revenues, and other non-subscription incomes. Taking these into account, total publisher income was £1,567 million in 2017. However £1,367 million of this revenue is exports and therefore outside of the tax impacts of zero-rating VAT on digital publications in the UK.

2.1.3 Magazines

Digital sales of magazines have been growing strongly in recent years, to reach £223 million in 2016, constituting 16% of the market. This is in contrast to physical magazine publications which have been experiencing a long-term downward trend, as consumers engage with magazine media in new ways across multiple platforms.

Figure 5 UK magazine circulation (£m)



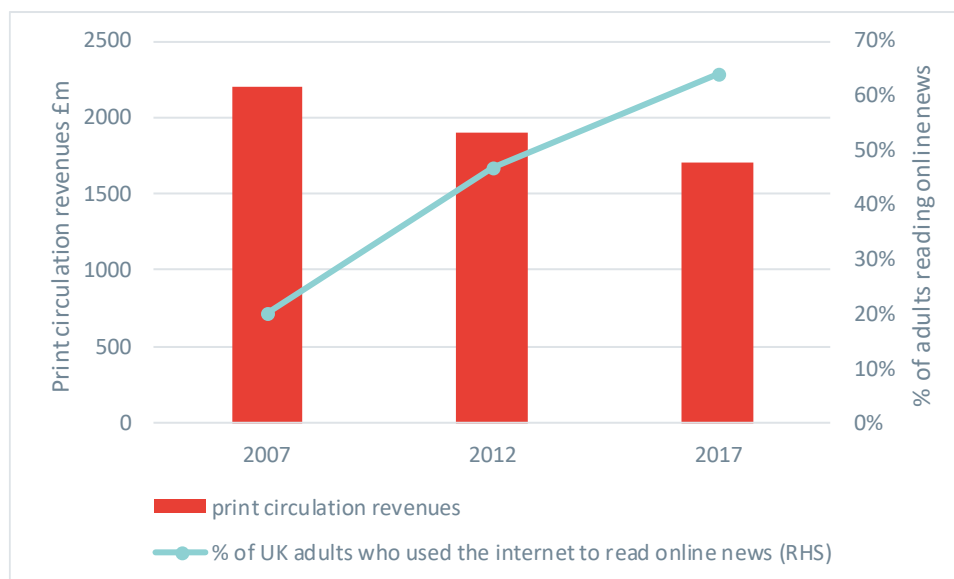
Source: PwC Global Entertainment & Media Outlook: 2018-2022, www.pwc.com/outlook © 2018 PwC

Note: Consumer and trade publications

2.1.4 Newspapers

Circulation of print newspapers have been declining steadily over the past decade, and now stand at approximately £1.7 billion per year. Over the same period, the prominence of reading news online has grown significantly. In 2007, 20% of UK adults used the internet to read online news, whereas in 2017 this had reached 64%.

Figure 6 Newspaper print circulation revenues and reading of news online



Source: Mediatique 2018, ONS Home internet and social media usage 2017¹⁸

Many newspaper titles have digital content freely available through their websites. Examples of leading titles with paywalls or alternative online pricing approaches are summarised in Figure 7 below.

¹⁸ Mediatique (2018), report for Department for Digital, Culture, Media and Sport, Overview of recent dynamics in the UK press market

Figure 7 Newspaper digital pricing models and subscriptions numbers

News brand	Online distribution model	Pricing	Number of subscribers
Times	Hard paywall	<ul style="list-style-type: none"> ▪ Digital Pack, £6pw ▪ Sunday Digital Pack, £2pw ▪ Included with most print subscriptions 	413,600 (185,200 digital only), June 2016
Financial Times	Hard paywall	<ul style="list-style-type: none"> ▪ Standard Digital, £5.35pw ▪ Premium Digital, £8.60pw ▪ Print and digital, £14.50pw 	700,000 digital subscribers (500,000 from corporate and institutional subscriptions), November 2017
Daily Telegraph	Mixed	<ul style="list-style-type: none"> ▪ Premium, £2pw ▪ Premium Digital Editions, £6pw ▪ Included with all print subscriptions 	N.A.
Guardian	Membership scheme	<ul style="list-style-type: none"> ▪ Supporter, £5pm ▪ Partner, £15pm ▪ Patron, £60pm ▪ One-off contributions 	500,000 members + 300,000 one-off donors, November 2017

Source: Mediatique, 2018¹⁹

Note: pw=per week, pm=per month

2.2 Characteristics of readers of digital publications

The characteristics of people reading and buying digital publications provides important contextual information on who would be the beneficiaries of a change to zero-rating VAT. It is also useful to consider which groups read fewer digital publications, as these groups may also benefit as a zero rate of VAT could help to broaden the market for digital publications to new readers.

We consider the reader characteristics for book, magazine and newspaper publications in turn.

2.2.1 Readers of consumer e-books publications

Information on the distribution of the volume of e-books sold, broken down by the characteristics of the purchasers, is provided in Nielsen consumer data. Our analysis of this data shows that:

¹⁹ Mediatique (2018), report for Department for Digital, Culture, Media and Sport, Overview of recent dynamics in the UK press market

- **Age group:** those aged 65 to 84 purchase a larger share of e-books sold than physical books, and those aged 13 to 24 buy a smaller share of e-books than physical books.
- **Gender:** females buy a larger share of e-books sold than physical books.
- **Income group:** the pattern of sales by income group is similar for both e-books and physical books.

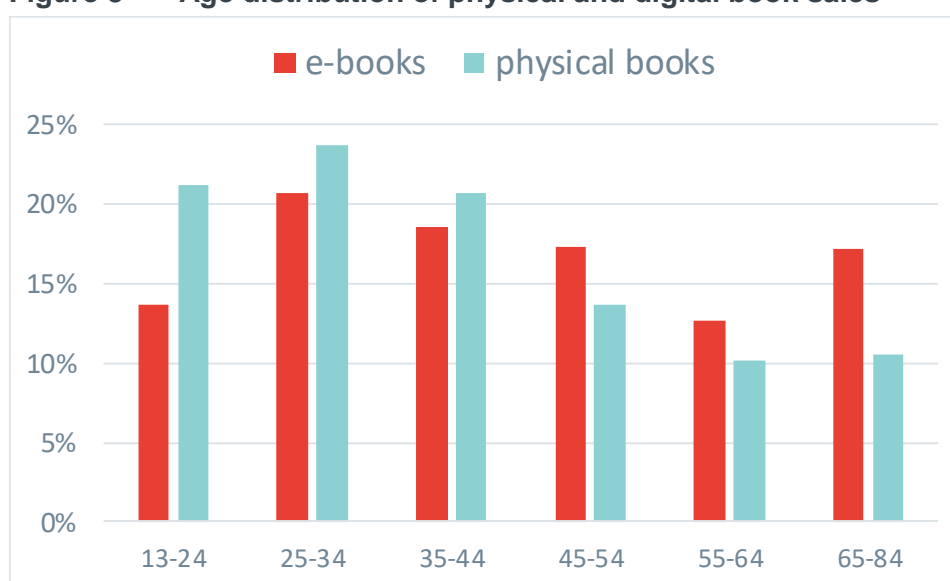
Age distribution of e-book and physical book sales

Those aged 13 to 24 account for around 14% of e-books sold, compared with 21% of physical books. The age distribution of physical books sold is generally more concentrated in the younger age categories. The lower proportion of e-book sales in younger age groups comes despite children and young people spending significantly more time reading online than they do reading physical books.²⁰

17% of e-books sold are to those aged 65 to 84, compared with 11% of physical books. The higher proportion of e-book sales in older age groups is likely to reflect the ease of accessible formats with e-books, that can be important for those older people with visual impairments. It could also be that these age groups contain more high volume readers, who are more likely to buy e-books.

Any reduction in e-book prices resulting from a VAT change would, though, bring benefits across age groups.

Figure 8 Age distribution of physical and digital book sales



Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018

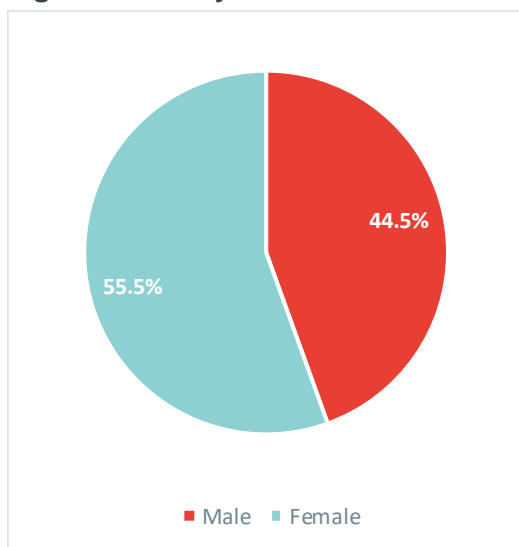
Gender distribution of e-book and physical book sales

The gender distribution of e-books sold shows females account for 64% of sales compared with 56% of physical books. Any reduction in e-book prices resulting

²⁰ National Literacy Trust, Book Ownership and Reading Outcomes, 2017

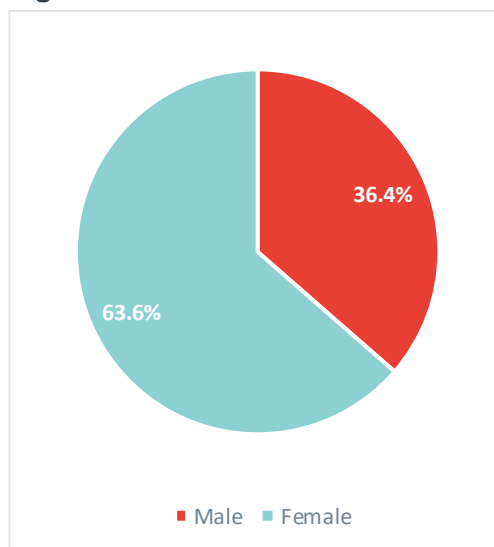
from a VAT change would, therefore, likely bring slightly larger benefits to female readers.

Figure 9. Physical books



Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018

Figure 10. E-books



Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018

Income distribution of e-book and physical book sales

The income distribution of e-book sales is similar to that of physical book sales.

Figure 11 Income distribution of e-books and physical book sales



Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018

Around a third of e-book and physical book sales are made by those on incomes below £24,000 per year. There are spikes of higher proportions of sales for those

on middle incomes of £28,000-£35,000 and also those in the highest income category of £55,000 or more. This suggests that the distributional impact of any reduced e-book prices would be very similar to that of physical books, benefitting those in all income groups.

2.2.2 Readers of magazines

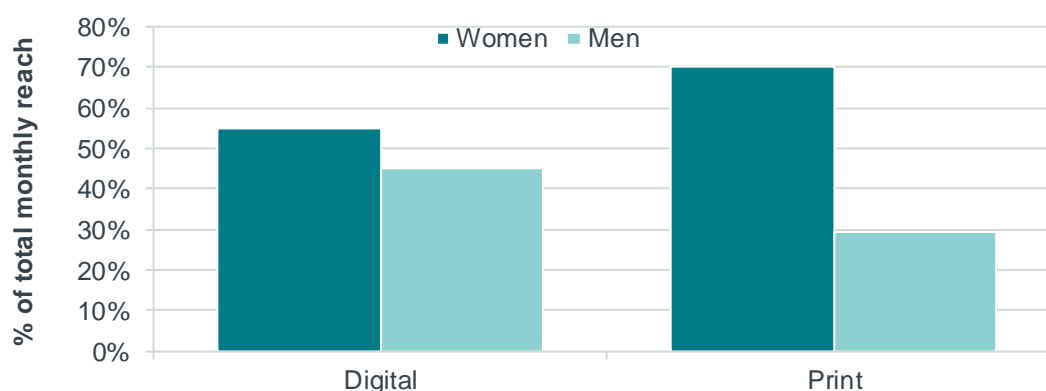
Information on the characteristics of magazine readers is provided by PAMCo audience reach data. Our analysis of monthly audience reach data for digital and print magazines shows the following characteristics:

- **Gender:** readership of digital magazines is relatively evenly split between men and women, with 55% women readers. This is in contrast to print magazine, where 70% of readers are women.
- **Age group:** The age profile of digital magazine reach is more centred on younger readers than for physical magazines. Those aged 15-24 and 25-34 collectively make-up some 40% of digital magazines reach, compared to around 18% for physical magazines.
- **Income group:** most readers of digital magazines, 74%, are in the higher three income groupings (ABC1). This is a slightly higher proportion than for print magazines, where 61% are in the higher income groupings.

Distribution of magazine readers by gender

Digital magazine readers are relatively evenly split between men and women, with 55% women readers. This is in contrast to physical magazines, where 70% of readers are women.

Figure 12 Magazine reach by gender 2017/18

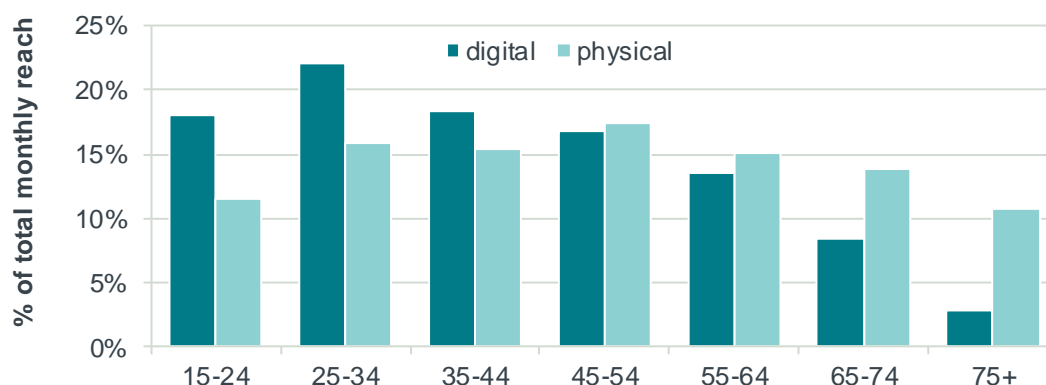


Source: Frontier analysis of PAMCo data

Distribution of magazine readers by age

The reach of magazines by age grouping for digital and physical magazines is shown in Figure 13 below. The age profile of digital magazine reach is more centred on younger readers than for physical magazines. Those aged 15-24 and 25-34 collectively make-up some 40% of digital magazines reach, compared to around 18% for physical magazines.

Figure 13 Magazine reach by age grouping 2017/18

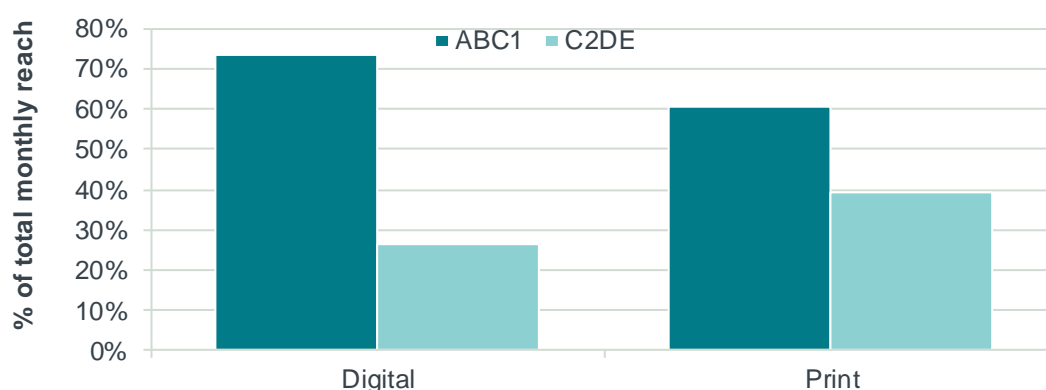


Source: Frontier analysis of PAMCO data and Magnetic Media analysis

Distribution of magazine readers by income

Income distribution data is grouped into two categories: higher incomes of ABC1 and lower incomes of C2DE.²¹ Most digital magazine readers, 74%, are in the higher income categories. This compares to print magazine where 61% of readers are in the higher income categories.

Figure 14 Magazine reach by income grouping 2017/18



Source: Frontier analysis of PAMCo data

2.2.3 Readers of newspapers

Information on the characteristics of newspaper readers is also provided by PAMCo audience reach data. Our analysis of monthly audience reach data for newspapers shows modest differences in readership between digital and physical newspapers:

- **Gender:** there is a slight difference in the gender distribution of newspaper reach between digital and physical newspapers. Women readers make-up 53% of monthly reach for digital newspapers compared to 46% for physical newspapers.

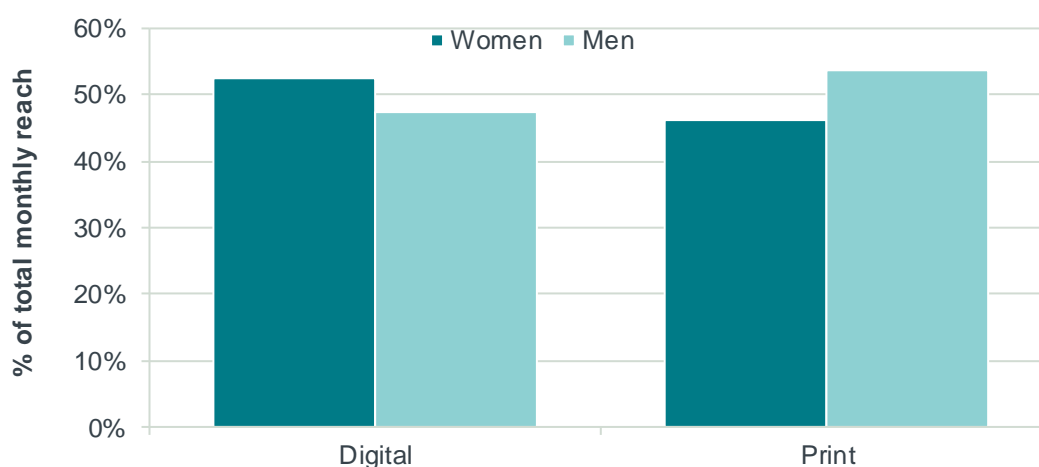
²¹ The individual socio-demographic categories relate to: A – upper middle class, B – middle class, C1 – lower middle class, C2 – skilled working class, D – working class, E – non-working.

- **Age group:** the majority of newspaper readers are in the 35+ age grouping. Those in the 15-34 grouping are slightly higher for digital newspapers, at 37%, compared to 29% for physical newspapers.
- **Income group:** Most readers of newspapers are in the higher ABC1 income groupings. The proportion in this income group is slightly higher for digital newspapers, at 70%, compared to physical newspaper readers at 60%.

Distribution of newspaper readers by gender

A slightly higher proportion of the total monthly reach of digital newspapers is with women readers, who make-up 53%. The opposite is true for physical newspapers, where women readers make-up 46% of monthly reach.

Figure 15 Newspaper reach by gender 2017/18

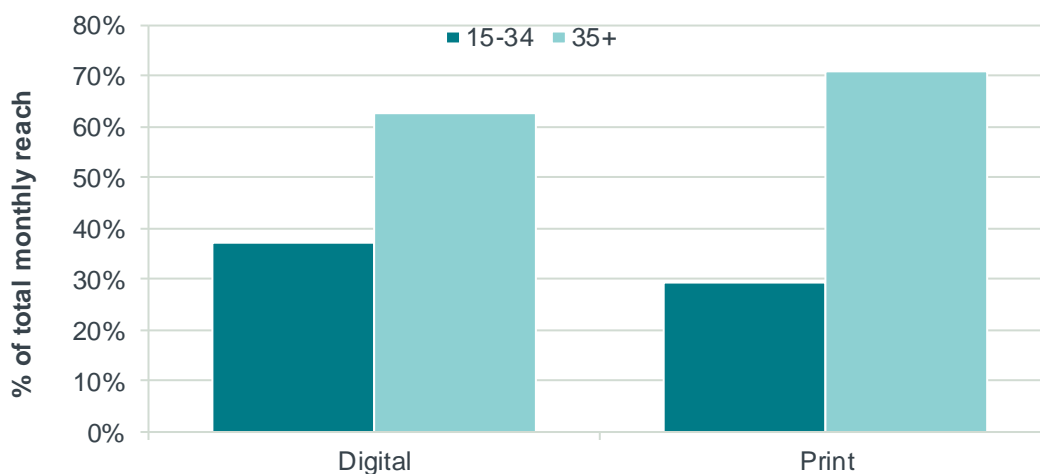


Source: Frontier analysis of PAMCo data

Distribution of newspaper readers by age

Information on the age distribution of newspaper reach is available for two age groupings: those aged 15-34 and those aged 35+. The age profile between these two groups is broadly similar between digital and print newspapers, with the majority of readers in the 35+ age grouping. However, a slightly higher proportion of digital readers are in the 15-34 age grouping, which makes up 37% of monthly reach for digital newspapers compared to 29% for physical newspapers.

Figure 16 Newspaper reach by age grouping 2017/18

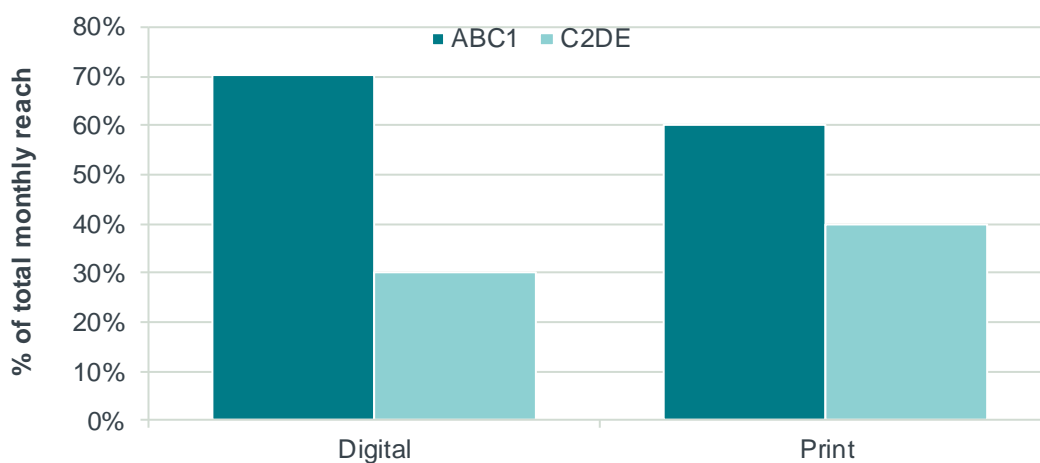


Source: Frontier analysis of PAMCo data

Distribution of newspapers readers by income

Most readers of newspapers are in the higher ABC1 income groupings. The proportion in this income group is slightly higher for digital newspapers, at 70%, compared to physical newspaper readers at 60%.

Figure 17 Newspaper reach by income grouping 2017/18



Source: Frontier analysis of PAMCo data

2.3 Characteristics of the market and supply-chain for digital publications

The characteristics of digital publication markets and supply-chains is important for understanding how zero-rating VAT would feed through into the market.

Key characteristics of the markets and supply-chains for consumer books, academic books and journals, and magazines are discussed in turn below.²² We then outline implications for how reduction in VAT may be passed-through into prices of digital publications.

2.3.1 Consumer e-books

Our discussions with publishers highlighted important aspects of the e-book supply-chain that are seen as intensifying competition in the market, as follows:

- **Self-publishing authors:** e-books have enabled the growth of self-publishing authors. This reflects the lower barriers to entry for distributing an e-book compared to that of physical books. Self-publishers have added an additional competitive dynamic, on top of competition between specialist publishers. Whilst there is limited data available on the self-publisher side of the market, the publishers we spoke to felt this was an area of significant growth that was expanding the overall e-books market.
- **Platforms and devices:** early growth in the e-books market was seen as closely linked to increasing penetration of devices, particularly the Kindle. However, e-books can also now be read on mobile phones and tablets, which already have high market penetration. Future growth could therefore be more driven by innovations in the digital offering, rather than being reliant purely on penetration of specialist reading devices.
- **Pricing models:** there are also differences in the price-setting model for publishers which makes pricing particularly competitive online. For physical books, publishers set a Recommended Retailer Price but retailers then decide the final price, and so the final price competition is seen at the retailer end. For e-books Amazon has a large share of the market, but there is also more scope for price competition between publishers at the final point of sale in the e-book market. This reflects that publishers can set their own final price (with an agency model). This intensifies price competition for e-books.

These factors are seen as having intensified competition in the e-book market, in terms of pricing and also product quality and innovation.

2.3.2 Academic e-books and journals

The supply-chain for academic e-books and journals is closely tied to provision for public sector and learning institutions. Our discussions with publishers identified the following key characteristics that differentiate academic publications from the consumer market:

- **Learning and scholarship platforms:** digital platforms are an area of innovation for academic e-books and journals. Online search functionalities have enhanced the experience of those using journals, while digital academic textbooks have been incorporating interactive learning tools. Universities are also building interactive systems for learning as well as some publishers. This

²² This section draws principally on our interviews with publishers in each sector. Interviews with newspaper publishers were out of scope of this work, so equivalent insights for the newspaper market are not included in this section.

innovation requires research and development investment, which comes with inherent risks.

- **Libraries and universities:** the majority of academic publication sales are to public institutions, particularly universities and libraries. These institutions are increasingly budget constrained, which the publishers we spoke to felt had led to downward pressure on prices in recent years.
- **Purchase models:** pricing structures for digital sales tend to be linked to physical pricing structures, with digital editions often priced similarly to paperback print editions. In some cases subscription models include bundles of both print and digital. The differential VAT treatments of digital publications adds significant complexity in these cases, due to the requirement to apportion value between formats for VAT purposes. Open access models are also increasingly in demand at the expense of subscription revenues, but the extent to which open access revenues compensate for lost subscription revenue streams varies across publishers and subject areas.

2.3.3 Magazines

The magazines market faces intensive competition from the growth of freely available online content, such as through social media platforms. The key characteristics of the magazine market and supply-chain identified in our discussions with publishers were as follows:

- **The business models** for digital magazines are different to physical, although the investment in journalism is broadly similar. It is hard to generate direct sales revenues because there is so much free content available online. Advertising revenues are more important, but require constant innovation to keep pace with platform developments and wider competitors online.
- **Bundled** physical and digital packages are very common. This makes the differential tax treatments of the two formats complex to manage and increases compliance costs.
- **Costs** of production for digital magazines are similar to physical costs overall, with the significant cost being investment in journalists. Whilst the nature of digital production costs varies significantly, the size of the costs are not dissimilar to print. Digital magazines have a saving in printing and distribution costs, but there are additional costs of keeping-up with innovations in platforms and content, competing for skilled staff, and providing more regular content updates. For example, platforms require very regular updates to reflect new developments and because of the competition for advertising revenues with wider online competitors.

2.3.4 Implications

Each of the digital publication markets is experiencing downward pressure on prices in various ways, whether through competition with other types of publishing (consumer books), as a result of pressure on public sector budgets (academic books and journals), or competition with the wider online market (magazines). These downward pressures on prices suggest a reduction in VAT would be

passed-through into prices at least to some extent. The extent of pass-through is very market specific however, and is likely to vary between and within the different segments of the publishing market.

Where VAT reductions are passed-through into lower prices, this is expected to lead to cost savings for consumers and market expansion as sales increase. To the extent that VAT reductions are not fully passed-through, this will have impacts for investment, wages or revenues in the sector. We discuss these issues further in section 4.

2.4 Observations

In this section we have explored recent trends in the UK digital publications market, characteristics of readers and buyers of digital publications, and characteristics of the market and supply-chain. Our observations on these areas are as follows.

- Recent trends in the markets for digital publications vary by publication type. E-books experienced strong growth historically but have since been on a broadly flat trend, while audio books sales are growing rapidly. Digital penetration in the journals market is very high, with digital journals constituting some 82% of publisher income from learned journals. Digital sales of magazines have grown strongly in recent years but from a relatively low base, and digital sales are also growing in prominence on the newspaper sector. The digital publications market is an area where the UK is already showing strong performance, but where a reduction in VAT to a zero rate is likely to stimulate further growth.
- Readers of digital publications show some differences in characteristics from physical publications:
 - Take-up of e-books among young age groups remains relatively low. Only 14% of e-book sales are from readers aged 13-24, compared with 21% of physical books. Lower prices through a VAT reduction could help to expand uptake of e-books among this age group, and would also benefit older readers who tend to buy larger volumes of e-books at present.
 - For magazines and newspapers, digital reach is already higher for younger age groups than is the case with physical publications. However, given the prominence of online reading for younger readers, a VAT reduction could still expand readership in these markets too. This may have wider added advantages from encouraging reading of curated, controlled content in the context of the proliferation of freely available 'fake news'.
 - The reach of digital publications among lower income groups is not as high as is the case for physical publications. This could also indicate that a price reduction through the zero-rating of VAT on digital publications could help to expand reach to those on lower incomes.
- Each of the digital publication markets is experiencing downward pressure on prices in various ways, whether through competition with other types of publishing (consumer books), as a result of pressure on public sector budgets (academic books and journals), or competition with the wider online market (magazines). These downward pressures on prices suggest a reduction in VAT would be passed-through into prices at least to some extent. The extent of

pass-through is very market specific however, and is likely to vary between and within the different segments of the publishing market.

3 THE ECONOMIC RATIONALE FOR ZERO-RATING DIGITAL PUBLICATIONS

In this section we explore the economic rationale for zero-rating VAT on digital publications.

The economic literature on consumption taxes sets out four key principles of good tax policy design²³ that are relevant to the VAT treatment of digital publications:

- **Efficiency:** minimising the negative effects that taxes can have on economic efficiency and the welfare of society.
- **Addressing market failures:** targeting differential tax treatments at those areas where the tax system can help to address areas of market failure. This is particularly in terms of areas where consumption decisions by individuals lead to positive or negative impacts for wider society, which the tax system can help to incentivise or discourage.
- **Fairness:** fairness across different tax payers, in how they are taxed, and in distributional terms.
- **Simple and transparent:** ensuring taxes are well understood and compliance costs are minimised.

We discuss how each of these principles applies to VAT on digital publications in turn below. The market failures rationale is especially relevant in the context of the original introduction of zero-rating VAT for physical publications, which was centred on avoiding taxation on knowledge and learning because of their benefits to both individuals and wider society.

Efficiency

For most goods and services, the tax system should seek to be ‘fiscally neutral’. This means that the choice of goods and services consumers buy should not be overly influenced by the taxes on those items. This reflects that the pre-tax choices of consumers are usually expected to result in the most economically efficient outcome. Where taxes distort decisions away from this outcome, it results in a loss of efficiency and consumer welfare.

Current VAT rates are not fiscally neutral between physical and digital publications in the UK. This creates an artificial distinction between the two formats, which is likely to impact consumer spending decisions and reduce consumer welfare. For example, an individual that prefers to buy an e-book to a physical book is left worse off after the tax, as they must either pay 20% on top of the market price for the e-book, or purchase the same content in a physical book instead despite their preference for e-books.

Addressing market failures

There are however cases where it is beneficial to incentivise changes in consumer behaviour through the tax system because of market failures. These relate to the

²³ See for example, The Institute for Fiscal Studies (2010), ‘Tax by design: the Mirrlees Review’

consumption of goods and services that lead to ‘externalities’ and ‘spillovers’ for wider society. These can be negative, for example environmental costs from pollution caused by the use of fossil fuels; or positive, such as the benefits to society from education.

Positive externalities and spillover benefits provide a key rationale for government support of cultural goods in general,²⁴ and the existing zero-rating of physical books in particular. The benefits to wider society of increased reading centre on disseminating knowledge and information, educational value, improved literacy, and cultural enrichment. Estimates suggest low literacy rates in the UK cost the taxpayer £2.5 billion every year²⁵ and could cost £32 billion in GDP growth by 2025.²⁶ The social benefits from the dissemination of knowledge featured prominently in the decision to retain the zero-rating of VAT for physical publications when the UK joined the Common Market in the 1980s.²⁷ Examples of wider tax incentives for cultural sectors in the UK are shown in the box on page 30 below.

The wider benefits from reading relate to the content of publications and do not appear to differ substantially depending on whether content is in a digital or physical format. The current tax differential between formats is at odds with the common benefits that they provide to wider society.

Fairness

The tax system should aim to be fair across tax payers. This has two dimensions in the context of digital publications: ensuring equal access to goods and services, and ensuring fair treatment of producers of similar types of goods and services.

Reduced rates of VAT are sometimes justified to ensure equal access to goods and services for different groups across society.²⁸ Digital publications provide accessible reading formats, which can be important for particular readers such as the visually impaired or those with dyslexia. It does not appear fair to charge VAT on these formats, when other consumers can buy physical books without paying VAT. Equal access to goods and services can also apply in terms of income groups, as it may be desirable to ensure those on lower incomes are not priced out from accessing the benefits of digital publications.

The current differential VAT treatment between physical and digital publications means suppliers of books are treated differently depending on which format they publish in. Those publishing in both formats may also face additional compliance burdens, as they must apportion their costs between formats for tax purposes. This means producers of similar types of goods and services are not taxed in the same way under the current VAT structure.

²⁴ See for example, Ginsburgh (2012), ‘The economics of art and culture’

²⁵ KPMG (2009), ‘The long term costs of literacy difficulties’

²⁶ Save the Children (2014), ‘Read on, Get on’

²⁷ For example, see: UK Parliament, Hansard, 31 October 1984, Volume 65

²⁸ Copenhagen Economics, ‘Study on reduced VAT applied to goods and services in the Member States of the European Union’, 2007

CULTURAL TAX RELIEFS USED IN OTHER UK SECTORS

The UK has a system of creative industry tax reliefs. The reliefs relate to corporation tax, and allow qualifying companies to claim a larger deduction, or in certain circumstances claim a payable tax credit, when calculating their taxable profits. The tax reliefs are available to qualifying:

- film production companies producing films;
- television production companies producing relevant animation, children's or high-end television programmes;
- video games productions;
- theatrical and orchestral production companies; and
- museums and galleries which claim relief for an exhibition.

The underpinning rationale for the tax reliefs is to encourage the societal benefits from creative sectors and support cultural productions in the UK.

The film tax relief has been in place since 2007, while the other tax reliefs were introduced from 2013 to 2017. When the first set of new tax reliefs were introduced in 2013, the then Chancellor George Osborne remarked "*Our creative industries are one of the jewels in Britain's crown and are just the kind of industry I want to back, which is why we are introducing these new tax breaks to help and promote production in the UK.*"²⁹

The total cost of the creative industry tax reliefs in 2017-18 was £868 million.

Exchequer cost of creative industry tax reliefs in 2017-18

Tax relief	Exchequer cost (£m)
Films	469
High end TV	184
Animation	13
Video games	105
Children's TV	13
Theatre	77
Orchestra	6.6
Total	868

Source: HMRC, *Creative Industry Statistics, 2018*

Note: Receipts basis. Museums and galleries tax relief data is not included in these HMRC statistics.

Simple and transparent

A well designed tax should be as simple and transparent as possible. This helps people to understand the tax, and reduces compliance costs for taxpayers and HMRC.

The difference in VAT treatment between physical and digital publications adds complexity to the current tax system:

²⁹ <http://dev.britishfilmcommission.org.uk/chancellor-launches-new-tax-reliefs/>

- It is confusing for those purchasing publications, when different formats are priced and taxed differently.
- It is costly to comply with for publishers. Publishers have to attribute value between their physical and digital publications for VAT purposes. This is an issue particularly for bundled sales, where a subscription includes both a physical and digital element. Publishers have to attribute value between formats for VAT when in practice much of the costs of content creation are common to both.
- It is costly for HMRC to ensure compliance. Our interviews with publishers highlighted examples where it had taken years to agree a position with HMRC, increasing costs for publishers and HMRC, and adding uncertainty over tax liabilities while the position remained unclear.

We explore these issues further in sections 4.3 and 5.3 below.

4 IMPACTS OF ZERO-RATING DIGITAL PUBLICATIONS FOR CONSUMERS AND SUPPLIERS

In this section we discuss the impacts for consumers and suppliers from zero-rating VAT on digital publications. We explore the extent to which a VAT reduction is likely to be passed-through into prices. We then outline the resultant benefits to consumers, including those with accessibility needs who benefit because of the functionality of digital publications. The benefits for suppliers are then discussed, whether through market expansion as a result of lower prices, or through increased opportunities to invest in innovation and quality of content.

4.1 Prices of digital publications

As we saw in section 2, the markets for digital publications all face downward pressure on prices. As a result we would expect to see pass-through of a VAT reduction into lower prices, with some variation depending on the specifics of each publication market. We discuss the possible price impacts for each publication type in turn below.

4.1.1 Prices of consumer e-books

Our interviews with publishers of consumer e-books identified various competitive dynamics in the e-book market that are likely to drive down prices. As a result, full or close to full pass-through of a VAT reduction can be expected in this market. This reflects the following competitive aspects:

- **Competition between publishers:** there is competition between publishers of consumer e-books, which the publishers we interviewed described as intensive. This has different characteristics to the physical book market in two respects. First, the e-book market is more international, because of the lower distribution costs. Second, publishers can set their own final price (with an agency model) as opposed to final prices being set by retailers in the physical book market. This provides more scope for direct price competition between publishers at the final point of sale.
- **Competition with self-publishers:** self-publishing is an important and growing part of the digital market. This side of the market is characterised by low entry costs (relative to physical publishing) and a very high number of very small scale publishers. This leads to increased competition, alongside that between the publishing houses.
- **Competition between retailers:** there is also competition between e-book retailers. Whilst Amazon has a large market share, driven in part by the popularity of the Kindle, e-books are also available from other major retailers including Apple iBooks, Google Play Store, WH Smith and Kobo Store.³⁰

³⁰ <https://www.which.co.uk/reviews/ebook-readers/article/best-ebook-stores-for-price>

These three aspects of competition would make it more difficult for an individual publisher to retain a price mark-up on e-books following a VAT reduction, since competitors would be able to charge lower prices and capture sales. At the same time, consumers can be expected to be well informed about price differentials and able to exercise a choice, as this information is easily accessed online. However, for competition across reading platforms, there could be some reluctance for consumers to switch between reading platforms, given this often requires an upfront cost for a reading device.

4.1.2 Academic e-books and journals

The nature of competition in the academic e-book and journals market has different characteristics to that for consumer e-books. It is difficult to reach strong conclusions over the likely pass-through of a VAT reduction.

The majority of sales in these markets are to public institutions, such as libraries and universities. These buyers are typically budget constrained, which puts downward pressure on prices. This, alongside competition between publishers, would make it difficult for an individual publisher to retain a mark-up on prices, because competitors would be incentivised to lower their prices to capture sales from price sensitive buyers.

However, there may be some limiting factors on the scope to reduce prices following a VAT reduction. As we discussed in section 2, in some cases digital pricing models mirror physical pricing structures, and so the current VAT may not be fully reflected in current prices. In some cases subscription models include bundles of both print and digital, and so how VAT currently feeds through into these pricing structures is complex. As a result, a reduction in VAT may be expected to lead to partial, rather than full, pass-through into lower prices.

4.1.3 Magazines

The magazine market is different again. The extent of pass-through of VAT in the magazine market is also somewhat uncertain, but we anticipate that the average level of pass-through may be lower, as publishers prioritise investing in journalism. This reflects the nature of competition and pricing models which are outlined below.

- **Competition between magazine publishers:** magazine publishing is a highly competitive market. However, the intensity of competition is very market specific. For example, an entertainment magazine appealing to a large audience may have several close competitors; whereas a more specialist trade magazine may have fewer direct competitors because it is targeted at a more niche audience. This makes generalisations over the pressure to reduce prices following a VAT reduction difficult.
- **Competition with wider media providers:** there is also competition with wider media providers, including written content on current affairs websites, social media, and audio-visual platforms such as YouTube. Much of this content is freely available. This could be expected to lead to downward pressure on prices following a VAT reduction. However, in this context investing to compete on quality of journalism is very important for publishers, to distinguish themselves

from freely available content and ‘fake news’. The publishers we interviewed also described the current revenue model as very challenging with low margins, which could reduce the scope for reducing prices following a VAT reduction.

As with the academic market, the use of subscriptions adds complexity to VAT treatment in current pricing models. Subscriptions can be physical only, digital only, or a bundled subscription. Some titles already offer the same prices for digital and physical platforms despite the current VAT differential, so may be partially absorbing VAT in their bundled subscriptions. Since the VAT is not always reflected in current prices, full pass-through of a VAT reduction into lower prices appears less likely. However, there is evidence of high pass-through of VAT changes in magazine markets abroad. A rise in the VAT rate on periodicals of 10 percentage points in Italy in 2002 led to a rise of prices of 14 percent.³¹

4.2 Impacts for consumers of digital publications

We now explore the impacts of a VAT reduction for consumers of digital publications. We find that where prices fall, there are benefits for existing buyers of digital publications, and to new consumers for who digital publications may become newly affordable. There are also particular benefits for those where the functionality of digital publications are especially important, notably those with accessibility needs.

4.2.1 Readers

Where a VAT reduction leads to lower prices, this will benefit readers of digital publications. This benefits those who would have bought publications anyway but can now do so at lower prices. It also benefits those who are now able to buy more digital publications than they otherwise would have done, including people who may buy them for the first time.

The benefits could be particularly important for those who are more budget constrained, who may be unable to afford the purchases of digital publications that they would like at current price levels. We explore impacts for various budget constrained groups further below.

Low income groups

As we saw in section 2, around a third of e-book buyers are on incomes below £24,000 per year, while 26% of digital magazine readers and 30% of digital newspaper readers are in the lower C2DE socio-economic groupings. A VAT reduction could therefore be important in increasing the affordability and reach of digital publications for these readers.

The benefits of increasing reading can be especially important for these groups. Research from the National Literacy Trust shows that one in eight (13.1%) children from disadvantaged backgrounds say they do not have a book at their own home; while children who say they own a book are 15 times more likely to read above the

³¹ Copenhagen Economics, Study on reduced VAT applied to goods and services in the Member States of the European Union, 2007

level expected for their age than those who say they don't own a book (28.8% vs 1.9%).³² There is also evidence that for children from low income groups or struggling readers, reading success is associated with improved social skills and social behaviour.³³

Young people

We also saw in section 2 that prominence of digital publications among young people varies by type of publication. For e-books, digital uptake is lower among young readers, with 14% of e-book buyers aged 13-24 compared to 21% for physical books. For magazines and newspapers, reach of digital is higher than physical for young readers. The lower proportion of e-book buyers in younger age groups could be driven in part by a price barrier for buying e-books for these age groups. This suggests that lower prices through a VAT reduction could help to expand uptake of e-books among this age group in particular.

Public libraries

Public libraries play an important role in widening access to digital publications. However, library budgets have been under considerable pressure. A recent report by the Chartered Institute of Public Finance and Accountancy identified a budget fall of £66 million in 2016-17, the 7th consecutive year of funding reductions, with 105 libraries closed during the year.³⁴ Lower prices of digital publications following a VAT reduction would be a useful boost for public libraries in this context.

Students and higher education institutions

Academic publications are important for students and higher education institutions. As we saw in section 2, digital penetration for journals is already very high at 82%. Prominence of digital formats for academic textbooks is relatively low, but is an area of potential growth.

A reduction in VAT could be important for relieving budget pressure on academic users of e-books. For university students, some estimates put the cost of books between £450 and £1,070 per year including VAT³⁵ and our interviews with academic publishers highlighted that university library budgets have been under increasing pressure in recent years.

The added functionality of digital publications also has particular benefits in this context. Digital textbooks can offer more interactive functionality, for example graphical examples can move, explanations can point to related practice questions or further detail in an area can be provided on demand.³⁶ Academic journals can

³² National Literacy Trust, 'Book ownership and reading outcomes', 2017

³³ Ashcroft, "Preventing School Failure" by Enhancing Reading and Social Skills, 2004; and, Miles and Stipek, Contemporaneous and Longitudinal Associations Between Social Behavior and Literacy Achievement in a Sample of Low-Income Elementary School Children, 2006

³⁴ <http://www.publiclibrariesnews.com/2017/12/public-library-budget-for-the-uk-falls-roughly-one-tenth-in-one-year-ouch.html>

³⁵ <https://online.essex.ac.uk/blog/630-per-student-the-cost-of-paper-textbooks/>

³⁶ There is considerable research into the respective merits of digital and physical books in learning. Whilst some have shown certain advantages to physical books, particularly in terms of concentration, it is clear that digital publication formats offer the opportunity for new innovations to enhance learning. See for example:

be easily searched through platforms like Google Scholar or JSTOR. Referencing and incorporating the research and material of others is made easier and digital formats also allows for comprehensive detection of plagiarism, as enormous volumes of information are searchable in a very short period of time.

4.2.2 Readers with accessibility needs

Digital publications provide important functionality that is especially important for those with needs arising from a disability or impairment. These people would therefore be expected to especially benefit from a reduction in prices following a move to zero-rating VAT. This would mean those with accessibility needs who currently purchase digital publications would no longer have to pay an additional cost that does not apply to physical formats. Lower prices could also make digital publication formats available to people who may currently be unable to afford the quantity of publications that they would like to.

There are 360,000 people registered as blind or partially sighted in the UK, but the RNIB estimates that the number of people with sight loss severe enough to affect their daily lives is more than two million and expected to grow due to an ageing population.³⁷ The functionality of digital publications can also help those with broader accessibility needs such as dyslexia or physical disabilities, which we discuss further below. This means that accessible digital publications can play an important role in the lives of hundreds of thousands of people in the UK. Accessibility standards are widely applied which mean that disabled individuals can access a broad range of titles through digital publications, whereas with printed publications a far smaller range is available in accessible formats.

Daniel, D. B., & Woody, W. D. (2013). E-textbooks at what cost? Performance and use of electronic v. print texts. *Computers & Education*, 62, 18-23.

Felvegi, E., & Matthew, K. I. (2012). eBooks and Literacy in K–12 Schools. *Computers in the Schools*, 29(1-2), 40-52.

National Literacy Trust, The impact of ebooks on the reading motivation and reading skills of children and young people: A study of schools using RM Books, 2015

³⁷ <https://help.rnib.org.uk/help/newly-diagnosed-registration/registering-sight-loss/statistics>

FUNCTIONALITY OF DIGITAL PUBLICATIONS FOR THOSE WITH ACCESSIBILITY NEEDS

The development of digital publication formats offers several features for those with accessibility needs in addition to those available for print publications. This functionality provides those with accessibility needs access to a far wider range of content than has been the case in the past. We held an interview with the DAISY consortium to discuss these issues, and identified four key aspects of accessibility which we outline below.

Visual adjustment and personalisation

Unlike printed titles, digital publications can be dynamically personalised to meet the needs of the reader. Simple customisations such as changing the colours, text size, fonts, line spacing and margins can make an enormous difference. For example, changing contrast levels between text and background can be essential for people with visual impairments. Adjusting the colouring and spacing of words and lines improves speed and comprehension of reading for dyslexic students.³⁸ These features are widely available on popular reading apps.³⁹

Reading through audio

While audio publishing is a growing sector, the number of titles produced each year is relatively low compared to e-books. Fortunately, computers, tablets and smartphones can instantly output spoken versions of text using software generated voices. This provides accessibility for those with visual impairments and those that find reading difficult more broadly. The functionality means readers are not only able to read the main text of a published book, but also navigate easily through chapters, read accompanying text and references, and read less mainstream content independently.

Reading through touch

For many people who are blind, reading braille is the most efficient, enjoyable and accurate method. For people who are deafblind it is essential. However, a relatively tiny number of books are printed in braille each year. In contrast, digital formats such as e-books can also be used with electronic braille displays to provide instant access to millions of titles.

Physical needs

E-reader or tablets are light, and easy to carry and navigate. This improves accessibility for those with mobility and dexterity impairments, as pages can be turned via voice or a button, and the added weight of larger books can be avoided. For people with profound physical disabilities such that they are unable to hold a book or turn the pages, switch and eye tracking technology make it possible to browse an online bookshop, open a book and turn the pages.

³⁸ Schneps, M. H., Thomson, J. M., Chen, C., Sonnert, G., & Pomplun, M. (2013). E-readers are more effective than paper for some with dyslexia. *PloS one*, 8(9), e75634.

³⁹ <https://inclusivepublishing.org/toolbox/reading-system-tests/>

4.3 Economic impacts for the digital publications sector

In this section we discuss the economic impacts for the UK digital publications sector from a reduction in VAT. Impacts are expected through market expansion, investments and innovation, and through reduced tax compliance costs for businesses.

4.3.1 Market expansion

Where prices fall as a result of the VAT reduction, this can be expected to lead to changes in demand for publications. In this section we first explore the expected increase in demand for digital publications. We then consider the potential for substitution between digital and physical publications, and find that growth from digital publishing expands the overall size of the publishing market. The majority of new sales are additional rather than at the expense of physical publications.

Demand for digital publications

The increase in demand for digital publications depends on how responsive consumers are to a change in price. This is known as the price elasticity of demand. We searched the economic literature for estimates of the price elasticity of demand for digital publications in the UK and western OECD countries. The results identified are shown in Figure 18 below.

For e-books, the elasticity estimates identified are in the US. These estimates range from -0.39 to -0.77 for conventional e-book publications. This means a 10% reduction in price would be associated with a 3.9% to 7.7% increase in demand for e-books. A UK survey undertaken for the Intellectual Property Office provides information on the likelihood people purchase e-books at different price levels. This finds that while 55% of respondents are likely to buy e-books at a price of £4, this increases to 74% at a price of £2. Elasticities are not reported, but the results are consistent with an elasticity of approximately -0.5 at the current average price of a consumer e-book, which is around £4.⁴⁰ Elasticities for digital journals, magazines and newspaper publications were not identified from our literature search.

⁴⁰ Average price of consumer e-books in the UK in 2017 was £4.06 (Source: Nielsen's UK Books & Consumers Survey © Nielsen Book Research 2018)

Figure 18 Estimated price elasticities of demand for digital publications

Study	Market	Elasticity estimates
Li (2015)	US e-books	-0.40 for avid reader; -0.77 for regular readers
Reimers and Waldfogel (2014)	US e-books	-0.39 to -0.53 for conventional e-books; -0.08 to -0.22 for self-published e-books
TNS/Kantar report for Intellectual Property Office (2017)	UK e-books	Approximately -0.5 at current market prices ⁴¹

Source: Li(2015), 'Dynamic Demand and Pricing Strategy in the EBook Market';

Reimers and Waldfogel (2014), 'Throwing the Books at Them: Amazon's Puzzling Long Run Pricing Strategy';

TNS/ Kantar Media (2017), Online copyright infringement tracker survey (7th Wave)⁴²

Examples of VAT reductions in book markets abroad have shown significant positive effects for publishing sectors, as well as lower prices for consumers. We explore an example from Sweden below.

IMPACTS OF A REDUCTION IN VAT ON PUBLICATIONS IN SWEDEN

In the 1990s Sweden had differential VAT rates between different types of publications. Books and magazines were charged VAT at the standard rate of 25% while newspapers were charged a lower rate of 6%.

In 2001 a change was made to bring the VAT treatment of books and magazines in line with that of newspapers. This was intended to lower prices and increase sales, and to promote readership, the quality of books and the variety of content as a result.

Following the reduction in VAT from 25% to 6%, there was an immediate fall in book prices. In the long-run prices fell by 12%, representing close to full pass-through into final prices.⁴³ Sales increased by 16% in the following year, and were reported to still be showing a sustained increase three years after the tax change. Benefits from increased sales were also felt in the wider supply chain, including books shops and small publishers specialising in niche and quality content.⁴⁴

Similar impacts were felt in the magazines market. Following the VAT reduction there was a decrease in price of 10.3%, an increase in audited magazine titles from 277 to 344 (or 24%), and circulation of audited titles increased by 3.7%.⁴⁵

⁴¹ This research does not state a price elasticity, but provides estimates of the likelihood consumers purchase e-books at different price points based on a willingness to pay study. At current prices of around £4 for a consumer e-book, the results suggest a change in likelihood of purchasing an e-book of around -0.5% for a 1% increase in price.

⁴² An 8th wave of the survey has since been undertaken, but this does not include the question on the likelihood of purchasing e-books at different price points.

⁴³ Ahlmark, Cultural VAT on Books: An Evaluation of the First Three Years, Swedish Booksellers' Association and Swedish Publishers' Association, 2003

⁴⁴ Copenhagen Economics, 'Study on reduced VAT applied to goods and services in the Member States of the European Union', 2007

⁴⁵ Sveriges Tidskriftr audited titles estimates

Demand for physical publications

A reduction in prices for digital publications could potentially reduce demand for physical publications if the two are close substitutes. This is known as a cross-price effect. However, evidence from our interviews with publishers and the economic literature suggest that there is likely to be limited substitution between digital and physical books in the current UK market. As a result, the majority of growth in digital sales is expected to be through expansion of the overall market rather than cannibalisation of physical book sales.

Our interviews with publishers suggested that the majority of growth in digital publications would be additional sales. This reflects that the digital and physical markets are largely distinct from one another, especially in the book market. For example, those who read very frequently are more likely to use e-books, particularly in genres such as consumer fiction, because of the convenience and pricing of e-books, and the availability of subscription models that allow a high volume to be accessed for a fixed price. Our interviews with magazine publishers also suggested that whilst there has been a long-run trend from print to digital, future digital growth is seen as competing more with wider digital media rather than physical magazine sales.

None of the studies we identified included reliable cross-price estimates. However, two studies report estimates of the potential for substitution effects, which we outline below.

Li (2015) provides an estimate of what proportion of past growth in e-books sales was through market expansion versus cannibalisation of physical book sales. The study uses US data from 2008 to 2012. The study finds that overall 58% of e-book sales in the US were from market expansion during this period, while 42% were 'cannibalised' from paper books. However, the degree of cannibalisation between digital and physical publications is shown to have been higher when digital publications first emerged, but to then fall over time and be lower as the market matures. The estimate for cannibalisation is 59% for avid readers who are early adopters of e-book devices, but only 8% for general readers who adopt e-book devices later. This suggests a lower level of cannibalisation is more likely in the UK since the market for e-books is now mature with early adopters already purchasing e-books.

Chen et al (2017)⁴⁶ investigate the impact of delaying the release of e-books on sales of physical and e-books using US data from 2010. If there is a high degree of cannibalisation between physical and digital formats, it would be expected that delaying the release of an e-book would boost physical book sales in the short-run. However, the study finds no evidence of any strong cannibalisation effects. Delaying the release of e-books is found to reduce e-book sales, but has no statistically significant impact on physical book sales during the period analysed.

⁴⁶ Chen, Hu and Smith (2017), 'The Impact of Ebook Distribution on Print Sales: Analysis of a Natural Experiment'

4.3.2 Investment and innovation

A reduction in VAT is expected to stimulate investment in the digital publications market. This is the case whether the reduction is passed through into lower prices, and so the market expands; or where price reductions are not fully passed-through, then the higher after-tax revenues impact investment, wages or profits.

Stimulating investment and innovation is important in the context of significant long-term structural challenges in the UK publishing sector. Physical magazine and newspaper sales are in long-term decline, affecting both direct sales revenues and advertising revenues.⁴⁷ Online content faces competition from freely available material and broader media channels such as social media. A recent report, published as part of the Cairncross Review into the future of high-quality journalism in the UK, found the total press industry revenues declined by more than half over the last ten years and the number of full-time journalists has fallen by over 25% since 2007.⁴⁸ Whilst book publications have performed relatively strongly in recent years, challenges remain.

The publishers interviewed in this study identified four key ways in which they would anticipate investment increasing following a VAT reduction:

- **Content:** investment in quality and innovative content. This is important across digital publications, but was seen as a particular priority for magazines. This reflects that providing a quality offering is important to distinguish magazines from freely available competitors online, and the challenges this creates for sales and advertising revenues.
- **Staff:** related to quality of content, is quality of staff. This was again raised as a particular issue in the magazines sector. Publishers felt it had become increasingly difficult to attract and retain staff because wages in the wider online media sector are higher. Increased revenues could therefore be invested in quality of staff.
- **Platforms:** investing in digital platforms is important for keeping digital publications in line with the latest technologies. Magazine publishers regularly have to update their platforms because of the high standard required to attract advertising revenues in a competitive online space. Some journal publishers have invested heavily in platforms to enhance learning and academic functionalities, or at least they need to keep pace with university platforms.
- **Exports:** increased UK revenues could also enable investment to grow international sales. UK publishers are already prominent exporters of digital publications, and the publishers we interviewed felt a VAT reduction would further enhance the UK's reputation as a digital leader in this space.

These investments would all be expected to provide a boost to economic growth and jobs in the UK publishing sector and its supply chain. Further discussion of how the publishing sector contributes to the wider economy is discussed below.

⁴⁷ PWC, Global Entertainment & Media Outlook, 2018-2022

⁴⁸ <https://www.gov.uk/government/news/tackling-the-threat-to-high-quality-journalism-in-the-uk>

THE ECONOMIC CONTRIBUTION OF THE UK PUBLISHING SECTOR

The publishing sector makes a value contribution to the UK economy, through its direct economic contribution, its support of adjacent sectors, and ripple effects in the wider economy. Through supporting market expansion, a zero rate of VAT for digital publication would help to further grow these economic impacts.

Recent analysis by Frontier Economics (2017) estimated that books and journals publishing contributes £3.2 billion in gross value added directly, and potentially up to £7.8 billion including indirect and induced effects.⁴⁹ The wider sectors supported include authors, digital distribution, education, marketing and research.

4.3.3 Reduced tax compliance costs for businesses

As we have noted, the differential VAT treatment of physical and digital publications creates complexity for publishers, and for digital content businesses more widely. It can be difficult to attribute value between physical and digital sales, when in practice much of the creative process is common to both. This can become very complicated for bundled subscriptions that involve both a digital and physical supply.

There is a direct compliance cost associated with this, but the length of time required to confirm the position with HMRC can also create uncertainty and risks for publishers. For example, one publisher described that it had taken them three years to agree an apportionment position with HMRC. This meant that there was a risk they would face a liability for tax over that period if HMRC did not agree with their proposed approach at the end of the process.

Harmonising the VAT treatment of physical and digital publications with a zero rate would remove the need for these distinctions to be made, creating savings for publishers and digital content businesses that could be re-invested.

4.4 Observations

Zero-rating VAT on digital publications would have important impacts for consumers and the UK publishing sector.

Consumers would benefit in the following ways:

- Consumers will benefit from lower prices where VAT reductions are passed-through into final prices. The likely extent of pass-through is very market specific and difficult to reliably predict. We anticipate that for consumer e-books a high degree of pass-through is likely. This reflects the price competition between publishers, self-publishers and different retailers in the digital market. Pass-through is also expected for journals and magazines but could be more

⁴⁹ Frontier Economics (2017), *The Contribution of the Publishing Industry to the UK Economy*, available at <https://www.publishers.org.uk/policy-research/value-of-uk-publishing/>

partial because of the more complex pricing models for these publications, such as the use of subscription models that bundle both physical and digital products.

- Where prices for consumers are reduced, this could help expand the economic and social benefits of reading, especially among those that are more budget constrained. This includes low income households, younger readers, public libraries, and students and academic libraries. For example, take-up of e-books among young age groups remains relatively low. Only 14% of e-book sales are to those aged 13-24, compared to 21% of physical books. For university students, academic books can be a significant expense: some estimates put the cost between £450 and £1,070 per year including VAT.⁵⁰ Lower prices could therefore help enhance access to digital publications for budget constrained readers.

A reduction in VAT would provide a stimulus for greater investment at a challenging time in the UK publishing sector:

- A reduction in VAT could provide a stimulus for greater investment as the publishing sector adapts to significant long-term challenges. Our interviews with publishers highlighted key areas where investment is needed. There is a need for investment to keep pace with innovative new online platforms which are important for attracting readers and advertising revenues. Investment in skilled staff is also important to attract and retain staff in the face of growing competition from other sectors. This investment is important for the future sustainability of quality journalism in the UK.

A move to zero-rating VAT on digital publications is also expected to lead to significant market expansion:

- Evidence from economic studies and our stakeholder interviews shows that the growth of digital publishing would expand the overall size of the publishing market: the majority of new digital sales would be new, rather than coming at the expense of physical publications. This reflects that digital and physical markets serve different consumer types, particularly in books. Interviews with magazine publishers also suggested that while there has been a long-run trend from print to digital, future digital growth is likely to come more from wider digital media than physical magazine sales. The degree of substitution between digital and physical publications is likely to fall over time as markets mature, suggesting limited substitution in mature markets such as the UK.
- Market expansion will also benefit authors through increased sales, with digital publications offering another route to market.

Moving to a single zero rate for publications would also remove complexity from the tax system that results from the current differential rates. This would reduce the associated compliance costs for publishers and digital content businesses.

⁵⁰ <https://online.essex.ac.uk/blog/630-per-student-the-cost-of-paper-textbooks/>

5 REVENUE IMPACTS FOR THE EXCHEQUER

This section explores the potential revenue impacts for the Exchequer from zero-rating digital publications. This revenue impact is shown to be small in the context of zero-rating of physical books, VAT as a whole, and overall tax revenues.

This section also explores the potential for costs to the public purse to be partially off-set through cost savings to some publicly funded users of digital publications, or through wider taxes as a result of market expansion.

5.1 Direct revenue impacts for the Exchequer

In Section 1, we explained the current position of physical and digital publications for VAT and in Section 2 we provided best estimates of the current value of digital sales in the UK which are subject to standard rate VAT of 20%.

Given estimates of VAT-inclusive sales it is straightforward to estimate a cost of zero-rating digital publications. As the standard VAT rate is 20%, VAT makes up one-sixth of the value of sales (the VAT-inclusive value of sales is 120% of the pre-VAT value of sales, and 20% is one-sixth of 120%).

This calculation gives the so-called ‘**static cost**’ of the change – assuming that there are no behavioural changes as a result of the tax cut. It asks “how much revenue is lost, compared with a base case in which the rate of VAT on digital publications remains at 20%?”

To get the full picture, in line with best practice in policy costing followed by the Office for Budget Responsibility,⁵¹ we also need to consider any wider impacts from the change which affect tax revenues. This gives the ‘**dynamic cost**’. However, for this particular reform our assessment is that there is no meaningful difference between the two. Whilst demand for digital publications should rise, this does not affect the costing as we need to compare receipts in a world where VAT is maintained at 20% (the base estimate) with zero receipts in a world where VAT is reduced to 0%. So subsequent changes in sales that are subject to 0% does not affect the costing. Whilst the overall market is expected to expand, it is possible there could be a degree of substitution with physical publications that reduces demand in some cases. However, as physical publications are already zero-rated this has no effect on the cost estimate.

More broadly there could also be indirect effects for the Exchequer from changes in demand for other goods and services as a result of lower prices for digital publications, or as a result of market expansion in the sector. We discuss the potential for these indirect impacts further in section 5.2 below.

Our estimates of the Exchequer costs are therefore based on:

- Taking estimates of current and forecast VAT-inclusive value of digital publications sales in the UK based on industry data (Section 2);

⁵¹ OBR (2014), *Policy Costings and Our Forecast*, Briefing Paper 6 (http://cdn.obr.uk/27814-BriefingPaperNo_6.pdf)

- Taking one-sixth of the value as an estimate of the VAT cost in each year, assuming the change happens in April 2019 (shortly after Brexit) so that the cost is felt from the 2019/20 financial year onwards;
- Reporting the likely cost in the five-year period from 2019/20 to 2023/24 inclusive, in line with the approach taken in Budget scorecards which estimate costs over a five-year horizon.

The results are given in Figure 19 below.

Figure 19 Estimated value of sales by sector and VAT cost of zero-rating e-publications, 2019/20 to 2023/34

£ million	2019/20	2020/21	2021/22	2022/23	2023/24
<i>Estimated VAT-inclusive value of sales</i>					
e-books	610	610	610	610	610
Digital journals	220	250	270	300	330
Digital magazines	270	290	300	320	340
Digital newspapers	170	180	190	200	210
Total	1,260	1,310	1,370	1,430	1,480
<i>Estimated VAT</i>					
Total	210	220	230	240	250

Source: Frontier Economics estimates based on industry data and industry interviews

Note: Estimates rounded to nearest £10m; totals may not sum due to rounding

We estimate an annual cost to the Exchequer of approximately £210 million in 2019/20, rising to £250 million in 2023/24. The estimated costs increase over time as a result of underlying growth in the digital publication sector.

As we describe in more detail in Sections 5.2 and 5.3, there may be some offsetting savings for the Exchequer and firms in the publishing sector which should be taken into account, although it is hard to provide robust quantitative estimates of the size of those savings.

5.1.1 Contextualising the cost estimate

We estimate the cost of zero-rating e-publications to the Exchequer to be approximately £210 million in 2019/20. How significant is that sum?

The most recent Economic and Fiscal Outlook, published by the Office for Budget Responsibility in March 2018 setting out tax and spend projections for the next five years, estimates that total tax revenues in 2019/20 will be £746.2 billion.⁵² The cost of zero-rating e-publications is therefore expected to be 0.03% of total tax receipts. In 2022/23 (the last year of the current OBR forecast horizon), total tax receipts are expected to be £815.4 billion, so our estimated cost of zero-rating digital publications in that year is also only 0.03% of total receipts.

⁵² See <http://obr.uk/download/march-2018-economic-and-fiscal-outlook-charts-and-tables-fiscal/>, Table 4.6. This is the estimate of total National Accounts taxes receipts that year.

We can also compare the cost with total VAT receipts. In 2019/20, VAT receipts are forecast to be £134.6 billion, meaning the cost of zero-rating e-publications is 0.14% of total VAT receipts. By 2022/23 the figures are £147.4 billion and again 0.14%.

A summary of these figures is given in Figure 20 below.

Figure 20 Cost of zero-rating e-publications relative to total tax receipts and total VAT receipts, 2019/20 to 2022/23

	2019/20	2020/21	2021/22	2022/23
<i>£ billion, forecasts of</i>				
Cost of zero-rating e-publications	0.2	0.2	0.2	0.2
Total tax receipts	746.2	768.1	788.1	815.4
VAT receipts	134.6	138.7	142.9	147.4
<i>Cost of zero-rating as a % of</i>				
Total tax receipts	0.03%	0.02%	0.03%	0.03%
VAT receipts	0.14%	0.14%	0.14%	0.14%

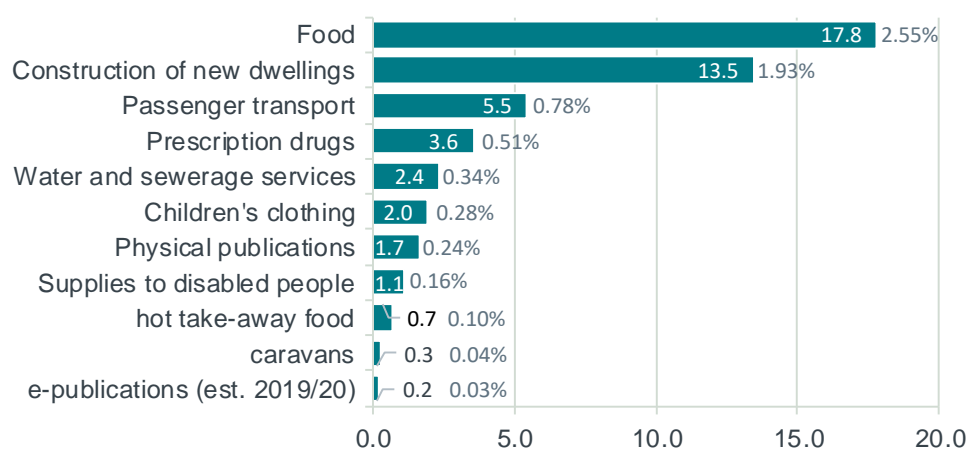
Source: Frontier Economics estimates based on industry data and industry interviews; Office for Budget Responsibility Economic and Fiscal Outlook March 2018

HM Revenue and Customs also publish regular estimates of the cost of various tax reliefs and exemptions. Although forecasts of these over the same period are not published, the most recent estimates (for 2017/18) also give context to the estimated costs of zero-rating e-publications.⁵³

In 2017/18, the cost of zero-rating physical books, newspapers and magazines for VAT was estimated to be £1.65 billion. This is approximately five times larger than our estimated cost for zero-rating e-publications in 2019/20. Figure 21 below shows the estimated cost of zero-rating different parts of consumption for VAT in 2017/18 and our estimated 2019/20 cost of zero-rating digital publications. The costs of zero-rating digital publications are again shown to be small in this context, the smallest of the categories in the data.

⁵³ HM Revenue and Customs (2018), *Estimated Costs of Tax Reliefs* (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/675345/Dec_17_Main_Reliefs_Final.pdf)

Figure 21 Estimated cost of zero-rating e-publications in 2019/20 compared with estimated cost in 2017/18 of other zero-rated goods and services (£ billion and % of total tax receipts)



Source: Frontier Economics estimates based on industry data and industry interviews; HMRC Estimated Costs of Tax Reliefs (January 2018)

Note: Figures rounded to nearest £100 million. Figures for e-publications are 2019/20 forecasts; figures for hot take-away food and caravans are tax base estimates from Budget 2012; figures for other goods and services are 2017/18 forecasts

5.2 Indirect revenue impacts for the Exchequer

There are also indirect impacts for Exchequer revenues. These are expected to partially offset the reduction in VAT from digital publications in two respects.

Firstly, the reduction in VAT is expected to result in an expansion in the overall size of the UK publishing sector, as we outlined in section 4.3. This market expansion provides an economic boost to the digital economy and associated tax receipts.

Secondly, since a proportion of digital publications are sold to the public sector, the loss in collected VAT on these sales is precisely offset by the cost savings to these institutions.

In addition, there are also savings to UK digital content businesses from reducing complexity in the tax system, as we outlined in section 4.3.3 above. This means that business resources can be reinvested in more productive activities.

We explore these issues further below.

5.2.1 Exchequer impacts from growing the digital publications sector

There will be wider Exchequer impacts from the economic impacts of a reduction in VAT for digital publications. Savings to consumers from lower prices could lead to spending in the wider economy, and associated VAT receipts. Growth in the UK publishing sector and its supply chain could increase revenues from corporation tax, income tax and national insurance contributions. The distribution of these impacts will vary depending on the response of the market to the VAT change (which we discuss further in section 5).

Consumer spending

Where a reduction in VAT for digital publications is passed-through into lower prices, this will lead to a saving for consumers. Consumers can then spend the money saved either on more publications, or in the wider economy. Where spending is in the wider economy, this will raise wider VAT revenues for the Exchequer, depending on which goods are purchased.

The digital publishing sector and businesses using digital content

Revenues for publishers, authors, retailers, businesses using digital content and the supply-chain could increase. This could be through increased sales after passing through the VAT reduction, with growth in the UK publishing sector and its supply chain. Or if some of the VAT reduction is retained by firms, there would be higher revenues that can be re-invested. The following Exchequer revenues could be impacted as a result:

- Corporation tax: growth in the publishing sector and its supply chain could lead to higher net revenues that increase corporation tax revenues.
- Income tax and National Insurance Contributions (NIC): increases in wages or numbers of jobs in the publishing sector and its supply chain could increase income tax and NIC receipts.

5.2.2 Digital publications in the public sector

The cost of a VAT reduction to the Exchequer would also be partially offset because of sales of digital publications to public sector institutions.

Publicly-funded institutions purchasing digital publications include libraries, universities,⁵⁴ government departments and the NHS. The VAT-inclusive sales of digital books and journals to universities can be estimated drawing on data in the Publishers Association Yearbook, but data is not available for a robust estimate for these sales to other public sector institutions. We also drew on the views of industry stakeholders consulted on the share of public sector sales for different categories of digital publications, on market intelligence relating to sales of digital magazines and newspapers to public institutions, and evidence on digital purchases by libraries reported by the Chartered Institute of Public Finance and Accountancy. Based on the available evidence, we estimate the associated savings in VAT to these institutions would be approximately £50 million to £55 million per year. This represents around a quarter of the estimated Exchequer impact in 2019/20.

However, the true savings will be greater, as our estimate does not fully capture digital publications sold to government departments or the NHS.

5.3 Enforcement and compliance issues

The current differential VAT treatment of physical and digital publications created an added enforcement and compliance cost for HMRC. It can be difficult for

⁵⁴ Universities are included in the estimates although we recognise in practice their funding comes from a variety of public and private sources.

publishers to attribute value between digital and physical sales, especially for bundled products. As a result, HMRC has to spend considerable amounts of time working with publishers and auditing their returns. There is the potential for costly disputes if HMRC does not agree with the approach taken by companies. Such definitional issues are often complex to prove or disprove, and can lead to lengthy legal cases.

A move to bring the VAT treatment of digital publications in harmony with that for physical publications would remove the need for HMRC to distinguish between digital and physical publications. This would save their resources from the enforcement and compliance issues outlined above. There would however still be an ongoing need to ensure the definition of digital publications works as intended, as occurs with physical publications at present.

VAT DISPUTES IN OTHER UK SECTORS

There is a long history of legal disputes on definitional issues resulting from the differential tax treatment. These cases are often very long lasting and costly for both HMRC and tax payers.

McVities famously resorted to baking a giant Jaffa Cake in a dispute with HMRC over whether Jaffa Cakes are cakes or biscuits. HMRC also had a 13 year legal case with Marks & Spencer (M&S) over the status of tea cakes that concluded in 2009. The case centred on whether tea cakes are cakes, which are zero-rated for VAT, as asserted by M&S, or whether they are chocolate covered biscuits and so subject to VAT. The case concluded in the favour of M&S in 2009, after an estimated £2 million in legal fees, £3.5 million in damages, eight trips to court, and a referral to the European Court of Justice.⁵⁵

5.4 Observations

Applying a zero rate of VAT to digital publications would involve a modest direct cost to the Exchequer. We estimate an annual cost to the Exchequer in terms of reduced VAT revenues of approximately £210 million in 2019/20, rising to £250 million in 2023/24. This is small as a proportion of total tax revenues in 2019/20 (0.03%), as a proportion of VAT revenues (0.14%), and compared to other products that are zero-rated for VAT.

There are also indirect impacts that we anticipate would partially offset the reduction in VAT from digital publications.

- A proportion of digital publications are sold to institutions that are funded at least in part through public funding, such as universities, libraries, government departments and the NHS. There is a cost saving for these institutions if prices of digital publications fall as a result of zero-rating. Evidence on the scale of these sales is limited, but we estimate that the savings could amount to around £50 million to £55 million per year, or one-quarter of the total estimated Exchequer cost. This may be an underestimate, as it does not fully capture digital book and journal sales to government departments, the NHS, and

⁵⁵ <https://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/4514338/MandS-wins-13-year-dispute-with-tax-man-over-tea-cakes.html>

libraries. There would also be broader savings from reduced administrative costs, because of the complexities faced with the current structure of differential VAT rates.

- There will also be wider Exchequer impacts from the economic impacts of a reduction in VAT for digital publications. Savings to consumers from lower prices could lead to spending in the wider economy, and associated VAT receipts. Growth in the UK publishing sector and its supply chain could increase Exchequer revenues from corporation tax, income tax and national insurance contributions. Finally, by harmonising the treatment of physical and digital publication formats, there would also be savings to businesses and HMRC from reduced enforcement and compliance costs. Quantifying the net size of these revenue benefits was beyond the scope of the report, but could help further offset the direct Exchequer cost.

ANNEX: REVENUE IMPACT ASSUMPTIONS

Our estimates of the costs to the Exchequer from zero-rating VAT on digital publications is described in Section 5 above. This annex provides further detail on the assumptions used to make the estimates.

The estimated value of VAT-able sales for digital publications is repeated below.

Figure 22 Estimated value of sales by sector and VAT cost of zero-rating e-publications, 2019/20 to 2023/34

£ million	2019/20	2020/21	2021/22	2022/23	2023/24
<i>Estimated VAT-inclusive value of sales</i>					
e-books	610	610	610	610	610
Digital journals	220	250	270	300	330
Digital magazines	270	290	300	320	340
Digital newspapers	170	180	190	200	210
Total	1,260	1,310	1,370	1,430	1,480
<i>Estimated VAT</i>					
Total	210	220	230	240	250

Source: Frontier Economics estimates based on industry data and industry interviews

Note: Estimates rounded to nearest £10m; totals may not sum due to rounding

The estimates are rounded to the nearest £10 million to avoid spurious accuracy over the precise figures, in line with standard practice to round Budget costings where there is uncertainty. They provide a reasonable estimate of likely future sales, and the resultant Exchequer impacts, but are subject to uncertainty. Key areas of uncertainty include the current level of digital sales, which are mainly based on survey data from a sample rather than complete market data. Forecasting future trends is inherently uncertain and market changes are difficult to predict, especially in innovative sectors such as those for digital products. Nonetheless, we believe the estimates provide a reasonable order of magnitude for the likely levels of sales and Exchequer costs.

Details of the data sources and assumptions on which the estimates are based are described in Figure 23 below.

Figure 23 Revenue impact assumptions

Digital publication	Initial sales figure	Source	Annual growth	Source
e-books	UK digital consumer sales of £459m in 2017 UK digital academic/professional sales in 2017 of £147m	Nielsen consumer tracker survey PA yearbook	0%	Frontier assumption based on recent trends in PA yearbook and Nielsen data, and interviews with publishers
Digital journals	Total digital journal sales of £1,356m in 2017, 13% of which are UK	PA yearbook	10.8%	CAGR of total digital journal sales 2012-2017, PA yearbooks
Digital magazines	UK digital consumer and trade magazines sales of £239m in 2016	PwC estimate ⁵⁶	6.5%	CAGR from PwC projections to 2021
Digital newspapers	UK digital national newspaper sales of £143m in 2017 UK regional digital newspaper sales of <£1m	Mediatique estimates ⁵⁷ Frontier estimate from ABC data	6.5%	Assumed to follow same growth rate as digital magazines above

Source: Frontier Economics

⁵⁶ PwC Global Entertainment & Media Outlook: 2018-2022, www.pwc.com/outlook © 2018 PwC

⁵⁷ Mediatique (2018), report for Department for Digital, Culture, Media and Sport, Overview of recent dynamics in the UK press market

