The legal services market is commonly thought of as divided into two “hemispheres”--PeopleLaw and BigLaw (Heinz and Laumann 1982, Heinz, Laumann et al. 1998). These segments represent, respectively, individuals and corporate clients. The last few decades have seen an increasing concentration of resources within the legal profession toward serving corporate clients, to the alleged detriment of consumer clients. The costs of accessing legal representation exceed the financial resources of many ordinary citizens and small businesses, compromising their access to the legal system (Clementi 2004, Hadfield 2010, CMA 2020).

We ask: will the adoption of new digital technologies lead to a levelling of the playing field between the PeopleLaw and BigLaw sectors? Technology offers the promise of scaling the delivery of services so as to lower the unit cost. Will reductions in cost be enough to allow PeopleLaw to meet the currently-unmet legal needs of clients? Capturing economies of scale implies consolidation: does this suggest that both segments will converge towards a more concentrated market structure? And will the firms that deliver these services look less different across the two segments than has been the case in recent decades?

Technology is not the only causally-relevant factor in play, however. We consider a range of other factors that are relevant to the conditions under which convergence, or continued divergence, will emerge between PeopleLaw and BigLaw. We seek to unravel those conditions and draw implications for practice and policy. Our analysis focuses not only on the direct impact of digital technology on meeting legal needs, but also effects on what lawyers do (Remus and Levy 2017), emergent business models (Teece 2010, Sako 2012, Armour and Sako 2020), and complementary governance changes (Armour, Parnham et al. 2020). Adding these considerations to the causal framework allows us to gauge not only what legal technology in theory may be capable of doing, but which legal technology use cases are likely to emerge in practice and take root.

The problem of unmet legal needs is not new (Genn 1997, Sandefur 2015). In 2007, the UK enacted a bold set of reforms to the regulation of the legal profession.¹ These reduced the substantive domain over which qualified lawyers have exclusive service rights and opened up the sector to multi-disciplinary organizations. The explicit motivation was to stimulate competition and thereby more cost-effective legal services to meet latent demand (Clementi 2004). Similar proposals have long been debated in the US (Hadfield 2000, Hadfield 2007, Henderson 2018), and some states have taken tentative first steps.² We therefore include the

¹ Legal Services Act 2007 (UK).
role of regulation in our causal framework. Our primary focus is on the UK (England and Wales, strictly speaking), but we draw comparative insights with the US. Because of the regulatory differences, this comparative exercise provides insights into the relative importance of regulation in the causal framework.

This paper proceeds as follows. Section 1 provides an overview of the development of the PeopleLaw and BigLaw sectors in Britain and the United States in the last few decades. Section 2 examines the adoption of digital technology (including artificial intelligence (AI)) in the BigLaw sector, to identify specific use cases and emergent business models, while giving regard to complementary changes taking place (or not taking place) in organizational governance. Section 3 conducts a similar exercise for the PeopleLaw sector, before Section 4 provides an explicit comparison of the two sectors to address the question of whether or not legal technology will enable a convergence in the extent to which consumer or client needs are met. To do so, we use a causal framework that takes account of organizational complements and regulatory constraints to the adoption of emergent business models, which will in turn affect the market size and industry structure of PeopleLaw and BigLaw sectors. Our conclusion is that while legal technology and data aggregation have enormous potential to meet unmet legal needs, different constraints continue to hold back realizing such potential. Major barriers in BigLaw are human capital and data aggregation. In PeopleLaw, major barriers include financial capital and the technological limits to automating human lawyers.

Section 1: Overview of PeopleLaw and BigLaw Sectors

This section provides a macro-level overview of the state of PeopleLaw and BigLaw sectors. Differences in data availability mean the contours of these sectors can be outlined in sharper focus for the US than the UK. At least in the US, PeopleLaw’s fraction of the total legal services market attributable has been in secular decline since the 1970s, and the economics of PeopleLaw practice continues to be quite different from the economics of BigLaw practice.

In the United States, lawyers have long been aware of a distinction made between the part of the legal sector that provides services to sizeable corporate clients and the part that does not. This divide was brought to prominence in the seminal work Chicago Lawyers: The Social Structure of the Bar (Heinz and Laumann, 1982), which studied legal practice in the 1970s, and found empirical evidence for what might now be called BigLaw and PeopleLaw. A number of commentators have charted a decline over time of both the proportion of the total legal services market, and in recent years the absolute dollar amount spent, attributable to PeopleLaw (Heinz, Laumann et al. 1998, Hadfield 2010, Henderson 2018).

In particular, the Chicago Lawyer Survey in 1975 showed that lawyers devoted 45% of total effort to services for individual or small business clients, unions, environmental plaintiffs, and state administrative agencies or municipalities. Updating evidence in the 1990s, the survey repeated in 1995 showed that this PeopleLaw proportion declined to 35% of lawyers’ total effort (Heinz, Laumann et al. 1998).

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US Economic Census Data report spending on services provided by lawyers employed in private practice. In 2005, 39% of this was attributable to individual clients (Hadfield 2010). By 2007, the share of PeopleLaw in total revenue was 29%; by 2012 it had declined to 24%, while the share of BigLaw (Henderson calls this the Organizational Client sector) grew over the same period from 68% to 73% (see Figure 1). The Census Data, however, exclude lawyers working outside private practice—in particular, those working in-house in corporations. Corporate in-house lawyers are, by definition, part of the BigLaw sector. This practice setting has seen by far the greatest relative growth over the past two decades (203.1% compared to 29.5% for lawyers in law firms) (Henderson 2018). Hadfield uses the fraction of lawyers working outside private practice to “gross up” the overall value of legal services spend in 2005 to $277 billion, of which then 31% was attributable to individual clients. If we perform the same exercise for the 2012 Census data, the overall spend is approximately $335 billion, of which only 18% was attributable to PeopleLaw.

Figure 1: Henderson analysis of PeopleLaw and BigLaw in the United States

Henderson also reminds us of the striking differences between the economics of PeopleLaw and BigLaw. In PeopleLaw, lawyers (typically sole practitioners) charged an average $260 per hour (data source: Clio), but billed for only 1.6 hours per day, amounting to $422 a day, or $105,000 in gross receipts over a 50-week year. In BigLaw by contrast, Am Law 100 total gross revenue in 2012 was $71.0 billion, with a total lawyer headcount of 86,272. So, average gross revenue per lawyer was $822,978, while average profit per partner was $1.48 million (Henderson 2018: 14-15).

3 The total figure was $221.6bn, of which $85.6bn was spent by individual clients.

4 Total legal services spend reported in the 2012 Census was $246.2bn, of which only $58.8bn was spent by individual clients. Of a total 628,370 lawyers employed as W-2 employees in the US in 2017, 388,670 (62%) were in private practice. Grossing up the total spend to include the 38% working in other practice contexts yields an estimated total of $335bn. Henderson, W. D. (2018). Legal Market Landscape Report: commissioned by the State Bar of California.
The problem of access to justice for consumers is a central policy concern that has led a handful of state bars (Arizona, Utah, California) to address this issue, in part by encouraging the adoption of legal technology. Henderson, commissioned to produce a report for the California State Bar, described developments in legal technology and documented cases of unauthorized practice of law by technology providers (Barton and Rhode 2018, Henderson 2018).

In the United Kingdom, a similar policy concern over the unmet legal needs of consumers lay behind the enactment of the Legal Services Act in 2007 (Office of Fair Trading 2001, Clementi 2004, Department of Constitutional Affairs 2005). This act implemented three major changes intended to stimulate competition within the legal services sector. First, it facilitated the ownership of law firms by non-lawyers through so-called Alternative Business Structures (ABS). This was intended to facilitate access to capital and new multi-disciplinary business models, thereby stimulating innovation. Second, it introduced a new regulatory regime that shifted licensing power away from self-governing professional bodies such as the Law Society of England and Wales in favor of public regulatory agencies. And third, it introduced a new complaints-handling mechanism, the Legal Ombudsman, intended to make it easier for consumers to seek redress for poor service. However, despite these reforms, the UK’s Legal Services Board (LSB), the overseer of front-line regulators created by the Act, and Competition and Market Authority (CMA) have continued to find evidence of considerable and undiminished latent demand for legal services (CMA 2020, LSB 2020).

The UK legal services market is about a sixth the size of the US market: in 2017, the total turnover in the legal activities sector was £24 billion. Unfortunately, UK national statistics do not shed light on the relative size of PeopleLaw and BigLaw sectors, as the Office of National Statistics does not provide a sufficiently detailed classification to break down the SIC code for ‘legal activities’ by class of client. There are past attempts at developing a methodology for market segmentation by type of consumer, type of consumer problem, and type of legal activity (e.g. by OXERA for LSB), but only the PeopleLaw sector has been taken into consideration, making it not possible to weigh the relative importance of the two sectors.

An alternative approach, for which data do exist, is to break down lawyers’ activity by type of work, on the understanding that some areas of practice are predominantly serving individuals (family law, criminal law, residential conveyancing, wills and trust and probate), and others are predominantly serving corporate clients (commercial/corporate, litigation/dispute resolution and commercial property and planning). A recent study by KPMG for the Law Society of England and Wales reports that 60% of law firm turnover is in corporate client work (which they term “B2B”) and 20% in individual client work (which they term “B2C”) (KPMG 2020). Similarly, the Solicitors Regulation Authority estimate that only 11% of law firm revenues in England and Wales come from work provided to vulnerable, or potentially vulnerable, individuals (Solicitors Regulation Authority 2019). Similarly to the US, there has been significant growth in the numbers of lawyers working in-house for corporations, rising

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5 This is slightly less than the ratio of population (67 million to 328 million, or 20%) but more than the ratio of GDP ($2.83 tn to $21.43 tn in 2019, or 13%).

6 In this study, client types are presumed but not explicit in the Law Society data. Therefore, PeopleLaw (B2C) clients are assumed to include not only individuals but also small businesses. BigLaw (B2B) clients are primarily corporate legal departments and big law firms. And a third category, HybridLaw (B2H), has as its clients the public sector (national and local governments), the judiciary, the not-for-profit sectors, and a combination of B2C and B2B clients, for example in the case of employment law applied to both employers and employees. These three categories cover a wide range of clients, but do not make explicit where for example wealthy individuals, start-up founders, and individual inventors (who need to file and defend intellectual property rights) fit.
from 16% of all solicitors in 2004 to 23% by 2019 (Law Society 2020). Because this growth is directed at corporate work, it is strongly suggestive of a corresponding decline of PeopleLaw’s relative share of the overall legal services market during the same period.

**Figure 2: PeopleLaw and BigLaw services provided by Law Firms in England and Wales**

However, a more direct measure of latent demand is available for the UK. Regular surveys on individual legal needs, following the OECD methodology, have been carried out to gauge the extent of unmet legal needs. Adults based in England and Wales were asked about the legal issues they experienced in the four years prior to the survey, the action they took and the help they sought to resolve them. In the most recent survey in 2019, the top six areas of legal needs encountered by survey respondents were: “family”, “employment, finance, welfare and benefits”, “rights of individuals”, “property, construction, and planning”, “conveyancing/residential”, and “wills, trusts and probate.” In all cases, those whose legal needs remain unmet exceed those whose needs were met (see Figure 3). The underlying reasons for why legal needs remain unmet are numerous, but a significant issue lies in the perceived inaccessibility of the civil justice system (see Figure 4). In the same survey, the majority opinion was that the justice system is not for ordinary citizens, and as many as 88 percent of respondents agreed that “for issues like these, law is like a game in which skillful and resourceful are more likely to get what they want.”

To summarize: we have seen that the PeopleLaw sector represents only a small fraction of the overall legal services market in both the US and the UK. There is clear evidence that this fraction has been in secular decline in the US for the past four decades; differences in data collection methods in the UK mean the evidence is harder to interpret, but it is also suggestive of a similar relative decline. Moreover, in the UK, despite the major overhaul in legal services regulation a decade ago, there is clear evidence of significant continuing latent demand for legal services by individuals. We now turn to consider how technology has been impacting the provision of legal services in each of the two hemispheres, BigLaw and PeopleLaw, respectively.
Section 2: Digital Technology in the BigLaw Sector

This section analyses how digital technology is influencing the work of lawyers, emergent business models adopted by law firms and other providers, and organizational complements that facilitate the adoption of emergent business models. A “business model” is a focused way of understanding how client needs – here the needs of corporate clients and big law firms -- are met, in ways that translate into sustainable profit-making for providers (Teece 2010, Sako 2012). The three key components of a business model are therefore the customer value proposition (what customers value), how value is created, and how value is captured (Armour and Sako 2020). Before we do so, however, we will briefly survey the sort of digital technology being developed by providers and adopted by users in BigLaw. While legal technology may
be defined as technology that supports or enables the provision of legal services, it is a broad category, encompassing the use of interactive websites, electronic documents, and elements of artificial intelligence (AI) to automate the review and prediction from text, and automation of workflow and matter management. We distinguish between an earlier wave of routinised automation, and more recent ongoing adoption of AI technologies.

**Technology use cases in BigLaw**

In the BigLaw context, users distinguish between technologies supporting the “practice of law”—that is, supporting the delivery of legal services themselves—and those supporting the “business of law”—that is, supporting the management of client relationships and the allocation of human resource internally.

In the practice of law, a core system for most law firms and corporate in-house teams is document and knowledge management, which provides digital indexing for legal services work product. Increasingly, firms and corporate in-house teams are also making use of workflow automation platforms applying what in other industries might be referred to as robotic process automation (RPA), that is, the automation of scalable and repetitive tasks. Increasingly common too are the use of extranets or digital deal-rooms—that is secure repositories of data that are accessible by the lawyers and clients or others outside their team. In large-scale litigation, or corporate transactions, there are typically huge volumes of digital documents that are provided by outside parties and need to be reviewable by a range of personnel across organizational boundaries (Sako, Armour et al. 2020).

The deployment of AI differs from earlier generations of automation in that it requires training to parameterize a model that best classifies items of a particular category. Training is done using a set of data labelled according to the variable of interest. This training requires data—the more the better—that is relevant and accurately labelled. In the litigation context, AI is now commonly used to identify potentially relevant documents in a pre-trial discovery exercise. This necessitates the training of new models for each suit, based on aspects identified as “relevant” by expert human reviewers. In the transactional context, AI is increasingly deployed to review contracts. In-house teams train AI systems to review their company’s every day or “business as usual” contracts; BigLaw firms by contrast train AI systems to do due diligence, reviewing the entirety of an M&A target’s contracts to identify clauses that may pose problems for buyers (such as change of control clauses). In each case, the training requires legal expertise. Moreover, increasing numbers of legal practitioners are making use of AI in support of their legal research, training tools that complement the offerings of the big legal data providers (Armour, Parnham et al. 2020, Sako, Armour et al. 2020).

In the “business of law”, technology is widely used to support accounts and time recording. BigLaw firms are beginning to deploy AI-based systems both to enhance and leverage the data from these earlier systems. An appropriately-trained model can both help to fill gaps in time recordings and predict the likely time budget for new instructions. This opens up the possibility of output-based pricing, as opposed to the traditional input-based model of the billable hour.

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7 Most current deployments of AI in legal services rely on machine learning, or deep learning, coupled with natural language processing (NLP) (Frankenreiter and Nyarko, this volume). However, some systems in operation make use of an earlier rules-based approach, and leading-edge applications seek to combine elements of both to deliver greater explainability: Armour, J. and A. Petrova (2021). AI and Judicial Precedents: A Review. University of Oxford.
Similarly, lawyers are increasingly turning to CRM (customer relationship management), systems to support marketing and client relationships. These systems themselves increasingly deploy AI (Sako, Armour et al. 2020).

The deployment of AI makes economic sense where the fixed costs of training a model can be amortized across a large number of similar exercises. This “scaling” of the trained model’s application can be done either on a very large process flow for a single user, or by deploying the same model across multiple similar processes from different users. These can be termed “within-user” and “between-user” scaling, respectively. In each case, the model’s performance is continually updated through feedback from review of its output. In contexts where “between-user” scaling is efficient, problems may arise where users are uncomfortable about their data being used to train a model that can go on to generate value for other users. Legal users—especially law firms—are highly sensitive to this issue, which can in some cases act as a block on scaling. Corporate clients may also be cautious about between-user sharing of data due to commercial sensitivity, particularly if the data are not about back-office but front-office, potentially revealing the essence of their competitive advantage.

Augmented lawyering and business models in BigLaw
Focusing on the adoption of artificial intelligence (AI), survey and interview evidence suggests that the impact of AI on lawyers has multiple components (Armour, Parnham et al. 2020). First, by disaggregating lawyers’ work into tasks, the most well-understood effect is substitution, that is, AI machines automating and replacing tasks which are repetitive and scalable. Second, lawyers’ work of giving bespoke advice is augmented by the use of AI; here, lawyers are consumers of AI to augment the quality of their advisory work. Third, AI creates the need for new tasks such as in data science, information security, process and project management, and user experience. In this context of legal service delivery pipeline, lawyers are producers of AI, working as part of a multi-disciplinary team (MDT).

Figure 5: the BigLaw Ecosystem

These three distinctive AI effects on lawyers’ work -- substitution, augmentation, and new task creation – raise questions about where in the BigLaw ecosystem these effects are taking place. The ecosystem consists of corporate clients as the ultimate customer, serviced on the one hand
by law firms—the traditional “outside counsel”—and on the other by a rapidly-changing congeries of other types of legal services firms (sometimes referred to as “Alternative Legal Service Providers” to differentiate them from law firms) including law companies and legal tech providers (see Figure 5). In prior work, we sought to organize these relationships by reference to business models – distinguishing between a traditional “Legal Advisory” business model which entails the provision of bespoke or customized advice or analysis, a “Legal Operations” business model, which focuses on leveraging efficiencies in the execution of frequently-repeated legal tasks, and an emerging “Legal Technology” business model focuses on the development of technology platforms for legal services (Armour and Sako 2020).

The Legal Operations business model, when it first emerged, was largely driven by reductions in labor costs through process management and outsourcing, but in recent years has become increasingly enabled by the deployment of technology. In this context, technology substitutes for humans, both within the Legal Operations business and its clients. The Legal Advisory model, in contrast, focuses on work that requires skills that for the foreseeable future remain distinctively human. Technology in this context can augment the work of human lawyers, by freeing them up from doing repetitive work to focus on the activities for which their human capital is most valuable. Technology is also creating new tasks for persons with legal human capital—most obviously in firms (including young ventures) adopting Legal Technology business models, for which multidisciplinary teams are associated with success (Sako, Qian et al. 2020)—but also in firms adopting Legal Operations business models.

We describe these business models as ideal types; in practice, experimentation in combining different business models is rife. For instance, some law firms have developed internal legal operations expertise, and/or have an in-house legal technology firm either via organic growth or via acquisition. For example, in the US, Wilson Sonsini has an in-house technology division in the form of SixFifty, and in the UK, Simmons & Simmons acquired Wavelength Law, a lawtech provider. At the same time, notable law companies have used legal operations excellence as a launch pad to move into legal advisory work (e.g. Elevate has its in-house law firm Elevate Next, and UnitedLex created a law firm Marshall Denning), while legal tech providers are partnering with law firms and law companies to access premier corporate clients. Thus, combining all three business models – Legal Advisory, Legal Operations, and Legal Technology – under one roof in an integrated legal management company might be desirable from the point of view of providing a one-stop shop for corporate clients. However, such integration creates tensions in strategic focus and reputational capital. In particular, employing both lawyers-as-consumers of AI and lawyers-as-producers of AI under one roof is challenging, not least due to the need to establish career paths to integrate, or segregate, the two types of lawyers. As it stands, these career paths are yet to be clarified. And in the meantime, some firms are implicitly signaling which type of lawyer -- lawyer-as-consumer or lawyers-as-producer of AI – they prioritize as their core human capital.

Our empirical findings suggest that such human capital challenges, rather than the challenge of accessing external finance, are more central to the difficulty of law firms as lawyer-only partnerships to sustain the effective deployment of digital technology including AI (Armour, Parnham et al. 2020).
Section 3: Digital Technology in the PeopleLaw Sector

Using digital technology in PeopleLaw, just as for BigLaw, potentially unlocks enormous value to meet the legal needs of consumers. Common across the two sectors, technology is generally seen to contribute to increasing the efficiency of, and lowering the cost of, delivery. This is done, in part by automation that cuts out the need for human lawyers, and in part by exploiting economies of scale. In contrast to BigLaw, legal work in PeopleLaw is generally less complex, and more likely to be repeatable and/or productized. Because data aggregation is possible across individual consumers, service providers would also likely face fewer barriers to scaling were they to deploy AI.

Against these advantages arising from the application of digital technology are some significant barriers that account for the fragmented nature of PeopleLaw service delivery. It is important to untangle these barriers from the demand side and the supply side of the PeopleLaw market. The demand side is well understood with systematic evidence discussed earlier in Section 1. This can be summarized in terms of persistently high degree of unmet legal needs in many issue areas (see Figure 3), due to the perceived inaccessibility of the civil justice system and the cost of accessing lawyers to solve legal problems that ordinary citizens face. Survey evidence (see Figure 4) shows that consumers’ budget constraints are significant. In particular, some consumers are unable to afford a lawyer to advise them whenever they have a problem at home (divorce, child custody, debt collection, etc.), at work (employment dispute), or when moving home (immigration, conveyancing, etc.). These problems or disputes have a legal dimension, and translate into legal needs that households encounter, that could be addressed through the civil legal system. The adoption of legal technology is seen to solve the issue of unmet legal needs, in part by lowering the unit cost of legal service delivery, particularly in areas where such legal service can be productized. In transactional contexts, this can take the form of providing standardized document templates or transaction processing pipelines. In the context of dispute resolution, this could involve facilitating ADR mechanisms that are quicker and simpler to execute than court proceedings.

Despite the clear potential for technology to meet latent demand, adoption of technology in smaller legal services firms – the sort that traditionally service individual clients – remains lower than in larger firms. The Legal Standards Board’s 2018 survey of Technology and Innovation in Legal Services asked firms about deployment of ten emerging technologies (see Figure 6), and in each case found that firms with more than 50 employees were much more likely to have done so (Legal Services Board 2018). The ABA’s 2019 report on technology adoption by small firms presents a similar picture (ABA 2019). Moreover, the evidence discussed in Section 1 suggests there are still considerable unmet legal needs. Why, despite the UK’s reforms designed to liberalize legal services for the benefit of consumers, does this pattern emerge so consistently?

Economies of scale likely play a role. The deployment of automated systems has fixed costs, which make them relatively more costly for smaller than larger firms to adopt. This means that technology is likely to penetrate first into BigLaw firms. It also implies that deployment in PeopleLaw is likely to necessitate consolidation of service providers.
There is also a challenge of translation between how lay clients speak about their problems and the way in which the legal system frames these same issues. This translation exercise is a core part of a human lawyer’s “client skills”. Social intelligence—including the ability to empathize and communicate with a with range of backgrounds—remains particularly elusive for AI systems (Frey and Osborne 2017). In the BigLaw context, the users of technical systems are typically themselves lawyers, and so able to deliver such translation for their ultimate clients. The costs of having human lawyers provide this are typically small relative to the value of the service in question. For PeopleLaw, the cost of having a human lawyer remain in the loop may be prohibitive. This suggests that at least part of the unmet legal needs may be beyond the current technical possibility frontier.

Use cases in PeopleLaw
For the reasons described above, deployment of technology in the PeopleLaw context remains relatively modest. One key use case is document automation. In particular, it is the only technology of the ten considered in the LSB’s 2018 survey for which law firm respondents serving individuals were more likely to report adoption than those serving large businesses (25% vs 11%)(Legal Services Board 2018). And transaction management tools are increasingly widely deployed to assist in residential real estate, which is by far the largest throughput of transactions for which individuals need legal services.8

These tools are in many cases complemented by a platform model that facilitates the connection of a user to a relevant human lawyer. These are typically fronted by a portal that offers users simple Q&A on basic legal issues relating to their concerns, accompanied with document templates – perhaps automatically generated – along with referrals to human lawyers where the service requires moves beyond the basics. The platform retains a network of lawyers whose work is ranked by users and to whom referrals are made.

Chatbots may seem a promising solution to the problem of engaging with lay users, but the necessary translation challenge requires systems not only to be able to dispense and classify

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8 Legal issues in most other significant consumer transactions – for example, financial products or car payment plans – are managed by the firm on the other side.
legal advice—beyond the capabilities of current systems (Frankenreiter and Nyarko, in this volume)—but also to be able to translate this into how lay people understand legal issues. There is evidently a serious gap between ordinary parlance used by laypersons and the specialized terminology of legal discourse. This gap tests the frontier of applying natural language processing (NLP) to use laypersons’ statements or queries as data for prediction. There is sound evidence using a corpus of 5842 cases of attorney misconduct initiated by citizen complaints in the US, that fact statements by unguided pro se (self-represented) litigants are far less amenable to machine-learning techniques to predict outcomes than judges’ text (Branting, Balhana et al. 2020, Branting, Pfeifer et al. 2020). Only when and if this technological challenge is resolved would it become possible for chatbots and virtual assistants to give appropriate advice to consumers. This technological problem may explain the relatively low rate of use of chatbots and virtual assistants (only 5% of respondents in firms servicing individuals)(see Figure 6), even compared to the use of other types of legal technology in the LSB’s 2018 survey (Legal Services Board 2018).

Augmented lawyering and business models in PeopleLaw
Lawyers in PeopleLaw face the same dynamics of substitution, augmentation, and new task creation associated with technology adoption as do those working in BigLaw. The PeopleLaw ecosystem, however, is somewhat different in both the stakeholders and the key emergent business models (see Figure 7). In the PeopleLaw ecosystem, clients are individual consumers and small businesses, rather than large corporate clients. Thus, all the lawyers in the ecosystem are on the supply side, offering advice to consumers (contrast the BigLaw ecosystem, where the demand side is driven by in-house lawyers). Traditionally, lawyers, whether as sole practitioners or as members of law firms or on behalf of legal aid or other organizations, transacted directly with consumers.

With legal technology, the ecosystem is extended with the providers of two new business models, namely Legal Technology and Transactional Platforms. Substitution of lawyers is a key aim of Legal Technology model and requires lawyers-as-producers working as part of multi-disciplinary teams to develop new technology tools, including virtual assistants and chatbots, and document template generation. Humans-out-of-the-loop in providing legal advice would lower the cost of legal service provision. A separate technology use exists in providing Transactional Platforms, which is aimed at not substituting lawyers but by matching lawyers to clients, just as e-Bay provides a marketplace for buyers and sellers to come together and engage in transaction. Thus, a lawtech firm offering such a marketplace acts as a two-sided platform (Rochet and Tirole 2003, Sundararajan 2016, Van Alstyne, Parker et al. 2016) to lower costs of matching lawyers to consumer needs.

Moreover, some providers define consumer needs, not as legal needs, but as something broader, thus leading to integrating legal services with other services for the convenience of being a “one stop shop”. Such consumer service providers combine technology and human capital to offer legal services as part of a bundle of complementary services. For example, Farewill offers “death” services, combining will writing and funeral services; other providers may offer a service in “moving home”, combining conveyancing and mortgage brokerage, or in “injury” combining advice on personal injury law with insurance services.
As of the 2010s, legal technology is not yet capable of substituting effectively for human lawyers except in very simplest contexts, such as generating standardized documents for wills or small business incorporation. Thus, there so far appears to be more value created by technology augmenting human lawyers and lowering the search cost for end-users, than by technology substituting human lawyers. While augmenting human lawyers brings the overall costs of legal services down by increasing productivity, there is still a need for human lawyer input in most cases. For example, NetLawman provides a co-habitation (living together) agreement template for only £26.40, but the price rises to £176.40 for a “template + review” package. Thus, the document template is only 15 percent of the cost of template + human lawyer review. In future, if and when the review part can be also automated, PeopleLaw providers would better be able to meet additional latent demand for legal and associated services.

**Section 4: Implications for Levelling the Playing Field**

We are now in a position to return to our central question: will the adoption of legal technology level the playing field in the two sectors, PeopleLaw and BigLaw? In order to address this convergence-divergence question, this section examines several areas, namely the extent to which consumer or client needs are met, access to external capital (Hadfield 2014), emergent business models, organizational governance, and industry structure. We discuss each dimension below, highlighting the necessary market and technological conditions for convergence, contrasting these with others that would tend to suggest divergence in the coming years.

The causal framework used to discuss the convergence of two sectors is based on the following elements. First, we summarize the emergent business models that are theoretically possible given the nature of legal technology and the availability of data. Second, we examine factors

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9 NetLawman.co.uk
that encourage or discourage the adoption of these business models, including regulation, access to financial capital and relevant human capital, mediated by organizational governance of law firms and other providers. Third, to the extent that it is possible, we draw implications for the market size and industry structure (the degree of concentration or fragmentation) of PeopleLaw and BigLaw markets.

Convergence in meeting client needs?
Before we delve into the analysis using the causal framework, a high-level overview of the possibility of convergence and divergence may be provided with an economic lens, devoid of the organizational context. This amounts to looking primarily at the black boxes in Figure 8, imputing causal links between legal technology and data on the one hand, and market size and industry structure on the other, while assuming that latent demand is more or less fixed.

Digital technology is a double-edged sword when it comes to levelling the playing field with respect to meeting client or consumer needs. On the one hand, the possibility for convergence relative to the past lies in technology’s ability to reduce costs of delivery, expanding the “legal production possibility frontier” given user budget constraints. The reduction in cost per unit of legal service delivery derives from both supply-side economies of scale, with technology facilitating automation (substituting human lawyers) and better workflows, and from demand-side economies of scale, the so-called network effects.

Figure 8: Causal framework for examining convergence-divergence

Other factors, however, suggest we may still be a long way from absolute convergence, and the two sectors may continue to diverge in meeting latent legal needs. Convergence would require the demand curve to remain fixed, which may not be the case. For example, in the BigLaw context, while technology assisted review (TAR) lowers the unit cost of document review, its availability may simultaneously increase the level of effective demand (that is, the numbers of documents sought to be reviewed), thus raising the capacity needed to meet the overall demand. That is, while the per-unit cost is lowered by technology the overall cost does not reduce and the size of the pie is no bigger (this assumes a relatively high price elasticity of demand or an outward shift in the demand curve). This type of effect requires users to have
significant financial resources, more readily available in BigLaw than in PeopleLaw. In PeopleLaw, notwithstanding consumers’ meagre financial resources, inability (yet) to automate interfaces with end-users due to the translation challenge (from lay language to legal framing as discussed in Section 3) means that unmet legal needs are likely to remain significantly high. In short, this is a scenario in which PeopleLaw will be left behind in the artificial intelligence revolution, while BigLaw leapfrogs in the scale and scope of AI adoption.

Thus, to predict convergence or continued divergence necessitates attributing different conditions about each side of the market. On the supply side, the case for convergence is based on technology’s capacity to reduce the cost of service delivery, but this may operate asymmetrically between the sectors—implying continued divergence—because of the uncertainty around technological capacity to translate lay language into legal framing. On the demand side, convergence would come about if latent legal demand is more or less fixed; by contrast, the divergence perspective is grounded in a view that unmet legal needs are a moveable feast, with latent demand turning into effective demand not only through a change in the price but also through outward shifts in the demand curve arising from societal and commercial forces.

Below, we start by comparing emergent business models and their complements in PeopleLaw and BigLaw, to unravel some of these differing conditions.

**Technological possibilities, data, and business models: BigLaw and PeopleLaw compared**

Our first task is to compare the technological possibility offered by legal technology and data to develop new business models in the two segments of legal services market. In both BigLaw and PeopleLaw sectors, the current phase of legal technology is based not only on rule-based expert systems to generate documents based on templates, but also machine learning that enables the generation of prediction. With this in mind, we identify five business models which exist in both sectors (see Figure 9) but with some variations in relative importance. In particular, Legal Advisory given by lawyers-as-consumers-of-AI is plausible for both sectors but likely remains unaffordable for many of the PeopleLaw consumers. Given this, the application of Legal Technology to bypass lawyers-in-the-loop by using chatbots and virtual assistants has high latent demand in PeopleLaw. But the aforementioned technological problem of translating lay language into legal framing using NLP is a barrier to the wide diffusion of chatbots in PeopleLaw, but not in BigLaw.

In making a distinction between legal advice (more bespoke) and legal services (subject to repeated and scalable delivery), the Legal Operations business model has wider application in BigLaw than in PeopleLaw simply because the opportunity to exploit workflow efficiency and automation exist for large law firms and corporations in BigLaw, in the way that such things are less important for individual consumers and small businesses. In other words, opportunities to seek efficiency and lower costs exist due to both supply side and demand side reasons, but BigLaw is in position to benefit more from supply side economies of scale than PeopleLaw.

With respect to demand-side economies (Brynjolfsson and McAfee 2016), network effects could be leveraged in both sectors by using the Transactional Platform business model. Not only do such marketplaces lower search costs, the possibilities of finding appropriate transactional partners rise exponentially with more users of the platform. Separately, another demand-side aggregation may occur as a result of adopting what we call an Integrated Service
Delivery model, in which legal service is delivered as part of a larger bundle of services. This model has applications in both sectors.

Figure 9: Business models in BigLaw and PeopleLaw compared

<table>
<thead>
<tr>
<th>Business model</th>
<th>BigLaw</th>
<th>PeopleLaw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal Advisory</td>
<td>Bespoke legal advice by lawyers as consumers of AI for corporate clients</td>
<td>Bespoke legal advice by lawyers for individual consumers, but it may be unaffordable</td>
</tr>
<tr>
<td>Legal Operations</td>
<td>Improve workflow of legal service delivery at law firms and corporations via automation</td>
<td>Less important as both consumers and providers do not have large organizations</td>
</tr>
<tr>
<td>Legal Technology</td>
<td>Develop software tools, to generate documents, to predict outcomes, etc.</td>
<td>Develop and provide software tools, document templates, virtual assistants &amp; chatbots</td>
</tr>
<tr>
<td>Transactional Platform</td>
<td>Lawyers-on-demand for corporate clients wanting contract lawyers on a project-by-project basis</td>
<td>Marketplace to lower search costs for consumers to find lawyers</td>
</tr>
<tr>
<td>Integrated Service Delivery</td>
<td>Corporate clients framing their demand in business services (&quot;tax restructuring&quot;, M&amp;A, government investigation &amp; regulatory compliance, etc.)</td>
<td>Consumer framing their need in &quot;moving home&quot; (conveyancing + mortgage), &quot;breakup&quot; (divorce + child custody), &quot;injury&quot; (insurance + employment), &quot;death&quot; (wills +probate + funerals).</td>
</tr>
</tbody>
</table>

Last and not least, the central importance of “big data” in artificial intelligence is likely to give advantages to providers that can scale in both BigLaw and PeopleLaw. First-mover advantage may accrue to data aggregators that have a head start in training their AI models using data. Both sectors face similar challenges in turning unstructured data into machine-readable structured data, while also developing NLP methods to analyze less structured data. However, there are different dynamics that should be noted here. In PeopleLaw, between-user data aggregation appears possible with access to consumer data being in theory much easier, although this may be subject to growing background constitutional data governance concerning privacy. For now, it is curious that LegalZoom appears to be the only PeopleLaw startup that has scaled, which indicates that we need to investigate barriers to scale up other than in the nature of data. In BigLaw, between-user data aggregation requires careful negotiation that takes account of commercial sensitivity. For now, much of the data aggregation taking place is within-user, for example for a specific corporate client, be it a bank or an insurance company. Between-user data aggregation in BigLaw will require both further pushing of the technology possibility frontier – by eliminating the need to unencrypt data for machine learning – and the setting of industry-wide standards for data sharing.

Access to finance including external capital
We now shift our analysis to the orange boxes in Figure 9, namely studying any differences in financial capital constraint and human capital constraint to the effective deployment of new business models that arise from organizational governance of law firms and other entities providing legal services in BigLaw and PeopleLaw. Our analysis suggests that the financial capital constraint is not an issue in BigLaw in the way that it might be in PeopleLaw, whereas the human capital constraint may be more of a problem in BigLaw than in PeopleLaw.
From a corporate governance perspective, the inability of traditional law firm partnerships to raise external capital was considered a major challenge preventing law firms from adopting technology (Hadfield 2014). Our research suggests that rather, the main challenge for law firms in the BigLaw sector is in human capital, and in recruiting and motivating non-lawyers working in multi-disciplinary teams to deploy digital technology for legal service delivery (Armour, Parnham et al. 2020). In PeopleLaw, by contrast, sole practitioners and small firms likely suffer from financial constraints, if they wish to access legal technology.

Given the absence of publicly available information on spending on digital technology by law firms and corporate legal departments, it is difficult to estimate the difference in investments made between the PeopleLaw and BigLaw sectors. Instead, we resort to comparing the amount of external funds that have been invested in lawtech startups, using the Crunchbase Pro database. We focused, in our analysis, on 139 lawtech startups in London (45), New York (37), and San Francisco Bay Area (47). We manually classified these 139 lawtech startups in PeopleLaw, BigLaw, and HybridLaw by reading the company description in Crunchbase, LinkedIn and company websites. The areas of legal work that these startups addressed with their technology are wide-ranging. In BigLaw, startups in all three locations were in contract analytics, knowledge management, practice management, or lawyers-on-demand marketplaces. In PeopleLaw, tech startups existed typically in will-writing, residential conveyancing, and simplifying the process of setting up a new business for startup founders. HybridLaw startups included those with tools for patenting and patent search, and tools for clients who were not-for-profit or for government organizations.

As shown in Figure 10, there are more BigLaw startups than PeopleLaw startups in each location. But the difference between the number of BigLaw startups and the number of PeopleLaw startups is bigger in San Francisco than in New York or London. In terms of money raised (including angel and venture capital financing) over the lifetime of all startups in our sample, what is most striking is the disproportionately large sums that San Francisco startups have attracted in all areas of law, as compared to startups in London and New York (see Figure 11). Money raised by BigLaw startups is more than money raised by PeopleLaw startups in all three locations, but the difference appears marginal in London and New York.

While these figures are only indicative of the underlying trends, we believe there are plausible explanations for the funding patterns. First, the disproportionately large amount of funding in San Francisco may be due to the supply side – there are simply a larger pool of startup founder talent with more serial entrepreneurs who target markets beyond legal, and a larger pool of angel and venture capital funding in San Francisco than in New York or London. Second, fundraising by startups in BigLaw captures only a portion of the total investment in technology for BigLaw. Not only do BigLaw startups attract venture capital funding; they also receive complementary investment by law firm and corporate clients to co-create new technology and share data. For example, according to the annual financial statement submitted to Companies House, the English magic circle firm Allen & Overy LLP invested approximately £20 million in internally-generated software in 2018/19. This is more than the total amount raised by lawtech startups in London, as shown in Figure 11. Thus, in BigLaw, the startup fundraising figures significantly understate the total investment in technology, whereas in PeopleLaw there is no corresponding investment by individual consumers.

To summarize, financial capital appears not to be a binding constraint for the BigLaw sector, given that law firms organized as partnerships are able to invest more in technology than the
fundraising by startups. Turning to PeopleLaw, because law firms serving the sector tend to be smaller and have fewer financial resources, outside capital is plausibly more important.

**Figure 10**: Lawtech startups in PeopleLaw, BigLaw and HybridLaw

[Chart showing number of lawtech startups by category for BL, PL, and HL across London, New York, and San Francisco.]

**Figure 11**: Money raised by lawtech startups in three locations

[Chart showing money raised in USD for BL, PL, and HL across London, New York, and San Francisco.]

**Access to multi-disciplinary human capital**

We argued that an effective use of multidisciplinary teams (MDTs) in which lawyers-as-producers-of-AI work alongside non-legal professionals was essential for the effective deployment of legal technology. Here, we argue also that the problem of accessing multidisciplinary human capital to enable MDTs is more pertinent in BigLaw than in PeopleLaw.

In BigLaw, clients are large law firms as lawyer-only partnerships and corporate legal departments. Within law firms, human lawyers are required for bespoke work, and these lawyers-as-consumers-of-AI do very different work from lawyers-as-producers-of-AI working in MDTs. Other non-legal professionals are also not given opportunities for promotion to top management, making it challenging to recruit and retain the best talent in data science, management, and other disciplines (Armour, Parnham et al. 2020). Thus, there is likely to be a bifurcation in legal service delivery, between law firm partnerships that focus on the human capital business, and corporations that are aligned better to implement MDTs.

In PeopleLaw, the transformative impact of legal technology is likely to come about through lawtech start-ups which employ lawyers-as-producers-of-AI. There are of course law firm partnerships in both PeopleLaw and BigLaw sectors, but the absence of career paths for multidisciplinary non-legal professionals does not hit small law firms and sole-practice lawyers as
much as large law firms which are more prevalent in BigLaw. PeopleLaw may also be delivered by professionals other than lawyers, for example experts in tax, insurance, real estate, and human resources.

In short, by comparing BigLaw and PeopleLaw, BigLaw faces a greater human capital challenge than PeopleLaw. BigLaw law firms’ challenge lies in aligning its human capital investment as a complement to their newly adopted business models other than the Legal Advisory model. PeopleLaw lawyers can also take advantage of the Transactional Platform, that enhances individual lawyers’ reputational transparency for consumers, thus reducing the significance of reputation pooling at the firm level.

Regulation
From the foregoing discussion, the financial constraint appeared to be more binding, and the human capital constraint less binding, in PeopleLaw than BigLaw. This suggests that the UK’s relaxation of rules that prohibited ownership of law firms by non-lawyers—which would facilitate the raising of outside capital—should have had more of an impact in the PeopleLaw than the BigLaw sector.

There are now over 1,000 licensed ABSs in the UK, as against a total population of over 10,000 law firms. For England and Wales, the Solicitors Regulation Authority (SRA) approved 1089 ABSs by December 2020. Of these, 73 percent are limited companies, and 22 percent are limited liability partnerships.10 About half of these ABSs have transformed from law firm partnerships (Legal Services Board 2017), and a sizeable number have consequently changed the way in which they raise finance, to invest more in technology and innovation (Solicitors Regulation Authority 2014). Consistently with the foregoing account, the vast majority of these law-firm-to-ABS moves have been very small firms whose clients are individuals rather than businesses (Legal Services Board 2017). While there have been one or two high-profile restructurings of larger incumbent law firms that focus on the corporate sector, such as DWF—which underwent an IPO in 2019 (DWF 2019, Armour and Sako 2020)—these have very much been the exception (Aulakh and Kirkpatrick 2016).

This seems to suggest the UK’s regulatory reforms had an impact on the PeopleLaw sector. Yet if so, we might expect this to translate into more capital being raised by lawtech startups in the UK than in the US, for which Figure 11 gives no support. While supply-side considerations may explain the greater levels of investment in San Francisco, this evidence does suggest the impact of the UK’s deregulation has been less than transformative.

Future of market size and industry structure
Pulling these various strands together, what is the likely future for PeopleLaw and BigLaw in terms of their relative market size and industry structure? We attempt to address this question in the context of no change in current regulation, and first identify the scaleup possibilities and advantage of each identified business model. Simply put, the Legal Advisory model does not scale. By contrast, the Legal Operations and Transactional Platform models are subject to supply-side and demand-side economies respectively. Legal Technology that has a platform characteristic has the potential to scale and dominate (Cusumano, Gawer et al. 2019), while other technologies such as software tools may remain “point solutions” what do not scale without a platform. Integrated Service Delivery is promising in wrapping legal services in wider service and will blur the boundaries between legal and non-legal markets.

10 Calculations are based on the SRA’s Solicitors Register datashare data accessed on 30/12/2020.
In BigLaw, technology solutions that are specific to legal industry are already wired into cross-sector technology solutions – for example DocuSign with its e-signature, Salesforce, contract analytics tools that use the Microsoft Office platform, etc. Moreover, data providers such as Thomson Reuters and LexisNexis are vying to become technology platform leaders via the acquisition of lawtech providers. One possibility is that legal technology for BigLaw will become more and more subject to the platform logic, leading to greater market concentration of technology providers, many of which hail from outside the legal industry. If that is the case, the UK Competition and Markets Authority’s recent recommendation for a unified register of lawtech providers may be necessary but not sufficient as effective public policy (CMA 2020). At a minimum, what is a lawtech provider, as opposed to a tech provider, needs to be defined. Also, market concentration requires a bigger push to restrain anti-competitive behavior of big tech companies.

In PeopleLaw, market growth would take place only if two things happen – the growth of Transactional Platforms and technological solutions to the lay-to-legal-framing translation problem. While platforms may take off to provide a launching pad for scaling, one side of the marketplace will remain human lawyers, rather than chatbots or virtual assistants until this translation problem is addressed and resolved by data scientists and linguists.

**Conclusion**

This paper addressed a question of central importance to public policy, namely whether or not the adoption of legal technology will level the playing field between two hemispheres of the legal services sector—PeopleLaw and BigLaw. In the late 2010s, PeopleLaw constituted only a fifth to a quarter of the total revenues in legal services markets in the US and UK. We argue in this paper that to level the playing field and to make PeopleLaw thrive relative to BigLaw, the use of legal technology is necessary but not sufficient.

Legal technology, together with the aggregation of data, has enormous potential to transform the way legal services and legal advice are delivered in both hemispheres. Repetitive and scalable tasks can be automated, substituting technology for human lawyers and lowering unit costs. Tasks requiring extensive customization or social intelligence remain in the exclusive competence of human lawyers, but their capacity is augmented by the deployment of technology for repetitive tasks. Through these channels, technology offers the potential to lower the costs of legal service delivery and thus reach consumers and clients whose needs had gone unmet. This would most obviously play out through the adoption of new business models (such as legal operations, transactional platforms, and legal technology) that focus on capturing economies of scale. In turn, these economies of scale would drive market concentration, with emerging winners likely being those who can best combine network externalities associated with both usage and data aggregation. This is a dynamic increasingly familiar from tech firms in other sectors. The change would be most obvious in PeopleLaw, which traditionally operates at a much smaller scale, but the underlying dynamic would be similar, and the process would lead to convergence both in meeting client needs, business model adoption, and market structure.

However, the reality is far more complex, because—at least for now—various constraints create obstacles to market participants’ ability to leverage technology through the adoption of new business models. In BigLaw, key barriers lie in the human capital constraints associated
with mixing Legal Advisory with other business models. Legal Advisory is, by definition, focused on work that is human-centric, and so organizational and management structures that appeal to the humans with the relevant capital will be crucial for competitive advantage. However, these institutions correspondingly constrain the deployment of Legal Operations and Legal Technology business models, creating a constraint on concentration. Alongside this, users’ hesitancy about data aggregation, at least for now, constrain the extent to which Legal Technology platforms are able to achieve concentration.

In PeopleLaw, the process of concentration appears to be well under way, with transactional platforms and integrated service delivery offerings capturing economies of scale and scope. However, there remains a seemingly significant obstacle to meeting latent demand, through the fact that the “client-facing” aspect of service delivery still eludes complete automation. Because human lawyers have high costs, this translates into high prices that raise the bar on the extent to which demand remains latent. There is some evidence that financial constraints are also an obstacle, but this is challenged by the greater levels of lawtech investment in the US (where law firms are not permitted to raise outside equity) than in the UK (where they have been for a decade under the Alternative Business Structure model). This suggests that the stakes in the US regulatory debate may be lower than participants imagine. At the same time, these constraints are unlikely to be eased by a policy focus on price transparency and comparison shopping emphasized by the UK’s Competition and Markets Authority (CMA 2020). Legal services, however productized, are after all credence goods, and consumers and clients who purchase them must overcome information asymmetry and/or behavioral biases.

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