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UNIVERSITY OF
TORONTO

THE PLATFORM ECONOMY AND COMPETITION POLICY: OPTIONS FOR CANADA

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INNOVATION POLICY LAB WORKING PAPER SERIES 2022-02

April 2022

This report was commissioned by Innovation, Science and Economic Development Canada. The opinions expressed herein are those of the author and do not necessarily reflect those of the Government of Canada.

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Executive Summary

This report reviews the competitive effects of the digital transformation in platform ecosystems for Canadian SMEs as purchasers of services. The digital transformation in markets enables greater efficiencies in the provision of services to businesses, but also generates competitive inefficiencies arising from the reliance on platform firms as suppliers, given their disproportionate share of the market. The economic impact of platform firms derives from the nature of network effects and increasing returns that have been identified as key aspects of the platform economy. The status of these firms also derives from increased investment in intangible assets, in contrast to investments in physical assets, as a dynamic factor in the expansion of the platform economy, as well as the specific characteristics of the economics of information. The report explores the potential of this transformation to create and reinforce monopoly positions in key platforms in the digital economy. It examines why conventional perspectives that inform competition policy have been slow to identify this threat and may not provide an adequate basis to respond to the challenge. The dominant position of the leading platform firms in the digital economy — frequently identified by the acronym GAFAM (Google, now Alphabet, Amazon, Facebook, now Meta, Apple and Microsoft) — has been enabled and reinforced by the confluence of four interrelated technologies, part of the broader paradigm of information and communication technologies (ICTs): the spread of the Internet and the shift to cloud computing; the widespread adoption of smart phones and the rise of the app economy; the increasing impact of big data and data analytics; and the adoption of AI techniques to predict trends using large data sets.

The report reviews some of the new policy perspectives that have emerged from the academic and policy-oriented literature to deal with this challenge, with a particular focus on the limitations of existing competition policy authorities to deal with the full dimensions of the current challenge. It considers a set of alternative recommendations currently being advanced and the need for a ‘whole of government’ approach to deal with the issue. Policy approaches recently adopted or currently under consideration in other jurisdictions, especially the EU, UK and US are examined, and the implications of this trend for policy development in Canada are considered. The report concludes with a preliminary set of recommendations for the most effective policy approach for Canada, considering its position as a small, open trading country in the global economy and its traditional role as a technology taker, not technology setter.

The increased emphasis on software-based products and digital channels in the current phase of the digital revolution signifies the shift from a world shaped by economies of scale to a more flexible environment where economies of scope based on platforms and networks dominate. The rise of platform firms is creating opportunities for entrepreneurial start-ups to

introduce dynamic new services that disrupt conventional business models and challenge the dominant economic position of established companies across the economy. The pace of innovation is increasing at exponential rates, dramatically compressing the time it takes to disrupt established markets. Yet, paradoxically, the economic lead enjoyed by dominant platform firms is accelerating, making it more difficult for new firms to gain a foothold in the digital platform economy. A critical question is whether the further growth and expansion of the platform economy will open a wave of new entrepreneurial opportunities for start-up and scale up firms, including those located outside the US, or whether it will suppress them through the disproportionate control exercised by the current echelon of established platform firms.

Through their control of the underlying architecture, platform firms establish the framework that controls the parameters for economic and social interaction — as such they exercise a high degree of control over the users of the platform. As is the case with all major economic upheavals and technological transitions, the answer lies in how the politics of the platform economy and the formation of new coalitions to advocate for alternative policy responses will allocate gains and losses between the winners and losers. Equally critical is the capacity for political actors and public policy to formulate the appropriate regulatory and competition policies to ensure that the economic gains from digital platforms are distributed equitably to the full benefit of society. At the heart of this question lies the way in which forms of monopolization generated by platform technologies differ from earlier forms experienced in the industrial economy and the broader implications of this difference for the distribution of economic benefits. This raises the central question at the heart of this review: whether regulatory and other policies previously used to redress occurrences of monopolization and excessive concentration constitute sufficient policy responses to the current challenge posed by the platform economy.

Platform firms are able establish a dominant position in the digital economy because of the impact of network effects and increasing returns. Technologies become more useful to end users as they are more widely adopted. The phenomenon of ‘increasing returns to adoption’ arises from a variety of sources, including: the greater the number of users of a technology, the more widely available it becomes and the greater the advantage of being part of the existing network of users, plus, the more widely used a technology is, the less risky it is to adopt for new users, and finally, the more widely it is adopted, the greater the number of sub-technologies, or add-ons that are developed for use with it. Many platforms prove to be winner take all markets in which only one or two companies prevail for reasons related to network effects and increasing returns. Power on platforms is highly concentrated, with the dominant company

tending to become a virtual monopolist, leading to the current policy dilemma faced by competition authorities in Europe, North America, and other industrial economies.

A key advantage generated by information technology is that it provides firms with substantial volumes of data that allow for the precise observation and detailed analysis of consumer behaviour. Firms can thus tailor their marketing strategies, and even adopt specific pricing strategies, customized to the unique characteristics and behaviour of individual consumers. Digital technology affords platform suppliers access to unique knowledge and data about the preferences and behaviour of their customers, giving rise to the prospect of them “owning the consumer”, to a much greater extent than potential competitors. The ready availability of information technology-mediated sources of data about consumer behaviour has generated the model of targeted advertising that underpins the market power currently enjoyed by platform firms. Digital platforms are viewed as a novel way to capture value through their capacity to extract and harness immense amounts of. Revenues extracted from platform users amount to a form of economic rent from their involvement with the platform and the data trails they generate. The unique advantage frequently enjoyed by first movers in the platform economy is seen as the critical source of the preponderant degree of market power they enjoy, giving rise to current concerns over the most effective policy levers to curtail or limit the market power of the platform firms.

Regulatory and policy remedies to deal with the dominant position occupied by platform firms must address the substantial differences between industrial and information economics. Most legal and regulatory remedies presently in place emerged from the political response to the power of trusts in the industrial economy of the early 20th century, with the objective of limiting excessive concentration and anti-consumer behaviour in individual market segments. Assessing the applicability of the legal and regulatory remedies designed for that era to the current context, where much of the product is delivered to the consumer for free or at a significantly lower price, represents a distinct challenge. Platform firms have largely been able to escape regulatory scrutiny by exploiting the fragmented policy landscape in the US to expand their networks rapidly and achieve scale. The perceived affinity between their respective interests distinguishes platform firms from traditional forms of monopoly that competition policy instruments introduced in the 20th century were designed to remedy and renders these remedies less applicable to the competition policy environment of the digital economy.

There is a growing consensus among legal and policy experts that the traditional focus of anti-trust policy on reducing or eliminating anti-competitive behaviour, may be insufficient to counter the inherent tendency of the platform economy towards producing winner-take-most results in digitally intensive sectors of the economy. The central point emphasized in the

literature is the need to not just constrain anti-competitive behaviour by platform firms, but to introduce proactive policies to increase the degree of dynamism in the economy by promoting the growth of new firms, especially scale-up firms. From this perspective, both competition policy regulators, and policy makers concerned with the digital economy more broadly, must employ multiple policy levers and consider the interaction effects between them. The implementation of this broad mix of policies may require the creation of a new expert authority responsible not just for limiting anti-competitive behaviour, but also equipped with policy tools to promote the entry and expansion of scale-up firms in the platform markets.

The past year and a half have witnessed a flurry of proposed legislative and administrative policy initiatives in the EU, UK, and the US in response to the competitive challenges posed by the digital platform economy. The report provides an overview of some of the policy approaches currently being proposed and adopted in these jurisdictions (G7 United Kingdom 2021). There is currently no new legislation that has been introduced in that is directly comparable to the current trend documented above in the EU, UK, and the US. The Mandate letter issued by the Prime Minister to the Minister of Innovation, Science and Economic Development on December 16, 2021, instructed him to position Canada to establish a digital policy task force to integrate efforts across government and position Canada as a leader in the digital economy and in shaping global governance of emerging technologies. The Minister was also mandated “to enhance consumer protection and ensure a level playing field for all businesses, undertake a broad review of the current legislative and structural elements that may restrict or hinder competition. This includes directly reviewing the mandate of the Commissioner of Competition, and in so doing, ensuring that Canadians are protected from anti-consumer practices in critical sectors, including in the oil and gas, telecommunications and financial services sectors” (Prime Minister’s Office 2021).

In conducting this review, the critical objective for government policy with respect to the platform economy should be to: 1) ensure equitable trade terms for Canadian SMEs as purchasers of business services from GAFAM firms; and 2) invigorate competition in markets for the provision of digital services to Canadian businesses where GAFAM firms are incumbents, notably by encouraging the market entry and growth of Canadian competitors to GAFAM in such markets. If the Digital Policy Task Force (DPTF) that ISED is mandated to set up in the Minister’s letter concludes it is important for Canada to adopt a domestic version of the EU/US legislation currently under consideration, Canada should coordinate its legislative initiative with its economic partners through a suitable international forum, comparable to the G7 consultative exercise that produced the Compendium of Current Approaches cited in this report.

If a key policy goal for Canadian competition policy is to invigorate competition in markets for the provision of digital services by encouraging the market entry and growth of Canadian competitors to GAFAM, as suggested above, the premature acquisition of Canadian SMEs, before they have a chance to scale, may become an important issue for competition policy to address. In cases where they determine that such an acquisition is detrimental to the goal of protecting domestic SMEs from a predatory acquisition, then Canadian competition authorities will need to have available the enforcement powers to prevent the acquisition or force a divestiture. This should be a key area for investigation by ISED's Digital Policy Task Force, with a mandate to propose new administrative or legal measures to protect domestic SMEs.

An adequate defence of domestic SMEs from the anti-competitive effects of the GAFAM firms increasing control over expanding sectors of the digital platform economy, as well as the growing impact of 'superstar' firms due to their disproportionate investments in intangible assets requires Canada to adopt a more pro-active approach to support the growth of the current cohort, as well as the next generation of domestic scale up firms. Among key recommendations discussed in the report are the need for greater education and awareness on the part of Canadian scale up firms of the critical role played by intellectual property in expanding and protecting their 'freedom to operate'. Additional policy initiatives include the need to establish an appropriate regime for the protection of personal property rights in data, the implementation of a 'privacy by design' regime as recommended in the recent CCA report on new forms of mobility (2021), the establishment of a national collaborative to create a standards roadmap for big data analytics in Canada and a broader set of sectoral and direct policy supports to promote the growth of Canadian scale up firms.

The report draws out the implications of the changing policy environment in some of Canada's key economic partners for the currently mandated review of competition policy with respect to the online digital economy in Canada. It concludes with a strong recommendation that a reformed approach to dealing with the platform economy, geared to ensuring that Canadian SMEs have equal opportunity to provide products and services in this sector and to scale internationally, requires a comprehensive approach. Such an approach must adopt both a preventive stance to protect Canadian firms from being acquired prematurely before they have a chance to grow to scale, but also a proactive stance to provide Canadian firms with the skills and strategy to enhance their 'freedom to operate' in a knowledge-based economy, as well as the policy supports to enable them to grow to scale.

Introduction

This report reviews the competitive effects of the current digital transformation in platform ecosystems for Canadian SMEs as purchasers of services. The digital transformation in markets enables greater efficiencies in the provision of services to businesses, but also generates competitive inefficiencies arising from the reliance on platform firms as suppliers, given their disproportionate share of the market. The economic impact of platform firms derives from the nature of network effects and increasing returns that have been identified as key aspects of the platform economy. The status of these firms also derives from increased investment in intangible assets, in contrast to investments in physical assets, as a dynamic factor in the expansion of the platform economy (Hazan, Haskel, and Westlake 2021), as well as the specific characteristics of the economics of information (Varian, et al. 2004). The report explores the potential of this transformation to create and reinforce monopoly positions in key platforms in the digital economy. It examines why conventional perspectives that inform competition policy have been slow to identify this threat and may not provide an adequate basis to respond to the challenge.

The dominant position of the leading platform firms in the digital economy — frequently identified by the acronym GAFAM (Google, now Alphabet, Amazon, Facebook, now Meta, Apple, and Microsoft — has been enabled and reinforced by the confluence of four interrelated technologies, part of the broader paradigm of information and communication technologies (ICTs):

- 1) the spread of the Internet and the shift to cloud computing enabled by the advent of faster, cheaper, and more scalable computing power.
- 2) the rise of the app economy facilitated by the rapid spread of mobile computing using smart phones, GPS technology, and running on 4G, now 5G, wireless networks.
- 3) the increasing importance of big data and data analytics facilitated by the substantial amounts of data generated by mobile devices and applications (apps) running on them.
- 4) the increasing adoption of artificial intelligence (AI) in the form of machine learning, deep learning and reinforcement learning to predict trends using the large data sets generated (Freeman and Louçã 2001; Freeman 2009; Friedman and Wyman 2016).

The report reviews some of the new policy perspectives that have emerged from the academic and policy-oriented literature to deal with this challenge, with a particular focus on the limitations of existing competition policy authorities to deal with the full dimensions of the current challenge. It considers a set of alternative recommendations currently being advanced

and the need for a ‘whole of government’ approach to deal with the issue. Policy approaches recently adopted or currently under consideration in other jurisdictions, especially the EU, UK and US are examined, and the implications of this trend for policy development in Canada are considered. The report concludes with a preliminary set of recommendations for the most effective policy approach for Canada, considering its position as a small, open trading country in the global economy and its traditional role as a technology taker, not technology setter.

Overview of the Key Characteristics of Platform Firms

The rise of the platform economy over the past two decades represents both a new phase in the development of the digital economy, as the organizational form of the platform directs an increasing proportion of economic and social activity through the platform itself (Kenney and Zysman 2020). The propagation of platform technologies commencing in the late 1990s is an outgrowth of the digital economy that emerged in the 1970s and expanded dramatically with the surprise developments of the early 1990s. The runaway popularity of the World Wide Web, followed by the emergence of the app economy, the shift to cloud based computing, the exploitation of large data sets and data analytics, and the growing application of artificial intelligence techniques in the form of machine learning and deep learning to analyze the large data sets, all signify the unpredictable potential of digital technology to tap new sources of growth (Berners-Lee 2000; Kushida, et al. 2014; Lee 2018; Friedman and Wyman 2016; Lee 2018).

The increased emphasis on software-based products and digital channels in the current phase of the digital revolution signifies the shift from a world shaped by economies of scale to a more flexible environment where economies of scope based on platforms and networks dominate. The rise of platform firms is creating opportunities for entrepreneurial start-ups to introduce dynamic new services that disrupt conventional business models and challenge the dominant economic position of established companies across the economy. The pace of innovation is increasing at exponential rates, dramatically compressing the time it takes to disrupt established markets. Yet, paradoxically, the economic lead enjoyed by dominant platform firms is accelerating, making it more difficult for new firms to gain a foothold in the digital platform economy. A critical question is whether the further growth and expansion of the platform economy will open a wave of new entrepreneurial opportunities for start-up and scale up firms, including those located outside the US, or whether it will suppress them through the disproportionate control exercised by the current echelon of established platform firms. The key question for policy is how the distribution of risks and rewards for platforms will be

shared between the owners and the users of the platform — in other words, who captures the value from the disruptive technology through their ownership and control of the platform (Kenney and Zysman 2016, 64–66).

A related question is whether the platform-driven reorganization of the economy is concentrating a disproportionate share of gains generated by the new technology into relatively fewer hands, principally those companies that build and manage the platforms. Through their control of the underlying architecture, platform firms establish the framework that controls the parameters for economic and social interaction — as such they exercise a high degree of control over the users of the platform. As is the case with all major economic upheavals and technological transitions, the answer lies in how the politics of the platform economy and the formation of new coalitions to advocate for alternative policy responses will allocate gains and losses between the winners and losers (Zysman 1994; Zysman 1996). Equally critical is the capacity for political actors and public policy to formulate the appropriate regulatory and competition policies to ensure that the economic gains from digital platforms are distributed equitably to the full benefit of society. At the heart of this question lies the way in which forms of monopolization generated by platform technologies differ from earlier forms experienced in the industrial economy and the broader implications of this difference for the distribution of economic benefits. This raises the central question at the heart of this review: whether regulatory and other policies previously used to redress occurrences of monopolization and excessive concentration constitute sufficient policy responses to the current challenge posed by the platform economy (Langley and Leyshon 2017; Kenney, et al. 2019; Montalban, Frigant, and Jullien 2019; Rahman and Thelen 2019; Birch, Chiapetta, and Artyushina 2020).

The reasons why platform firms can establish a dominant position in the digital economy derive from the impact of network effects and increasing returns. Technologies become more useful to end users as they are more widely adopted. The phenomenon of ‘increasing returns to adoption’ arises from a variety of sources, including: the greater the number of users of a technology, the more widely available it becomes and the greater the advantage of being part of the existing network of users, plus, the more widely used a technology is, the less risky it is to adopt for new users, and finally, the more widely it is adopted, the greater the number of sub-technologies, or add-ons that are developed for use with it (Arthur 1994). Many platforms prove to be winner take all markets in which only one or two companies prevail for reasons related to network effects and increasing returns. Power on platforms tends to be highly concentrated, with the dominant company tending to become a virtual monopolist, leading to the current policy dilemma faced by competition authorities in

Europe, North America, and other industrial economies. The way Google emerged in the early 2000s as the dominant search engine based on its page rank algorithm provides a classic illustration of this phenomenon (Zuboff 2019). The key policy challenge lies in determining what the most effective policy response is to deal with this new form of market power.

Key Drivers of the success and dominance of platform firms

Information economics differ in significant ways from traditional industrial economics due to the initial costs incurred in writing and testing the software on which the platform runs. The initial cost of creating the platform can be quite high, but once established, the marginal cost of adding additional users is virtually zero due to the digital nature of customer acquisition. This differs significantly from the marginal cost of producing a new unit of a physical product, such as an automobile or television. The rise of platform firms is part of a broader transition from the tangible economy, based on physical assets, to an intangible one, based on ideas, knowledge, and data. Intangible assets exhibit substantially different economic characteristics than tangible assets. In addition, investments in intangible assets generate considerable spillovers because of the network effects and increasing returns to adoption. Some of the most notable forms of intangible investments include intellectual property in the form of patents, copyright and trademarks, software, databases, entertainment or artistic originals, design, market research and branding (Haskel and Westlake 2018; Balsillie 2022). Investments in intangible assets have grown at a faster rate than investments in tangibles in recent decades; recent estimates indicate that they represented 40 per cent of all investments in the US and ten European countries, a significant rise from 29 per cent in 1995. There appears to have been an additional rise in 2020, as the pressure of working remotely in a pandemic environment has accelerated investments in digital technology across all sectors (Hazan, Haskel, and Westlake 2021).

An essential property of intangible assets, as reflected in the platform economy, is their scalability. In contrast to physical assets, which are tied to the site on which they are located, intangible assets can be accessed from multiple sites and by large numbers of users simultaneously, meaning that the underlying technology is highly scalable. There are also considerable synergies between elements of intangible investment, such as investments in software and platforms, and the introduction of new process technologies that build on those initial investments (Haskel and Westlake 2018). The process of digital customer acquisition differs considerably from traditional sales channels used in the industrial economy, even in the information and communications technology sector. Digital customer acquisition strategies

build on the network effects that are an integral part of information economics and are critical to the success of platform firms (Matthews 2018).

While the cost of acquiring digital customers online is considerably lower than that engendered through conventional sales channels, they are far from negligible. A critical contributor to the ability of platform firms to acquire customers arises from the easy access that they enjoy to financial investment through the dramatic expansion of venture capital and private equity vehicles for financing start-up and high growth firms (Lazonick 2009). Access to these ready sources of investment capital allows platform firms to price the initial cost of the service below full cost. This ability is based on the willingness of investors to stay for the long term on the understanding the goal is to create the largest scale possible by amassing the greatest number of users, rather than to generate immediate profits in the short term. Digital firm were prepared to price below marginal cost for an extended period to increase market share. Google making its search engine available for free in the initial period, without any model for generating revenue, or Amazon's investment in continued expansion for many years with generating profits reflect the use of this technique (Zuboff 2019). As a result, "in pursuit of market share, firms en masse may price their service below the cost of producing it, sometimes for long periods" this under-pricing can continue for long periods of time until one, sometimes two firm(s) has established themselves in a dominant position and lock-in has occurred (Kenney, et al. 2019, 873–74; Jenny 2021). While predatory pricing has long been prohibited under the provisions of competition policy, regulators in most of the leading jurisdictions were slow to identify these practices as potential violations of existing legal provisions.

Understanding the unique properties of information economics was pioneered in the work of Hal Varian and Carl Shapiro in the 1990s and early 2000s (Zuboff 2019). A key advantage generated by information technology is that it provides firms with substantial volumes of data that allow for the precise observation and detailed analysis of consumer behaviour. Firms can thus tailor their marketing strategies, and even adopt specific pricing strategies, customized to the unique characteristics and behaviour of individual consumers. But they also noted that this capability raises the prospect of some difficult issues concerning privacy and the use of data. Digital technology affords platform suppliers, such as Amazon, access to unique knowledge and data about the preferences and behaviour of their customers, giving rise to the prospect of them "owning the consumer", to a much greater extent than potential competitors (Varian, et al. 2004, 14).

The ready availability of information technology-mediated sources of data about consumer behaviour has generated the model of targeted advertising that underpins the market power currently enjoyed by GAFAM firms. The almost accidental discovery of the vast

stores of data generated through Google online searches provided the initial insights into how more refined analysis of the data could generate new insights into consumer behaviour and be put to new uses. What had previously been regarded merely as ‘data exhaust’ quickly became the source of critical new insights and market power in generating both a more effective search experience for Google’s users, as well as generating a new income stream for the company through the development of targeted advertising techniques. The real economic breakthrough from this recognition came in the early 2000s when the company realized that the redeployment of the insights acquired through these data extraction techniques could improve the targeting and profitability of advertising both for the company and its advertisers, thus opening a new era of “sustained and exponential profits” that provided the impetus for the emergence of the platform economy in its current incarnation and the predominant market position enjoyed by the GAFAM firms (Zuboff 2019, 74).

Advertising has effectively moved online with the advent of platform firms’ ability to capitalize on this technology. Over the past two decades, the market for online ads has become less competitive, going from Microsoft, AOL, Yahoo!, and Google as the major players, to just Google being the dominant site for publishers and advertisers to use. The inherent conflict of interest arises from the fact that Google sells ad space to both third-party sites as well as the ad space on its own sites. Hence, it’s no surprise that since 2007 almost two-thirds of the ad revenues Google received came from its own properties (including YouTube). The primary reason for Google’s dominance of the market in online advertising arises from their acquisition of ad server software company, DoubleClick, that year. This company was an intermediary, who had access to information about publishers’ primary ad servers. At the time of the acquisition the FTC believed that Google would not use this information to restrict competition, hence its approval of the merger. The inherent conflict in Google’s control of DoubleClick became apparent when it launched its own exchange in 2008. It began restricting publishers and advertisers’ ability to access their data from DoubleClick, thus giving its own trading divisions a critical information advantage. With Google operating its own exchange, it started restricting publishers’ and advertisers’ ability to see user’s IDs (claiming it was to ensure data privacy), even though its own exchange and buying tools could access this information. This asymmetry in information resources has contributed to Google’s dominance in the ad server market, by giving it access to proprietary data (Srinivasan 2020, 91–98). Google benefits from this privileged access to third party market participants’ private information by demanding higher bids for ad space from companies when Google knows there is a high likelihood of users accessing information on sites that will be relevant to the company in question. Google used to

protect this kind of information behind ethical walls, but this protection has broken down as its market power grew following the acquisition of DoubleClick (Srinivasan 2020, 154–155).

The growing competition between the leading GAFAM firms for greater control over lucrative advertising markets is heating up. In October 2021, Apple introduced a new App Tracking Transparency (ATT) policy designed to give its users greater control over how their data is tracked using online apps. Apple represented the policy change as one designed in the users' best interest and intended to protect individual privacy. However, the policy applies differentially to Apple's ad network than it does to other apps or platforms operating on Apple's platform. The implication is that advertisers using the Apple ad network would achieve better results than those using other advertising platforms. *Fortune* estimated that the initial impact of the change in policy cost other leading platform and online firms \$142 billion in lost market capitalization. The recent decline in Facebook (Meta) revenues and collapse in its share price was partially attributed to this policy change (Hackett and Harty 2021; Chen 2021; Feiner 2022).

Building on underlying insights derived from the new information economics, digital platforms are viewed as a novel way to capture value through their capacity to extract and harness immense amounts of data (Rahman and Thelen 2019; Zuboff 2019). According to Langley and Leyshon, "the harvesting and analysis of aggregated real-time data on the activities and movements of platform users may be in the process of becoming the primary source of revenue across the platform business model" (2017, 23). Revenues extracted from platform users amount to a form of economic rent from their involvement with the platform and the data trails they generate. The unique advantage frequently enjoyed by first movers in the platform economy is seen as the critical source of the preponderant degree of market power they enjoy, giving rise to current concerns over the most effective policy levers to curtail or limit the market power of the platform firms.

From a competition policy perspective, the GAFAM firms have invested considerable sums to acquire smaller, and sometimes relatively unknown firms, such as the Google acquisition of Waze. Experience suggests that the largest platform firms target acquisitions to entrench an already powerful positions or dictate the terms which users of the service must follow (G7 United Kingdom 2021). Many of these acquisitions have flown below the radar of competition policy administrators as the technology involved was too novel or seemingly unrelated to the primary business lines of the acquiring company to attract the attention of the enforcement authorities, until relatively recently. The economic benefit of these acquisitions is determined by the expected future synergies and revenue streams generated through the integration of the acquired firm with the GAFAM firm. Since 2004, Google alone has

strengthened its market position by acquiring close to 200 companies. While some of the acquisitions were related to its core market in digital advertising, many involved expansions into new and unrelated markets (Khan 2019, 1068). Relatively few of these transactions have been subject to regulatory or anti-trust review as they were often deemed to fall below the criteria for review established by US anti-trust regulations, or else they involved an acquisition in an unrelated industry, such as retail food distribution in the case of Amazon's takeover of Whole Foods. Existing regulators or regulatory mechanism may have trouble initially discerning how the increased synergies between the existing company, Amazon, Google, or Microsoft will result in greater market power for that company (Birch, Chiapetta, and Artyushina 2020).

One case, reviewed by the FTC in 2012 and allowed, was Facebook's acquisition of Instagram. The market for camera and photo editing apps was deemed by the FTC to have several strong competitors to Instagram. It determined that the merger did not create a serious prospect for the lessening of competition in the supply of photo apps and decided no further action by the Commission was necessary. In 2014, the FTC similarly investigated of Facebook's acquisition of WhatsApp and cleared it as well, although it sent the company a letter instructing them on their obligation to retain privacy practices in accord with their user agreements. However, in 2020, the FTC decided to reopen its investigation of the Facebook-Instagram merger leading to a lengthy exchange between the federal regulator and the company. These cases highlight the critical issue of whether existing competition law and regulatory measures are adequate to ensure the protection of a competitive marketplace and consumer welfare in the case of digital platforms. The challenge for regulators is that they

“. . . need to be able to reliably assess how consumer welfare can be defined for the users of the platforms who are offered services at a zero price and [they] must be able to distinguish between pro and anticompetitive behaviours or transactions.

Unfortunately, the competition analysis tools which work satisfactorily for the rest of the economy do not perform well in the digital world (Jenny 2021, 34).

The study released by the Federal Trade Commission (FTC) in September 2021 presents the most recent evidence from its inquiry into past acquisitions by the largest technology platforms' that did not require reporting to antitrust authorities at the FTC and the Department of Justice. The FTC reviewed a total of 616 transaction by the GAFAM firms valued at over \$1 million between 2010 and 2019. The report documents for the first time the extent of the transactions undertaken by platform firms to extend their market reach. In her remarks on the release of the study, FTC Chair Lina M. Khan said, "this study highlights the systemic nature of their acquisition strategies, . . . It captures the extent to which these firms have devoted tremendous resources to acquiring start-ups, patent portfolios, and entire teams of

technologists—and how they were able to do so largely outside of our purview” (Federal Trade Commission 2021a).

Competition between platform firms for control of the online space is likely to intensify as several US companies seek to emulate the model found in China and east Asian economies, where the dominant firms have expanded across existing industry verticals in the digital and online space (Rikap and Lundvall 2021). As US firms strive to prevent leading Asian companies from invading their markets and digital space, the key to their strategy involves the integration of online credit and debit payment systems into existing platforms. Platform firms are deploying varying strategies to achieve this goal — such as Apple’s Tap to Pay feature being introduced for the iPhone in 2022 — with the overall objective of transforming their existing platform into a super-app that will control a greater proportion of online activity. According to Scott Galloway,

The core economic principle of the internet is the arbitrage of your attention. Some of the most valuable companies in the history of capitalism got that way by taking your online attention (the average American spends some 119 days a year consuming media from a screen . . .) and monetizing it through subscriptions and advertising. Subscriptions and ads are only part of the full super-app monetization model and not even the most profitable. Taking a direct piece of transactions is staggeringly lucrative, and a company built around payments could make the Facebook and Google of today look small (2021).

Economic Impacts of Superstar Firms

Due to the scalability of intangible assets, firms that invest heavily in them are increasing their economic lead over conventional firms at an exponential rate. Increasingly, profitability derives from a firm’s control over intangible assets, such as intellectual property rights, with the result that the largest firms in terms of profitability and market capitalization are those with the most valuable portfolio of IPRs (Schwartz 2016). This trend is resulting in the rise of the “superstar firms”, based on a model where industries are characterized by the “winner takes most”, in which a small number of firms control a disproportionately large share of the market (Autor, et al. 2020, 649). Researchers at the OECD were among the first to identify this trend. They observed an emerging gap between the top frontier firms across 2-digit industrial sectors drawing from a database of 23 countries. Global frontier firms were more productive, more capital-intensive, invested more in IPRs, with larger sales and were more profitable, “In other words, new technologies developed at the global frontier are spreading at increasingly fast

pace across countries but spread increasingly slowly to all firms within any economy . . .” (Andrews, Criscuolo, and Gal 2015, 6).

New research from the OECD confirms that this concentration is strongly associated with firm investments in intangible assets, such as intellectual property rights, software, and data, which enable larger firms to scale up more rapidly and expand their market share (Bajgar, Criscuolo, and Timmis 2021). Growing industry concentration is shifting the competitive balance between firms in the economy, with large firms gaining market power relative to smaller firms. Overall, “business dynamism is declining (particularly for digital intensive industries), and this is consistent with theories of industry life cycles where competitive benefits associated with scale increase over time” (McMahon, et al. 2021, 9). Comparable work from McKinsey found that the top 2400 companies in the technology, media, and telecommunications sectors accounted for an increasing share of profitability. More specifically, the top 20 per cent of these companies captured 85 per cent of economic profit in these sectors, while the top five, including the GAFAM firms, capture 60 per cent (Bhatia, et al. 2017). Greater degrees of revenue, profits and capital are being accumulated in the hands of the superstar firms, at most the top 10 per cent of firms, with much smaller shares left in the hands of the middle 60 per cent and declining revenues and profits for the bottom 10 per cent (Ramaswamy, et al. 2019).

Recent academic research provides further insight into this phenomenon. The research indicates that extensive use of proprietary software correlates with larger revenues per establishment and higher labour productivity in the top four firms in each industry and with moderate increases in industry concentration ratios. The effect of this use of proprietary IPRs may be “to tilt the playing field in favour of firms that are able to use it most effectively” (Bessen 2020, 552). According to Autor et al., a higher degree of industry concentration is most evident in sectors experiencing accelerated rates of technological innovation, as revealed by greater patent intensity and total factor productivity. Technological dynamism associated with higher proportions of investment in intangible assets and control over IPRs and proprietary software is a key driver of the changes observed in the US economy (2020).

GAFAM firms can be viewed as a subset of the broader category of ‘superstar’ firms who are increasingly their lead over most of the other firms in their industry sectors. In October 2019, the five GAFAM firms, along with Tencent and Alibaba, constituted 7 of the 10 most valuable firms in the world (Kenney and Zysman 2020, 57). The top five IPR firms by market capitalization — the GAFAM firms — accounted for 22.3 per cent of the S&P 500’s total market cap in August 2021, while IPR firms more broadly captured 45 per cent of the S&P market capitalization (Schwartz 2021; Tambe, et al. 2020). The growing prevalence of “winner-take-most” outcomes in the digital sectors of the economy and the increasing gap between frontier

firms and the rest across a wide cross section of industrial sectors poses a novel set of problems that competition policy designed for the 21st century must address.

Legal and Regulatory Implications of the Platform Economy

Regulatory and policy remedies to deal with the dominant position occupied by platform firms must address the substantial differences between industrial and information economics and the nature of investments in tangible assets versus intangible assets, particularly with respect to control over IPRs and proprietary process technologies, such as Google Search or Amazon Web Services. Most legal and regulatory remedies presently in place emerged from the political response to the power of trusts in the industrial economy of the early 20th century, with the objective of limiting excessive concentration and anti-consumer behaviour in individual market segments (Rahman and Thelen 2019). Assessing the applicability of the legal and regulatory remedies designed for that era to the current context, where much of the product is delivered to the consumer for free or at a significantly lower price, represents a distinct challenge.

Many platforms have evolved into multi-product or multi-service ecosystems that arise from the “use of digital technology to better connect interdependent activities and enhance a firm’s value proposition either through an increase in its value chain or through a modification of the distribution of the value among the firms in the chain”. A second type of digital ecosystem, consumption ecosystems “use product or service generated data to identify demand-related complementary or interdependent services or products” (Jenny 2021, 5). Apple and Google are examples of product-based and service-based ecosystems respectively. Consequently, policy and legal experts have begun to argue for a significantly different policy approach and set of regularly tools to address the new form of market power exercised by platform firms in the digital economy.

Platform firms have largely been able to escape regulatory scrutiny by exploiting the fragmented policy landscape in the US to expand their networks rapidly and achieve scale. The regulatory environment in the US is characterized by a high degree of decentralization and overlapping regulatory jurisdictions combined with weak countervailing interests in the sense that most users of the platform feel they are getting a service for free or at greater convenience than alternative service provision would entail. The perceived affinity between their respective interests distinguishes platform firms from traditional forms of monopoly that competition policy instruments introduced in the 20th century were designed to remedy and renders these remedies less applicable to the competition policy environment of the digital economy

(Rahman and Thelen 2019). Three specific features of the US regulatory landscape have enabled platform firms to avoid close scrutiny from regulators: 1) the fragmentation of state regulatory capacity and weakness of countervailing pressures, i.e. from organized labour or competing business interests; 2) the historical pro-consumer orientation of US antitrust law actively promotes the platform model, which delivers its products for free or with a minimal charge; and 3) the ready availability of patient capital in the form of private equity and venture capital that allows platform firms to scale rapidly without regard to their profitability or the need to worry about full cost recovery for the services provided. Rahman and Thelen characterize the approach to anti-trust regulation adopted by the platform firms in the US as “regulatory entrepreneurship” (Rahman and Thelen 2019, 187–195).

In response to the challenge posed by platform firms, legal and academic researchers have opened new lines of inquiry into the range of policy instruments that might prove effective in sustaining a competitive market environment in the digital platform economy. The application of these new policy tools remedies may require the deployment of new analytical and policy frameworks to address with novel aspects of the problem. According to Gene Kimmelman, former chief justice to the Antitrust Division of the US Department of Justice,

As it seems clear that neither antitrust nor privacy rules alone are adequate to protect consumers and promote robust competition, countries must find ways to make all their policy interventions support complementary goals. The global nature of digital markets now makes such policy collaboration equally important across all national boundaries (2019).

Review of a Range of Policy Levers

There is a growing consensus among legal and policy experts that the traditional focus of anti-trust policy on reducing or eliminating anti-competitive behaviour, may be insufficient to counter the inherent tendency of the platform economy towards producing winner-take-most results in digitally intensive sectors of the economy. The central point emphasized in the literature is the need to not just constrain anti-competitive behaviour by platform firms, but to introduce proactive policies to increase the degree of dynamism in the economy by promoting the growth of new firms, especially scale-up firms. From this perspective, both competition policy regulators, and policy makers concerned with the digital economy more broadly, must employ multiple policy levers and consider the interaction effects between them. This will create the need for greater policy coordination across relevant departments, not just the regulatory agencies responsible for the administration of competition policy. The problem to be

addressed is particularly acute for small open trading economies, such as Canada, given its weak record at growing and sustaining technology-intensive firms in the domestic economy (Balsillie 2022; Harris 2015).

The implementation of this broad mix of policies may require the creation of a new expert authority responsible not just for limiting anti-competitive behaviour, but also equipped with policy tools to promote the entry and expansion of scale-up firms in the platform markets. The primary objective of this agency would be to actively promote competition, not just restrict anti-competitive behaviour. The new authority could be housed within an existing regulatory agency with an expanded mandate and analytical capacity or be created as a new expert agency focused on enhancing competition in digital markets. Recent institutional innovations in the UK are of some interest in this respect. The UK has established a new specialized digital competition regulator, the Digital Markets Unit, located within the Competition and Markets Authority. (Kimmelman 2019). We will turn to a fuller discussion of this option below, but the challenge with this approach is that it will require a higher degree of interdepartmental coordination under the leadership of a line agency or department, rather than a central agency, that has proved challenging in the past (Aucoin and French 1974; French 1984).

Policy Approaches to Strengthen Competition in the Platform Economy

Legal and academic experts have outlined a variety of approaches to remedying the anti-competitive effect of the platform economy through measures to increase interoperability across platforms, to foster and promote non-discrimination against non-platform firms, to adopt new forms of merger review, and to cope with the challenge of cross-jurisdictional review, given that most of the platform firms operate on a global scale. Other experts have suggested the need to link questions of data governance and standards setting to the need to promote increased competition in the platform economy. The following section reviews this range of approaches and considers the interaction effects between them.

The conventional anti-trust approach to platform firms would consider imposing strategic divestitures to unwind specific mergers or prohibit them before they occur. In a major paper published shortly before she became head of the Federal Trade Commission, Lina Khan suggested that the systemic nature of the economic dominance exercised by the platform firms provided a justification for abandoning the permissive approach to antitrust enforcement that legal authorities have taken to date with respect to digital markets and moving to a new regulatory model. This model, labelled a separations regime, is based on an ex-ante, rather than ex-post, approach. Under a separations regime, competition policy aims to limit the

industry verticals or lines of business a platform firm can enter by restricting entry into the additional market or by specifying that firms must operate their business lines through distinct operating entities. This approach has previously been applied in the US in several industries, including railroads, banking, television broadcasting and telecommunications. However, to determine whether it is appropriate for platform firms, a few issues need to be addressed, including the appropriate definition of a platform, the ability to distinguish between the platform itself and related forms of commerce, the costs and trade-offs involved in adopting this approach and the alternative remedies to be pursued. She concluded that, in the US, “the process of exploring how to respond to dominant platforms has been stunted by the fact that [they] are living through a major regulatory gap”, which has left “a diminished sense of the policy levers available to address dominant network intermediaries” (Khan 2019, 1091). A recent rekindling of interest in the approach suggests that the policy environment may be shifting. The US Department of Justice and attorneys-general in several states have antitrust actions underway against Google and Facebook. Although it may take years for these cases to make their way through the legal system, the litigation could eventually lead to the companies being forced to divest part of their operations or other firms they have acquired, such as Whatsapp or Instagram (Moore and Tambini 2022, 3).

In a related vein, Kimmelman recommends the adoption of three principles to guide the application of new forms competition policy targeted at restricting the market power of platform firms. First is the principle of interoperability, which would require platform firms to open their services to be fully operable with other services. This would allow competitors, including possible new entrants to the field or scale-up firms, to access to the platforms for their own customers. The implementation of a policy based on the principle of interoperability would need to adopt a second principle to ensure the privacy and security of user data to guarantee the protection of that data. The interlinked nature of the two principles and the interactive effects between them may require that regulatory and administrative responsibility for ensuring the effects of these principles should be housed in the same regulatory agency, or two agencies capable of closely coordinating their activities (Kimmelman 2019).

Although most of the individual platform firms tend to dominate specific market segments, there are several instances where a competitor operating in one vertical market may expand to compete in a seemingly unrelated industry, especially where they are able to capitalize on potential synergies that exist across the different industry segments. Various platforms can undercut the position of potential competitors by discriminating against them in their primary vertical through a few mechanisms. This can include leveraging their dominant position in one industry segment to gain greater market share in upstream or downstream, or

even unrelated, market segments. It can also be accomplished by utilizing its access to transaction data or the priority afforded to search results. Given that the “slow pace and complexity of antitrust litigation does not lend itself to fast-paced digital markets where discrimination can . . . make or break a competitive outcome”, policy experts suggest it is imperative that responsibility for preventing discriminatory behaviour be entrusted to a new regulatory agency (or existing agency with significantly expanded capabilities) to prohibit behaviour that prioritizes services provided by the dominant platform firm and discriminates against either current or potential competitors. Because some of the most impactful acquisitions by platform firms were relatively small at the time of acquisition and either fell below the levels required for notification under existing competition law (or were deemed to not pose a threat to competition), it is imperative that a new agency (or existing one with an expanded mandate) be empowered to review and/or block these mergers. The capacity to evaluate the potential effects of these acquisitions requires a significantly expanded analytical capacity for these agencies. In place of the current emphasis on demonstrating potential harm to the market or consumers arising from the merger, the onus in reformed competition policy should be on the acquiring firm to demonstrate net benefit to society, including a potential increase in competition, that could flow from the acquisition (Kimmelman 2019). This last point underlines the fact that a new policy for the platform economy must include measures to enhance the degree of market competition.

Legal and scholarly experts acknowledge that attempts by regulatory authorities in the US to address the growth of the GAFAM firms has been less than effective and that the European Commission (EC) has faced similar challenges, though it has won some recent cases. This recognition leads them to suggest that current antitrust or competition law enforcement and merger control are insufficient to deal with the issues raised by the degree of monopolization in the platform economy (Jenny 2021). While the individual reports differ in the precise diagnosis of the problems encountered, several common themes have emerged. The report for the EU commissioned in March 2019 by Margrethe Vestager, the EC Competition Commissioner, makes a few observations. The concept of the appropriate time frame and standard of proof the traditional consumer welfare approach to competition policy needs to be reconceptualized with respect to the platform sector to counteract the tendency to under-enforcement that has occurred to this point. The EU report also draws attention to the need to impose requirements for data access and the interoperability of platforms discussed above. It suggests regulators pay closer attention to the acquisition of smaller firms, (such as those examined in the recently released FTC report) that fall below current thresholds for notification, especially where there is evidence of a rapidly growing user base. Another issue examined in

the report is the need for closer attention to the potential of 'horizontal' mergers across unrelated industry verticals to forge dominant digital ecosystems through merger and acquisition activity (Jenny 2021, 2).

The report of the UK's Digital Competition Panel in May 2019 (referred to as the Furman Report), also highlighted the degree to which existing competition policy is not well suited to respond to the competition challenges posed by the platform economy. Current merger and antitrust enforcement are not well designed to reduce barriers to entry and promote competition in the sectors dominated by platform firms to allow consumers to exercise effective control over their data and facilitate interoperability between new digital start-up or scale-up firms and established online platforms. A critical issue for competition authorities is the need to anticipate future trends with respect to how platform technologies may evolve, rather than apply post-hoc remedies to an existing situation (Jenny 2021, 2).

The final report of by the UK's Competition and Markets Authority (CMA) in July 2020 into online platforms and digital advertising went further and concluded that competition is not working effectively in these markets, leading to substantial harm for consumers and society. The Report outlined several concerns with respect to the degree of competition in online platforms, including the fact that consumers do not receive fair compensation for the use of personal data by platform firms, nor are they able to control or understand how their personal data is used. They are afforded limited choice with respect to consent to the platforms' terms and conditions and privacy policies, with the result that they may provide more personal data to platforms than they realize or would prefer (a point emphasized by Zuboff 2019). Further evidence for this concern is found in a study by the Federal Trade Commission in the US, which revealed that Internet Service Providers (ISPs) collect and share more data than users appreciate and that their ability to allow it to be used, transferred, and monetized by others is often hidden in the fine print of the ISPs privacy policies (G7 United Kingdom 2021, 18; Federal Trade Commission 2021b).

The CMA Report recommended the UK Government establish a pro-competition regulatory regime to supervise online platforms funded by digital advertising. It suggested that a Digital Markets Unit (DMU) be empowered to enforce a code of conduct to govern the behaviour of platforms with market power and given powers to tackle sources of market power and increase competition, including increasing interoperability and providing access to data. It identified a range of actions that the DMU could undertake to constrain the market power and anticompetitive behaviour of the platform giants, such as Google and Facebook, through increased interoperability and guaranteeing consumers the right to determine whether they wanted to receive targeted, personalized advertising. The CMA was tasked with leading the

work of the Digital Markets Taskforce, to provide expert advice on the necessary action to promote competition and innovation in digital platform markets (Competition and Markets Authority 2020).

Finally, the report of the Antitrust Subcommittee of the US House of Representative's Judiciary Committee released in October 2020 drew attention to the challenges posed by the dominance of GAFAs firms (excluding Microsoft). It recommended the need to separate digital platforms from commerce and mergers encompassing 30 per cent or greater market share. It also recommended the need to prohibit the acquisition of direct competitors that are start-ups, including those operating in adjacent markets. Like the previous two reports and Kimmelman's report for CIGI, it recommended requiring data portability, interoperability, and non-discrimination, and the adoption of special rules to ensure fair access to essential facilities. Viewed collectively as a body of work, "[t]hese EU, UK and US reports have one point on which they agree: all three consider that, as they are practiced today by competition authorities, antitrust or competition law enforcement and merger control are inadequate or insufficient to deal with competition issues in the digital sector" (Jenny 2021, 2).

A critical area of concern reflected in these reports is how existing policy frameworks in their respective jurisdictions address the data issues at the core of the platform economy's business model. Until recently, competition policy regulators had limited experience with assessing the competitive effects of the economics of data in the digital world. Regulators are starting to take greater note of the information asymmetries associated with platform ecosystems and the ability of platform firms to deny access to their data to potential competitors, especially SMEs. This is closely related to the issue of where platform firms gain valuable access to proprietary data through the acquisition of seemingly unrelated firms, as reflected in Google's purchase of DoubleClick or Facebook's purchase of Instagram and WhatsApp. The reports discussed above emphasize that this increases the obstacles smaller firms must overcome to offer competitive services or products. Platforms may compete directly with third party business users of the platform or complementary service providers by refusing access to their platforms for applications that compete against their own (ecosystem) or by discriminating against these providers if they are allowed access. In other cases, the platform firm may use the data from third parties to enhance its own products. Potential solutions under consideration include placing access to, and control over, consumers data on a level playing field, through the institution of data trusts or similar policy innovations. However, some observers believe that there are still numerous administrative and policy questions to be addressed before these solutions can be implemented (Jenny 2021, 21–26).

Regulators are grappling with the question of the extent to which they can use existing policy remedies to constrain the data-driven market power wielded by platform ecosystems. Recent examples from the EU illustrate some of the measures deployed to this end. In a 2017 decision, the European Commission (EC) fined Google €2.42 billion for leveraging its domination of general algorithmic search for comparison shopping online to favour its propriety comparison service, Google shopping, over third-party comparison-shopping services. This was done by giving prominent placement to its own service results near the top of its general search results and was deemed to produce a significant loss of traffic for the shopping services offered by competitors. In March 2019, the EC also fined Google €1.49 billion for the abuse of its market position in the intermediation of online advertising. The Commission found that Google abused its market power by restricting third party websites by forcing them to use its AdSense exclusively for advertising, practices designed to exclude competitors from the online advertising market. In November 2020 the EU commission charged Amazon with a violation of competition law for using data from its third-party sellers to compete against them. Efforts to respond to the growing market power of digital platforms intensified in the past year with US Department of Justice (DOJ) filing an antitrust suit against Google for its use of anticompetitive tactics to secure the monopoly position of its search engine and advertising business and the Attorneys General of 38 US states and territories filing a similar suit against Google for using anticompetitive contracts to illegally maintain a monopoly in its search and advertising business. In a related move, the FTC and 46 US states sued Facebook in December 2020 claiming that it had unlawfully maintained its monopoly position in social networking services through the acquisition of potential competitors before they scaled into actual threats, seeking the divestiture of Instagram and WhatsApp by Facebook. In the past month, Canada's own competition bureau joined the fray by announcing an investigation into Google's efforts to lessen competition through the requirement that advertisers purchase spots on the YouTube platform via its own advertising services (Jenny 2021, 26–35; O'Kane 2021).

Similarly, on November 30, 2021, the UK's Competition and Markets Authority (CMA) determined that Facebook's \$315 billion takeover of the US firm, Giphy, in May 2020, will have a negative effect on competition between social media platforms, by providing it with the opportunity to deny other platforms access to its GIFs or requiring third party firms to provide it with more data to access Giphy GIFs. The CMA rejected the remedies proposed by Facebook. In its analysis of the acquisition, the CMA found that Facebook's three social media platforms — including WhatsApp and Instagram — account for 70 per cent of the time consumers spent on social media and are used at least once a month by 80 per cent of internet users. The CMA concluded that its competition concerns could only be removed by required Facebook to divest

its ownership of Giphy to an approved buyer (Competition and Markets Authority 2021). Other comparable examples include the application of interoperability remedies by the European Commission in the Microsoft acquisition of LinkedIn and Google's acquisition of Fitbit to constrain the ability of the merged companies to use the data to limit or prevent entry into those markets (G7 United Kingdom 2021, 22). While these developments are too recent for scholars to assess its full implications, according to the G7 UK Compendium, it reflects a broader trend in the way competition authorities are addressing consolidation among platforms firms to constrain their market power.

In assessing past decisions and the literature on competition in the digital sector, several improvements are needed to enhance the relevance of competition law. These include: a better understanding of the barriers to entry in the sector, particularly for digital SMES; new and more appropriate indicators to gauge the extent of market power; a better understanding of the way in which competition across ecosystems often produces winner takes all results; a need to identify what is anti- vs pro-competitive practice; the need for better research on the role of data in competition and innovation in digital services; and a better understanding of the pro-consumer bias in digital products and how that helps dominant platforms in the manner discussed by Rahman and Thelen above (Jenny 2021, 45–47).

The key issue at the heart of this recent flurry of legal and regulatory activity is the dominance of a small number of players over lucrative online advertising markets. Several policy approaches that go beyond the bounds of existing competition and antitrust law have been suggested to remedy current imbalances in online advertising markets. One approach involves the enforcement of structural separations to manage internal conflicts of interest by intermediaries, such as the requirement above forcing Facebook to divest itself of business divisions that give rise to the conflict of interest in selling advertising space. Another approach would involve the use of conduct and disclosure rules to manage conflicts of interest by forcing Google ad trading intermediaries to stop taking advantage of their privileged access to sensitive information from third parties. Competition regulators could also require intermediaries to act in the best interests of their publishers and advertising customers by routing part of their ad space to rival exchanges and buying tools. Policy makers could aim to ensure a good balance in disclosure by allowing market participants to understand who the intermediaries are, what the rules are all, while simultaneously ensuring privacy is maintained (Srinivasan 2020, 158–176).

There is also a view among legal scholars and policy analysts that competition policy makers should adopt regulatory remedies that have been applied in other policy areas and markets. The securities market has been suggested as one precedent that could provide a good framework for addressing the challenges identified in the online advertising market. This could

be done by implementing a rule that forces advertising exchanges to provide all bidders with fair access to information/data and speed. As a solution to these challenges (outside current antitrust enforcement), some arguing for the creation of a new regulatory agency, akin to the UK's Digital Markets Unit.

“To protect competition in advertising, lawmakers might borrow the core principles financial regulators have already crafted to address these types of competition problems in other electronic trading markets. That is, require exchanges to provide all traders with non-discriminatory access to information and speed, identify and manage intermediary conflicts of interest, and require trading disclosures to advance these principles in order to protect the overall integrity of the market” (Srinivasan 2020, 184).

In addition to these measures, there is recognition the need for better integration of competition policy remedies with data governance and standard setting policies, which recognize that the relative scarcity of personal data makes it a highly valuable economic commodity for platform firms. The protection and enhancement of personal rights to the data they generate (their data exhaust) must be integrated into a broader approach to competition policy. This should be reflected in a national data strategy to ensure that individuals own the data they create. The establishment of clear property rights to data and rules for future usage are a critical element of this strategy. With clear and full property rights, individuals will be able to exercise greater control over how their personal data are accessed and the conditions under which they agree to the use of their data by third parties. The simplest way to assure property rights for data would be: i) to grant people full property rights over their personal data; and ii) to establish a fully transparent open-source licensing system with limited access/use rights to data gathered as part of public or semi-public services, where a license to use is granted to the gatherer in exchange for sharing the data with current and future local citizens and companies, either free or for a nominal fee (Breznitz 2018). Part of the remedy for dealing with the excessive concentration of power in the hands of platform firms may come from technical solutions, such as new design principles based on criteria such as decentralization. Some of this is reflected in new principles such as those intended to interject ‘privacy by design’ into the control and use of personal data, in a wide and ever-growing range of industrial and service applications, such as the potential use and applications of personal data in connected and autonomous vehicles (Council of Canadian Academies 2021, 81–92).

Along with the imperative of protecting personal data in the platform economy is a recognition of the strategic importance of international standards as a competitive tool and the need for Canadians to be centrally involved in creating new standards for big data analytics. While standards have long been depicted as falling under the purview of neutral, international

standard setting bodies, they are increasingly being perceived as a critical arena in which firms vie to gain competitive advantage, with the winners able to introduce technology standards that privilege their own products. The definition and international enforcement of technology standards in both hardware and software play a central role, alongside IP rights, in defining the “freedom to operate” that companies enjoy in the defence and promotion of their innovative products (Balsillie 2021). Thus, it is imperative for Canadian firms to participate more actively in the international standard-setting bodies where these decisions are made. Greater effort is needed to educate Canada’s digital companies about the options available to participate in these bodies and how technology standards are used as a competitive tool to help them scale up and compete in the global platform economy.

Until the recent formation of the CIO Strategy Council Consortium, Canada lacked a national organization to develop policy and standards with respect to this critical area of the digital economy. It has recently been suggested there is a pressing need to establish a big data analytics collaborative that can fashion a standards roadmap to inform on developments underway, identify gaps, and formulate policy recommendations. ISED’s predecessor, Industry Canada, had a long and successful history of convening and supporting sectoral roadmapping exercises, but it has fallen into disuse as a policy instrument (Wolfe 2019). A necessary first step would be the creation of a standardization collaborative to facilitate the development of foundational standards identified by stakeholders. The collaborative could include more than 100 organizations, such as the Standards Council of Canada, consortia with a stake in the development of big data analytics, technology companies, academics with requisite expertise, and representatives from the broader economy. Fashioning a standards roadmap for big data analytics would be the purpose of the collaborative. The roadmap could then be used to by government and industry to determine investments needed to formulate a body of standards to guide the use of big data analytics across a range of economic sectors. It could be updated periodically to identify emerging issues in need of further attention (Girard 2018).

While there is no shortage of policy recommendations emerging from the recent analyses of competitive market conditions in the online platform ecosystems, the greatest obstacle to the adoption of more effective policy tools to control excessive market concentration by platform firms is that remedies will be enacted in isolated policy silos — with measures focusing on antitrust and divestiture, advertising, data governance, standards platform content, and negative effects — all dealt with in separate policy streams. This will undermine the need to deal with these issues in an integrated and coordinated fashion. Governments need to adopt a ‘whole of government’ perspective that links these various policy solutions into a comprehensive approach designed to deal with incentives and rewards

conferred by information economics in platform ecosystems. (Moore and Tambini 2022). Greater attention is also being directed towards the question of national jurisdiction. The platform ecosystems and GAFAM firms operate across national boundaries running on the digital infrastructure of the Internet and the World Wide Web. The cross-boundary application of their market power reveals the limits on individual countries or national jurisdictions to provide remedies on the scale required. Appropriate policy responses may require more effective supra-national coordination than competition policy authorities (outside of the EU) are accustomed to practising (Kimmelman 2019). The recent *Compendium of Policy Approaches* compiled by UK authorities as host of the G7 notes the current degree of congruence between competition policy agency concerns and their approach to digital markets is unprecedented,

Whilst there are good reasons for these reforms to differ across jurisdictions given local market conditions and existing national frameworks, it is clear that regulatory coherence, compatible regimes, and enforcement cooperation will be essential (G7 United Kingdom 2021, 6).

Current Policy Approaches in Other Jurisdictions

The past year and a half have witnessed a flurry of proposed legislative and administrative policy initiatives in the EU, UK, and the US in response to the competitive challenges posed by the digital platform economy, as the G7 UK Compendium of Approaches indicates. There are several reasons why competition policy makers and regulators have been slow to adapt to the need for more effective analytical tools and policy measures to assess dominance of platform firms in the digital sector. The relevant academic and policy related literature has been slow to catch up to the pace of innovation in the online digital world and literature analyzing the digital firms' business models has only recently begun to appear and come to the attention of market competition specialists. This section of the paper provides an overview of some of the policy approaches currently being proposed and adopted in these jurisdictions (G7 United Kingdom 2021). The following section elaborates on their implications for the Canadian context and recommends the approach that may have the greatest relevance for Canada.

In response to the recommendations of the Furman Report and the CMA's Market Study on digital platforms and online advertising, the UK government set out its proposals for a new pro-competition regime for digital markets to both promote the UK's growing tech sector and protect consumers in a consultation document released in July 2021. The measures launched a Digital Markets Unit (DMU) in non-statutory form within the Competition and Markets Authority (CMA), which will be given the power to designate tech firms that hold substantial

and entrenched market power with ‘Strategic Market Status’ (SMS). This will require the firms to follow new rules of acceptable behaviour with competitors and customers in a move designed to benefit the public and drive growth and innovation across the economy. The aim for the DMU is to work alongside firms to inject stronger competition into the digital tech sector, resulting in more innovation and fairer terms for UK businesses, including start-ups, news publishers and advertisers.

The consultation document released by the UK government in April 2021 sought views on the objectives and powers of the DMU and detailed a mandatory code of conduct that sets out what is expected of firms for fair trading, open choices, trust, and transparency. The code of conduct will be underpinned by robust investigation and enforcement powers. These may include imposing fines of a maximum of 10 per cent of a firm’s turnover for the most serious breaches. Under the proposed code, the DMU could be given powers to suspend, block and reverse code-breaching behaviour by tech giants — for instance unfair changes in their algorithms or terms and conditions — and order them to take specific actions to comply with the code. In addition to tackling poor behaviour by these firms, the consultation will also consider whether the DMU will be able to impose a set of measures to tackle the root causes of competition issues in digital markets. This could see the DMU implementing measures to support interoperability — making it easier for digital platforms and services to be compatible with each other and for customers to switch between them (Secretary of State for Digital 2021). The consultation period around the new DMU ended on October 1, 2021, and the UK government is currently assessing the feedback received (G7 United Kingdom 2021, 73–75).

One approach adopted in Germany involves the introduction of new methods to measure the degree of industrial concentration, where the 10th Amendment to the German Act Against Restraints of Competition, which came into effect in 2021 creates a new concept of ‘super-market dominance’ to regulate the unique informational aspects of digital platform markets reinforce ‘winner-take-most’ outcomes; the amendment allows the regulatory agency to intervene at an early stage and more effectively in cases of conduct deemed to have significant consequences for market competition. The German approach may prove to have wider applicability as it also informs that being adopted in the European Union through its Digital Markets Act (DMA). The DMA prescribes a range of constraints on the behaviour of dominant platform firms who act as ‘gatekeepers.’ Under the provisions of this act, they will be required to provide open and interoperable access to their data and services (G7 United Kingdom 2021; Moore and Tambini 2022).

The European Commission put forward its proposals for a regulation of the European Parliament and Council on contestable and fair markets in the digital sector (Digital Markets

Act) in 2020. This proposal is in its first reading in the Council of the European Union as of 16 June 2021. The proposals are intended to supplement existing enforcement powers exercised by the Commission in instances where it regards those powers as inadequate to deal with the competition policy concerns with respect to digital platform firms. The core approach taken in the proposals would impose positive obligations, as well as prohibited practices, on a set of firms termed gatekeepers, defined as core platform services, including search engines, online intermediation services, interpersonal communication services and cloud computing:

Gatekeepers have a major impact on, have substantial control over the access to, and are entrenched in digital markets, leading to significant dependencies of many business users on these gatekeepers, which leads, in certain cases, to unfair behaviour vis-à-vis these business users (European Commission 2020, 1).

Under the proposals, gatekeepers are deemed to have a significant impact on the internal market; operate a core platform or service that provides a gateway for business users to reach end users; and enjoys an ‘entrenched and durable position’ either currently or in the future. The above criteria set out the high-level requirements, in addition there are numerous nominal targets (such as 10 thousand monthly business users of the platform) adjustable based on changing circumstances as well (Jenny 2021, 37; G7 United Kingdom 2021).

The draft provisions contain several obligations for gatekeepers under Article 5. With regard to core platform services, the obligations would prevent gatekeepers from combining personal data from core platform services with personal data from any other services offered by the gatekeeper; allow business users to offer services to end users through third parties at prices or conditions different than those offered through the platform; allow business users to offer services to end users that compete with services offered by the gatekeeper; refrain from requiring business users to use identification services provided by the gatekeeper; refrain from requiring business or end users to register with any other core platform service as a condition to access any of their core platform services; and provide advertisers and publishers with price information upon request for each of the relevant advertising services provided by the gatekeeper (Jenny 2021, 37).

The proposals also contain a second category of obligations for gatekeepers specified under Article 6 (European Commission 2020, 41–42). Inter alia, these would require gatekeepers to refrain from using, in competition with business users, non-public data generated by those business users (including end users of these business users); allow the installation and use of third-party software on the gatekeepers’ platforms (as long as third-party software applications do not endanger the integrity of the hardware or operating system

provided by the gatekeeper); refrain from treating the gatekeeper's own products and services more favourably in ranking services; allow business users and providers of ancillary services access to and interoperability with the features that are available or used in the provision of any ancillary services by the gatekeeper; provide effective portability of data generated through the activity of a business user or end user; provide third-party providers of online search engines, upon their request, with access to ranking, query, click and view data in relation to free and paid search generated by end users on online search engines of the gatekeeper, subject to anonymization for the query, click and view data that constitutes personal data; and apply fair and non-discriminatory general conditions of access for business users to its software application store. In addition, Article 12 of the proposed regulations creates an obligation for gatekeepers to report any intended mergers or acquisitions involving another provider of core platform services in the digital sector. This obligation is intended to help the EC monitor general trends in the digital sector and determine whether there is a need to revise the individual gatekeeper designation. While this measure appears to be intended for information purposes only, other measures that the EC has announced suggest it intends to be able to review cross-border mergers in the EU that could give rise to 'killer acquisitions' that individual member countries cannot regulate under their national merger regulations has a few challenges in controlling these mergers (European Commission 2020).

A recent assessment of the legislation by Jenny suggests, "(t)he European Commission wants to be able to prohibit some of the practices it has examined in the past without having to define relevant markets, to assess market dominance or to bear the burden of establishing that these practices are capable of restricting competition" (2021, 38). Jenny is critical of the proposed regulation on several grounds; it focuses on a subset of the competition issues that gatekeepers cause rather than the underlying basis for the loss of competition and the remedies set out fail to take full account of trade-offs in the interoperability of platforms and the limits of data portability. He also suggests there that a few substantial issues need to be addressed prior to the Commission's ability to implement these measures with some degree of confidence. The precise determination of what constitutes the relevant market in which a platform firm operates is more difficult to determine in the digital realm than in the physical sectors of the economy. This may require new analytical tools to measure the benefits versus the costs of digital services to give competition authorities a more accurate sense of the actual effects of proposed mergers. Merger assessments must also be able to gauge the expected effect of a proposed merger with the counterfactual of how the market would have evolved had the merger not taken place for a period of years (Jenny 2021).

This critique implies the need for digital analysis units within, or associated with, existing regulatory authorities to develop the analytical tools needed to properly assess the economic implications of proposed mergers. A point made by Jenny, as well as several other commentators, is that the increased scale achieved through mergers can generate demand economies of scale that lead to an improvement in the quality of service provided by the platform. One example of where this could arise is the ability to train AI algorithms on large data sets which could lead to improved service benefits for consumers of the platforms. The same concern applies to the traditional remedies applied by competition authorities, such as divestiture in the case of Giphy above, which might have the unintended consequence of retarding the pace of innovation in the sector and limiting benefits for consumers. The above concerns highlight the need for much more sophisticated analytical tools to assess the full consequences, both positive and negative of M&A in the online digital platforms (Jenny 2021, 43–44; Parker, Petropoulos, and Van Alstyne 2021; Atkinson, et al. 2021). However, the full list of initiatives to enhance the analytical capacity of the relevant government agencies and regulatory authorities, documented in the G7 UK Compendium of Policy Approaches suggests that governments may be expanding their analytical capacity in this regard at a faster pace than critics expect (G7 United Kingdom 2021).

The flurry of regulatory and legislative activity around the digital platform firms observed above has also been underway in the US, particularly since the Biden Administration took office in January 2021. The US Federal Trade Commission has stepped up its enforcement actions in the digital and online markets with several recent lawsuits, as well as recently appointing a Chief Technologist and several other technology specialists to advise the Chair on technology issues. In addition, the principal initiative taken by the administration is Executive Order on Promoting Competition in the American Economy, issued on July 9, 2021. The purview of the July 9 Executive Order covers all aspects of competition across virtually all sectors of the economy subject to federal regulation but includes a critical focus on the digital sector of the economy. The E.O. starts with the assertion that, “[t]he American information technology sector has long been an engine of innovation and growth, but today a small number of dominant Internet platforms use their power to exclude market entrants, to extract monopoly profits, and to gather personal information that they can exploit for their own advantage. The E.O. asserts that the policy of the Biden Administration is to enforce current antitrust laws to address the challenges posed by innovative technologies, including the rise of the Internet platform firms, especially with respect to the question of successive mergers, the acquisition of potential competitors, the use of data, unfair competition in the market for users’ attention and the consequences of network effects. The E.O. reaffirms the intention of the administration

to apply existing U.S. law, including the Sherman Antitrust Act, the Clayton Antitrust Act, and other laws as a first line of defence to confront the issue of monopolization, but says these must be applied in conjunction with broader laws and policies in existence (Biden 2021; G7 United Kingdom 2021, 77).

In parallel with the Executive Order, a flurry of legislation is pending before the two Houses of Congress. Four separate pieces of legislation that have been introduced in the two houses. The American Choice and Innovation Online Act, H.R. 3816, read into the Congressional Record in the House of Representatives on June 24, 2021 deems certain discriminatory conduct by covered platforms to be unlawful. The bill defines covered platforms as companies with at least 50 million US-based monthly active users or at least 100,000 U.S.-based monthly active business users (defined as businesses operating on the platform; or companies with net annual sales of or market capitalization greater than \$600 billion, adjusted for inflation; or companies that are “a critical trading partner for the sale or provision of any product or service offered on or directly related to the online platform”, where a trading partner is understood to be a company that has the ability to restrict or impede access of a business user to its users or customers; or access of a business user to a tool or service that it needs to effectively serve its users or customers. The proposed bill makes it unlawful to operate a covered platform that privileges the platform operator’s own products or services to the advantage of those of other businesses; or excludes the products of another business user relative to its own products; or discriminates among similarly situated business users. The bill prohibits a long series of activities by the covered platform deemed to be unlawful, including: restrict the capacity of a business user to access or interoperate with the same platform, operating system, hardware and software features available to the covered platform operator’s own products, services, or lines of business; restrict or impede a business user from accessing data generated on the platform by the activities of the business user (including its customers’ interactions); in connection with user interfaces (including search or ranking functionality), treat the covered platform operator’s own products more favourably than those of another business user; restrict or impede a business user (or a business user’s customers), from interoperating or connecting to any product or service; and retaliate against any business user or covered platform user that raises concerns with any law enforcement authority about actual or potential violations of State or Federal law. The bill specifies several enforcement mechanisms in the form of remedies to be taken by antitrust authorities, including civil penalties, injunctions, and the potential to confiscate the salary and compensation of executive officers of platforms deemed to be repeat offenders during the 12 months preceding or following the violation. The act is to be enforced by the FTC in the same fashion as the Federal Trade

Commission Act or by the federal or state Attorneys General in the same fashion as the Sherman Act, the Clayton Act, and the Antitrust Civil Process Act (H.R.3816 - 117th Congress (2021–2022) 2021).

On the same day, three other bills were read into the Congressional record, the Ending Platform Monopolies Act (H.R.3825 - 117th Congress (2021–2022) 2021), the Platform Competition and Opportunity Act of 2021 (H.R.3826 - 117th Congress (2021–2022) 2021) and the ACCESS Act of 2021(H.R.3849 - 117th Congress (2021–2022) 2021). Of the four bills introduced into the House, the American Innovation and Choices Online Act, which shares a similar name and broad features with the House bill introduced by the Judiciary subcommittee on antitrust Chairman David Cicilline, D-R.I., was introduced in the Senate by Senator Klobuchar on October 21, 2021 (S. 2992 - 117th Congress (2021–2022) 2021). Like its counterpart in the House, the main thrust of the Senate bill would prohibit dominant online platforms from discriminating in favour of their own products and services at the expense of those of their competitors. A major step forward was taken by the Senate Judiciary Committee when it reported out S. 2992 on January 20, 2022, with a bipartisan vote of 16-6. The decision now rests with the Senate Majority Leader as to whether and when the Bill will be brought to the Senate Floor for a vote. However, a few Senators who voted the Bill out of Committee have indicated they will not support its final passage in its current form, so further amendments will likely be necessary for it to proceed further (MacCarthy 2022; G7 United Kingdom 2021, 83–85). The combination of Bills introduced in both Houses of Congress in 2021, combined with President Biden’s Executive Order in July, signifies the changing political sentiment in the U.S. with respect to the legal status of the platform firms.

Relevance and/or Relation to Proposed Canadian Legislation

There is currently no new legislation that has been introduced in that is directly comparable to the current trend documented above in the EU, UK and the US. The closest example was Bill-C10, introduced in the previous Parliament, but it dealt primarily with the role of the CRTC and the broadcast sector of the economy (Brideau, et al. 2020). The Government also introduced Bill-C11 to enact the Consumer Privacy Act and the Personal Information and Data Protection Tribunal Act (Chartland et al. 2020). Both bills died on the order paper when Parliament was prorogued in the summer of 2021. A revised version of the Bills was introduced into the House of Commons as Bill C-11 in November 2021 and received first reading on February 2, 2022. The most controversial aspects of the previous bill have been modified, but it still deals primarily with the regulation of online content.

However, the Mandate letter issued by the Prime Minister to the Minister of Innovation, Science and Economic Development on December 16, 2021, instructed him to position Canada to establish a digital policy task force to integrate efforts across government and position Canada as a leader in the digital economy and in shaping global governance of emerging technologies. The Minister was also mandated “to enhance consumer protection and ensure a level playing field for all businesses, undertake a broad review of the current legislative and structural elements that may restrict or hinder competition. This includes directly reviewing the mandate of the Commissioner of Competition, and in so doing, ensuring that Canadians are protected from anti-consumer practices in critical sectors, including in the oil and gas, telecommunications and financial services sectors” (Prime Minister’s Office 2021). The Strategy and Innovation Policy Sector of ISED is leading the current review of competition policy as set out in the Mandate Letter.

Of greater relevance to the topic under discussion is the number of recent measures adopted by the Competition Bureau to strengthen its monitoring and analysis capacity with respect to online platforms. The Bureau established the position of a Chief Digital Enforcement Officer to implement new intelligence-gathering tools and enhance its digital enforcement capacity. The Bureau also received a new budgetary allocation in 2021 to further expand its capacity to contend with the competitive effects of the platform ecosystems on the economy. The Competition Bureau is deploying the \$96 million it received in additional funding (and \$27.5 million annually thereafter to establish a Digital Enforcement and Intelligence Branch to add to the Bureau’s understanding of the digital economy is operating and to help it identify potential competition issues that may arise. The bureau will hire staff with specialized expertise to staff the branch, including data scientists and digital intelligence analysts (G7 United Kingdom 2021, 43–46). Under current regulations companies must inform the Bureau in advance of deals in which the Canadian assets or sales of the acquired firms exceed \$93 million and those of the merged companies exceed \$400 million and the government also announced that these thresholds would remain at current levels. But the Bureau recognizes that deals which fall below these thresholds could have important implications for intangible assets, such as IP or large data sets, which can afford digital firms overwhelming advantages in the platform economy. The report about this announcement specially compared the new Branch to the UK’s DMU discussed above. The Bureau also plans to create a small behavioural economics unit within the Branch to help it better understand how firms may use digital tools to influence consumer behaviour. According to academic experts interviewed by *The Logic* for the news story, “Canada’s ‘nervous competition-enforcement culture, the long-time under resourcing of the Bureau, and its practice of using outside lawyers as part of enforcement actions mean it’s

struggled to develop internal and institutional expertise.” The new budgetary allocation to the Bureau and the creation of its new Branch are seen as important steps in setting the Bureau on a different path (Hemmadi 2021).

Policy Insights for the Canadian Context

The preceding analysis provides a detailed overview of proposed legislative and administrative actions taken in comparator jurisdictions to Canada, particularly the UK, EU, and US, over the past two years. This section addresses the question of which, if any, of these policy measures appropriate for Canada to address the unique challenges faced by Canadian SMEs entering, and competing in, the global markets currently dominated by digital platform firms. This discussion must be framed in the context of the specific challenges posed for Canadian SMEs by operating in a smaller home market, the serious disparities between the size and nature of the internal market for Canadian firms compared to those in the EU and US, and the implications of the financial model that has funded and supported the outsized growth of the GAFAM firms, especially when compared to substantial differences in the role played by Canadian capital markets until relatively recently (Wolfe 2015).

The critical objective for government policy with respect to the platform economy should be to: 1) ensure equitable trade terms for Canadian SMEs as purchasers of business services from GAFAM firms; and 2) invigorate competition in markets for the provision of digital services to Canadian businesses where GAFAM firms are incumbents, notably by encouraging the market entry and growth of Canadian competitors to GAFAM in such markets. The key policy issue for the government is whether Canada needs to introduce its own domestic version of the EU’s Digital Markets Act or the US’ American Choice and Innovation Online Act. Given the size of the domestic Canadian market relative to the much larger internal markets of the EU and the US, any such legislation should be developed in congruence with the two larger economies. If either or both jurisdictions enact the draft bills currently under consideration, Canada will benefit indirectly by the enforcement of the provisions set out in those bills. This is not to suggest that the GAFAM or other dominant firms may be able to engage in anti-competitive practices in the Canadian economy. With its expanded analytical capacity, the Competition Bureau may be able to obtain consent agreements where companies found in breach of US/EU competition law will accept to apply behavioural measures in Canada that were imposed in those markets. If the Digital Policy Task Force (DPTF) that ISED is mandated to set up in the Minister’s letter concludes it is important for Canada to adopt a domestic version of the EU/US legislation, Canada should coordinate its legislative initiative with its key economic partners

through a suitable international forum, along the lines recommended by Kimmelman. A forum like the G7 consultative exercise that produced the Compendium of Current Approaches cited in this report might be the logical one in which to coordinate Canada's approach.

In the interim, Canada should continue to closely scrutinize any potential acquisitions by GAFAM firms of Canadian start-up or scale-up firms that may have the potential to create cross-vertical synergies that may not directly contravene current Competition law at this stage. The need for some version of a separations regime, as discussed above, is a key issue for the Digital Policy Task Force to address, as this seems to be the direction in which the EU, UK and US enforcement is moving to restrict the potential of the GAFAM firms to increase their market reach in digital platform ecosystems. If the primary focus of Canadian policy remains both the protection of domestic firms from potential predatory acquisitions, then the recently established Digital Enforcement and Intelligence Unit in the Competition Bureau may prove to be the most appropriate administrative unit to monitor and assess the competitive implications of potential takeovers in this respect. If a key policy goal for Canadian competition policy is to invigorate competition in markets for the provision of digital services by encouraging the market entry and growth of Canadian competitors to GAFAM, as suggested above, the premature acquisition of Canadian SMEs, before they have a chance to scale, may become an important issue for competition policy to address. In cases where they determine that such an acquisition is detrimental to the goal of protecting domestic SMEs from a predatory acquisition, then Canadian competition authorities will need to have available the enforcement powers to prevent the acquisition or force a divestiture. This should be a key area for investigation by ISED's Digital Policy Task Force, with a mandate to propose new administrative or legal measures to protect domestic SMEs. In cases where a foreign acquirer is involved, the Competition Bureau will need to coordinate its review with ISED's review under the Investment Canada Act. However, it may also be necessary for the DPTF to address the question of the suitable thresholds for such a review.

An adequate defence of domestic SMEs from the anti-competitive effects of the GAFAM firms increasing control over expanding sectors of the digital platform economy, as well as the growing impact of 'superstar' firms due to their disproportionate investments in intangible assets requires Canada to adopt a more pro-active, whole of government approach to support the growth of the current cohort, as well as the next generation of domestic scale up firms. In this respect, there is no shortage of policy recommendations for actions that can be taken. Among key recommendations discussed above are the need for greater education and awareness on the part of Canadian scale up firms of the critical role played by intellectual property in expanding and protecting their 'freedom to operate'. The recent report of Ontario's

Expert Panel on Intellectual Property provides numerous recommendations in this regard, some of which are already in process of being implemented (Expert Panel on Intellectual Property 2020). Additional policy initiatives include the need to establish an appropriate regime for the protection of personal property rights in data (Breznitz 2018), the implementation of a ‘privacy by design’ regime (Council of Canadian Academies 2021), the establishment of a national collaborative to create a standards roadmap for big data analytics in Canada (Girard 2018) and a broader set of sectoral and direct policy supports to promote the growth of Canadian scale up firms (Denney, Southin, and Wolfe 2021). One final policy area in need of attention is how to deploy Canada’s existing pools of investment capital, much of it in our successful public pension funds, more effectively to protect and support scale up firms from being acquired prematurely by larger MNEs with access to large pools of capital available in the US. This policy issue lies beyond the scope of the current report but needs equal attention from federal and provincial policy makers (Wolfe 2019).

Conclusion

This report provides an overview of the competitive effects of the current digital transformation in platform ecosystems for Canadian SMEs. It analyzes key aspects of the nature of information economic and the increasing importance of investments in intangible assets to explain the rapid growth and increasing market dominance of GAFAM firms in the platform economy. It explains how platform firms have been able until recently to escape regulatory scrutiny by exploiting the fragmented policy landscape in the US and other jurisdictions to expand their networks and scale rapidly. The high degree of decentralization and overlapping regulatory jurisdictions that characterizes the US regulatory environment are viewed by legal and policy scholars as an enabling environment that has allowed this growth. However, the recent expansion of scholarly research on this topic and the exploration of alternative regulatory and legal remedies provides a solid basis from which to consider new policy and legislative approaches to address this challenge.

The report then reviews recent administrative measures enacted in some comparator jurisdictions and key legislative initiatives under way in the UK, EU, and US. It draws out the implications of this changing policy environment for the currently mandated review of competition policy with respect to the online digital economy in Canada. It concludes with a strong recommendation that a reformed approach to dealing with the platform economy and GAFAM firms, geared to ensuring that Canadian SMEs have equal opportunity to provide products and services in this sector and to scale internationally requires a whole of government

approach. Such an approach must adopt both a preventive stance to protect Canadian firms from being acquired prematurely before they have a chance to grow to scale, but also a proactive stance to provide Canadian firms with the skills and strategy to enhance their 'freedom to operate' in a knowledge-based economy, as well as the policy supports to enable them to grow to scale.

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