Study of Competition Issues in Data-Driven Markets in Canada

Prepared for: the Ministry of Innovative, Science, and Economic Development

Vass Bednar + Ana Qarri + Robin Shaban

via Vivic Research
hello@vivicresearch.ca

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vivicresearch

About the Authors

Vasiliki "Vass" Bednar (@VassB) is the Executive Director of McMaster University's Master of Public Policy (MPP) in Digital Society Program and an Adjunct Professor of Political Science. She is a Public Policy Forum Fellow and writes the newsletter "regs to riches."

Ana Qarri (@AnaQari) is a recent graduate (JD/BCL) of the McGill Faculty of Law. Ana is an experienced policy and legal researcher, having worked at the Privacy Commissioner of Ontario, the Canadian Internet Policy and Public Interest Clinic and a national law firm.

Robin Shaban (@RobinShaban) is the co-founder and senior economist at Vivic Research, an economic consulting firm serving advocates and other agents working toward social justice. They were named a winner of the Globe and Mail's Report on Business 2021 Changemakers award and are a former officer at the Competition Bureau.

Executive Summary

This independent analysis commissioned by the Ministry of Innovation, Science and Economic Development provides an overview of the strategies and tactics of leading digitally-enabled firms in obtaining and maintaining data dominance. It discusses how data dominance may be leveraged within markets to increase profits and protect against competition, and provides analysis of the intersections between data-dominance firms' practises to obtain, control, and leverage data and applicable competition concerns.

The paper takes a case study approach to consider whether digital business behaviours are sufficiently captured under Canada's *Competition Act* by asking what would need to be true in order for the Bureau to take a case related to a particular business practice forward. This approach tests the flexibility of the current Act, questioning whether the current legislative framework is incorrect or insufficiently enforced.

The nine case studies considered are: gatekeeping; self-preferencing, "copycatting," labour market monopsony, algorithmic and "personalised" pricing, consumer IoT systems, commercial IoT systems, data-driven mergers and joint ventures, and killer acquisitions guided by data.

In each case study, the paper describes a data-driven business behaviour, discusses the harm associated with that behaviour, considers whether it is currently captured by the Act, asks whether it may be more suitably addressed through other policy levers, and references any relevant open cases or investigations in other jurisdictions.

A key finding of the paper is that various *conceptual* gaps exist rather than *evidentiary* ones.

Analysis demonstrates that the current consequentialist approach for evaluating anti-competitive conduct is not well-suited to addressing dynamic competition concerns. It may be incredibly difficult, if not impossible, to predict the outcomes of markets. In a data-driven, digital context, the consequentialist approach fails and is likely unable to capture the numerous variables. The authors propose a more rules-based approach that may be less flexible, but more predictable.

The paper concludes with a cross-cutting public interest policy approach that will aid in preserving and encouraging competition in data-driven markets where there is a data-dominant incumbent by addressing new forms of market power, improving regulatory capacity, introducing new vehicles for transparency, and addressing complexity.

In order to modernise competition law in Canada, the authors call for better integration with consumer privacy legislation and advice that information asymmetries be addressed through consumer protection provisions. The authors further propose that specific digital platform issues be translated to labour law. Further analysis is required to explore data as an essential facility.

A renewed approach to competition in Canada can empower consumers, support workers, and promote entrepreneurship and productive collaboration with relevant government actors.

From: Move Over, GE. The Tech Conglomerates Are the New Leaders of Industry (November 2021).

"But there are important differences between today's tech conglomerates, which continue to grow in value and scope, and those of yesteryear, say those who study the history of the subject. The way today's big tech conglomerates glue their products together into "platforms" makes them potentially much more dominant and long-lasting than the industrial conglomerates. In those older conglomerates, sibling businesses weren't nearly as interconnected or mutually supporting, and instead vied for investment from their corporate parent.

…. Old-style industrial behemoths were largely premised on supply-side economies of scale that were exhausted long before a company could completely take over and monopolize a market for goods, which is one reason that General Motors, for example, never ate the entire auto market. ***The network effects the tech companies are enjoying create a whole new class of economies of scale, which were largely unavailable to industrial conglomerates.***

In today's world, demand-side economies of scale, driven by every additional user, developer, marketplace seller, and advertiser added to a platform, mean that ***tech conglomerates are playing in markets that tend toward monopoly or at least oligopoly****. That gives them tremendous power and, potentially, resilience for the long term."*

Introduction[1]

The aim of this report is to aid in shaping policy decisions that encourage long-term competition and innovation in data-driven markets. The subsequent evaluation of policy options and opportunities will focus on the antitrust implications of the use of data by firms, and will not be limited to digital firms but will include the use of data in traditional industries.

This report approaches this goal in four steps:

- ➢ It provides an overview of the strategies and tactics of leading digitally-enabled firms in obtaining and maintaining "data dominance;"
- ➢ It discusses how data dominance may be leveraged within markets to increase profits and protect against competition;
- ➢ It provides an analysis of the intersections between data-dominant firms' practices to obtain, control, and leverage data and applicable competition concerns;
- ➢ And it proposes a cross-cutting policy approach that will aid in preserving and encouraging competition in data-driven markets (including traditional industries embracing digital adoption) where there is a data-dominant incumbent.

In an attempt to offer more concreteness in these discussions, the paper takes a case study approach to consider whether [new] digital business behaviours are sufficiently captured under the *Competition Act*, and what would need to be true in order for the Bureau to take a related case forward. This approach tests the flexibility of the current *Competition Act*.

This paper begins by summarizing the current Canadian debate regarding the *Competition Act* in a digital context. It briefly surveys advancements in data and competition law in other jurisdictions. The bulk of the paper discusses nine case studies that address business behaviour in a data-driven context. These behaviours are: gatekeeping, self-preferencing, "copycatting," labour market monopsony, "personalized" or algorithmic pricing, consumer IoT [Internet of Things] ecosystems followed by commercial IoT ecosystems, data-driven mergers and joint ventures, and killer acquisitions guided by data. Aggregate analysis is summarized before a long list of recommendations are surveyed. The paper concludes with a cross-cutting policy approach that will aid in preserving and encouraging competition in data-driven markets (including traditional industries embracing digital adoption) where there is a data-dominant incumbent.

[1] This is an independent expert report produced by Vivic Research and 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.

Current Canadian Debate

After a relatively quiet period following the 2008 final report of the Competition Policy Review Panel[2] and the 2009 amendments to the Competition Act, we now see the beginnings of a vigorous debate over the potential futures of competition policy in Canada. Preceding this debate, in 2019 then Minister of Innovation Science and Economic Development (ISED) Navdeep Bains expressed his desire to assess whether the Competition Act was up to the task of protecting Canadians in digital markets.[3] Likely spurred by building enforcement and energy for reform among international peers such as the E.U., U.K., and U.S., the Ministerial mandate letter is the first indication of official intent to review Canada's competition laws. Since the release of the welcome letter, the Commissioner of Competition has been vocal in public appearances about the need for reform of Canada's competition laws, most recently in a speech to the Canadian Bar Association.[4]

In the evaluation of the fitness of Canada's Competition Act for digital markets, there have been five recent stand-out contributions to the dialogue: the monopoly sections of the House Standing Committee on Access to Information (ETHI Committee), Privacy and Ethics report *Democracy Under Threat: Risks and Solution in the Era of Disinformation and Data Monopoly*[5], the Competition Bureau's *Big data and innovation: key themes for competition policy in Canada*[6], Niblett and Sokol's *Up to the Task*[7], Bednar and Shaban's *The State of Competition Policy in Canada: Towards an Agenda for Reform in a Digital Era*[8], and Iacobucci's *Examining the Canadian Competition Act in the Digital Era*[9]. In addition to these papers, it is worthwhile to scan recent commentary by the Commissioner of Competition for the enforcement perspective on reforms related to digital markets. While these do not cover the full range of competition-related issues raised by digital markets, they are useful for understanding the current spectrum of Canadian perspectives on the topic that have been offered in the public sphere. The papers are also useful in forecasting which topics are more likely to see research and analysis, and to highlight areas of competition in digital markets that may receive relatively less scrutiny going forward. A brief summary of the main arguments of each of the papers, along with commentary on their areas of focus, will be useful for this purpose.

In addition to these papers, in the spring of 2021, the INDU committee hosted some sessions exploring Competitiveness in Canada.[10] While these were not structured to specifically focus

[2] Government of Canada, Compete to Win (2008)
[3] ISED, Letter from Minister of Innovation, Science and Economic Development to the Commissioner of Competition
[4] Competition Bureau, Canada needs more competition (2021)
[5] House of Commons, Democracy Under Threat: Risks and Solution in the Era of Disinformation and Data Monopoly (2018)
[6] Competition Bureau, Big data and innovation: key themes for competition policy in Canada (2018)
[7] Niblett and Sokol, Up to the Task (2021)
[8] Bednar and Shaban, The State of Competition Policy in Canada: Towards an Agenda for Reform in a Digital Era (2021)
[9] Iacobucci, Examining the Canadian Competition Act in the Digital Era (2021)
[10] Standing Committee on Industry, Science and Technology" Competitiveness in Canada, "Competitiveness in Canada"

on competition issues in data-driven markets, some respondents raised the issue of whether the digital economy warranted a review of the Act.

In 2018, the Standing Committee on Access to Information, Privacy and Ethics released the report, "Democracy Under Threat: Risks and Solutions in the Era of Disinformation and Data Monopoly." The report was prompted by the breach of personal information involving Cambridge Analytica and Facebook. Of eleven core recommendations, one advised the Government of Canada to "study the potential economic harms caused by data-opolies and determine whether the Competition Act could be modernized" (vii), another recommended that PIPEDA be amended so that a framework could be established "allowing the Competition Bureau and the Office of the Privacy Commissioner to collaborate where appropriate" (59), and a third advised that PIPEDA be amended "to allow the Privacy Commissioners to share certain relevant information in the context of investigations with the Competition Bureau, other Canadian regulators, and regulators at the international level, where appropriate" (73). Testimony from experts noted that data-opolies can profit by "getting users addicted to spending more time on their platform."

Although the focus of the ETHI Committee's 2018 report is broader than competition in digital markets, the report brought forward a range of expert voices and provided valuable recommendations for the future of Canadian competition law as it relates to digital markets. Issues raised by witnesses, notably Carolyn Wiklins, Senior Deputy Governor of the Bank of Canada, included the role of data and network effects as a barrier to entry in digital markets, and how concepts like portability and interoperability might spur entry into concentrated markets such as search and social media. In his testimony, professor Maurice Stucke highlighted a broader set of harms of "data-opolies' than are usually considered in competition law, such as loss of trust, surveillance and related social, moral and political concerns. Anthony Durocher, a Deputy Commissioner at the Competition Bureau, stated that if they became relevant dimensions of competition, non-price effects of these data-opolies could be incorporated into analysis under the current competition law framework. While largely leaving Canada's competition framework untouched in its recommendations, the report did recommend enhanced access to data through principles of portability and interoperability in PIPEDA, further Government study of potential harms of data-opolies, and enhanced collaboration between the Competition Bureau and the Office of the Privacy Commissioner.

In developing the paper *Big data and innovation: key themes for competition policy in Canada* – what we can call the Bureau's "Big Data" paper – the Bureau engaged in a public comment process to assess perspectives on the impact that the then-emerging concept of "big data" might have on Canada's competition policy regime. In synthesizing the responses to its public comment, the main conclusion reached was that, while big data may raise unique concerns related to competition enforcement, Canada's competition policy framework was sufficiently flexible to address those concerns. One issue raised was the limit of jurisprudence related to the topic, but this concern is less related to Canada's analytical framework for competition law. However, we will see this theme of underdeveloped jurisprudence recur. It is worth noting that the tone of the Big Data paper appears to conflict with more recent commentary by the Commissioner of Competition and other Bureau officials, although the focus of the paper is relatively narrow, and the Bureau was synthesizing perspectives presented to it in its public comment process.

Echoing the argument for the suitability of the status quo to address concerns in digital markets, Niblett and Sokol's paper begins from the premise that material change to Canada's competition law is not only unnecessary, but potentially damaging. The paper addresses arguments related to three common facets of the digital economy: self-preferencing[11], big data, and two-sided markets[12]. The paper points to examples such as the Bureau's 2013 discontinued Google investigation into, among other things, self-preferential behaviour, the Nielsen and Toronto Real Estate Board cases surrounding questions of access to data, and the Southam and Visa/Mastercard cases which concerned companies that could be considered two-sided markets. The paper uses the existence of these investigations and cases to illustrate that the flexibility of the Act, another recurring theme in discussion of Canada's competition laws, allows for problematic conduct, should it exist, to be addressed. The paper also characterizes arguments against the efficacy of current competition law as part of a "populist backlash" that seeks to include non-economic considerations in Canada's competition law framework. In describing the potential consequences of what they see as "overregulation", the authors point to analysis of the history of the U.S. Robinson-Patman Act and its eventual shift from what the authors consider non-economic goals, to more economy-oriented goals. Although the thrust of the paper is firmly toward the preservation of the status quo, the authors do allow that expansion of rights of private access to address a lack of jurisprudence, and an increase in monetary penalty maximums might be appropriate, though not without caveat.[13]

Deviating from arguments for the status quo, Bednar and Shaban's paper, surveying related domestic and international literature, identifies a number of competitive concerns related to digital markets and puts forward multiple areas of opportunity for reform they argue would address those concerns. Key concerns highlighted include the possibility for harm through self-preferencing, evidence of mergers designed to thwart nascent competitors, often referred to as "killer acquisitions", and harms related to the prevalence of "surveillance capitalism"[14] with implications for both personal privacy and labour markets. A core recommendation of the report is greater information gathering powers for the Bureau to proactively study and understand digital markets, as well as evaluate the outcomes of previous digital mergers to identify overlooked harms and inform future analysis. The authors also advocate for revisiting the definition of consumer harm to ensure it remains relevant for the digital age, and considering a balance of harm approach to merger analysis to incorporate a view of both the potential scale and likelihood of harm arising from a merger, particularly in the case of nascent competitors.

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[11] The use of a digital platform to favour goods or services offered by the owner of said platform.

[12] Markets where a single digital platform provides disparate customer groups different offerings through the same platform (e.g. the provision of social networking to users, and the provisions of user attention or "eyeballs" to advertisers)

[13] "Empirical evidence supporting [expanded private access] is not overwhelmingly strong in other areas of law where private rights of action exist. With regards to price fixing, the evidence suggests that private actions often merely piggyback on public investigations and enforcement, rather than bringing forth new evidence of harmful conduct": Anthony Niblett and Daniel Sokol, Up to the Task (2021).

[14] Defined as "the unilateral claiming of private human experience as free raw material for translation into behavioural data. These data are then computed and packaged as prediction products and sold into behavioural futures markets — business customers with a commercial interest in knowing what we will do now, soon, and later" by Shoshana Zuboff, author of *Surveillance Capitalism* (2019): *Harvard Gazette*, High tech is watching you (2019).

What is probably the most in-depth contribution to the competition policy debate so far, Iacobucci's *Examining the Canadian Competition Act in the Digital Era,* commissioned by Senator Howard Wetston, frames its analysis in relation to two questions: is the current Act economically suitable for digital markets, and do non-economic objectives warrant inclusion in Canada's competition framework?

Beginning with the first question, the conclusion of the Iacobucci paper is thematically similar to the Bureau and Niblett and Sokol papers. Again the flexibility of the Act and its openness to new and novel dimensions of competition are stressed as being suitable for the concerns raised by digital markets, repeating the focus on self-preferencing and access to data. Still, Iacobucci puts forward a number of incremental statutory reforms to address gaps identified in his analysis. In response to the Act's identified blind spot related to labour market issues, Iacobucci argues for reintroducing buy-side conspiracies into s.45 to address wage-fixing and no-poach agreements. He also recommends statutory intervention to overturn jurisprudence that requires the Commissioner to quantify measurable, anti-competitive effects when the efficiency defence is evoked, which would bolster merger enforcement. Lastly, reforms to Canada's abuse of dominance framework are suggested to expand its scope to include harm against competition, even when no harm occurs to competitors, and bolster its deterrent capabilities through higher penalties.

Shifting from the question of whether or not the Act is economically suitable for digital markets, Iacobucci broadens the frame of the paper to consider whether non-economic considerations warrant inclusion in Canada, likely a response to the "populist" policy discussion alluded to by Niblett and Sokol. He points to the multiple goals of the current purpose statement of the Act. Although like in Niblett and Sokol's paper, the definition of non-economic policy goals is a fluid one, Iacobucci highlights several dimensions including privacy, inequality and redistribution, and freedom of expression. Iacobucci describes three potential paths forward for the purpose clause of the Act: one that includes a broad definition of fairness, including efficiency, distributional fairness, and political fairness, a purpose clause tailored narrowly to economic efficiency, and a middle path focused on efficiency but building in Cabinet oversight to provide a public interest lens and introduce non-economic policy goals into competition analysis[15]. Despite arguing for the reform of the efficiency defense from the Competition Act, Iacobucci argues for a narrower version of the Act's purpose clause focused exclusively on economic efficiency rather than the multiple goals set out in the current state and the other examples provided. Reasoning provided centers on providing clarity and predictability of Bureau enforcement and Tribunal decision-making, as well as a hesitance to introduce political factors and potential "rent-seeking" into Canada's competition regime.

Finally, despite having no formal responsibility for the design and development of competition policy in Canada as an enforcer, we can look to recent public comments made by the current Commissioner of Competition to gain a window into the enforcer's perspective on competition issues in digital markets. Looking at the past year of speeches, while the Commissioner has called for a review of the Competition Act, this request and suggested reforms are focused not on digital markets specifically, but on the general ability of the Competition Act to protect and

[15] Beyond the current public interest considerations accounted for with deference to other federal regulators in sectors such as transportation and banking.

promote competition in Canada. Despite this, the Commissioner's most recent speech includes many of the reforms suggested by Iacobucci, Bednar and Shaban, and even Niblett and Sokol, including expanded private access, addressing gaps related to labour markets, raising monetary penalties, and reform of s.96. In addition to these reforms, the Commissioner also describes the high bar to blocking anti-competitive mergers, with a reference to "[o]verly strict and impractical legal tests to prevent anti-competitive mergers" and discussion of a recent failed injunction attempt as part of the ongoing Secure Energy Services case. Returning to a focus on digital markets, the Commissioner does highlight the seismic shift in economies that have occurred since the last major review of the Act, noting that when the 2008 Compete to Win report was released it only mentioned the word "digital" twice and "we were still renting movies from Blockbuster.[16]"

In September, CD Howe's esteemed Competition Policy Council released a Communique titled "Distilled Wisdom." The memo anticipates that Canada's next government is "likely" to consider reforms to the Competition Act and showcases some of the "most-needed competition reforms for the next generation." While the memo does not explicitly discuss digital markets beyond referencing "digital economy issues," it clarifies three recurring issues that are considered to have the support of the Competition Policy Council in 2021. These are: providing for the budget and enforcement independence of the Bureau, while enhancing oversight, transparency, and accountability; an expansion of the private rights of access; and the need to better articulate the "efficiencies defence." This paper will consider these areas of support in the discussion of related policy opportunities.

In early 2021, the Standing Committee on Industry, Science, and Technology held sessions on Competitiveness in Canada. Seven briefs and 22 witnesses contributed to the sessions. Supplementary briefs were submitted by lawyers at McCarthy's, Jim Balsillie, Robin Shaban of Vivic Research, retired consulting economist Lawrence Schwartz[17] - who was a member of the Tribunal that decided the landmark "Propane merger" case, which was the first to test Canada's "efficiency defence,"- the Canadian Bar Association, Macmillan law firm, and the Agricultural Manufacturers of Canada. Overall, these submissions captured the current tension between a 'status quo' approach with the Act and those that see utility in more review and related research.

Lastly, current competition conversations are occurring while the Competition Bureau launches a new digital enforcement unit. It is anticipated that the new unit will improve the Bureau's "understanding of how things are actually working in the digital economy," and ensure it is spotting potential competition issues that may be harder to identify than in the brick-and-mortar business world. Some of the potential activities of this new unit include identifying non-notifiable mergers that it may want to review and countering efforts to create cartels to fix prices or allocate share in markets. This paper aspires to inform potential

[16] Competition Bureau, -Canada needs more competition (2021).

[17] "Superior Propane's 1998 acquisition of ICG Propane is the most infamous example of the efficiency defence in action. Because the transaction was expected to create about $20 million in cost savings per year, Superior was permitted to acquire ICG, creating a monopoly in the retail sale of propane in 16 communities, and increasing Superior Propane's market share to 80 per cent in an additional 32 towns and cities. After the merger, Superior Propane made up about 70 per cent of the entire Canadian retail market for propane.": Vass Bednar & Robin Shaban, "Competition Complexities" (13 April 2021) *National Post*.

parameters/conditions for future merger review. It is unlikely that the paper can inform the Bureau's "innovation garage" that tests ideas for enforcement in tech-influenced markets.

Table 1: Snapshot of Recent Competition Reports in Canada

YEAR	REPORT	AUTHOR(S)
2000	Interim Report on the Competition Act	INDU Committee
2008	Compete to Win	Competition Policy Review Council
2017	Big data and Innovation: Implications for competition policy in Canada	Competition Bureau
2018	Big data and innovation: key themes for competition policy in Canada	Competition Bureau
2018	Democracy Under Threat: Risks and Solution in the Era of Disinformation and Data Monopoly	House of Commons
2021	The State of Competition Policy in Canada: Towards an Agenda for Reform in a Digital Era (2021)	Bednar and Shaban
2021	Up to the Task (2021)	Niblett and Sokol
2021	Examining the Canadian Competition Act in the Digital Era	Iacobucci
2021	Big is Beautiful: Strengthening growth and competitiveness in the Canadian economy"	Atkinson
2021	Compendium of approaches to improving competition in digital markets	G7

The core message of many recent commentators is that the existing Act is flexible but under-enforced, and the Bureau lacks the financial capacity to fully enforce the Act, leading to deficits. They tend to conclude that the Bureau needs more funding[18] and that people should have private access rights that would make actors less reliant on Bureau resources. Generally, the discourse downplays the intersection(s) between data and competition and fails to consider whether new behaviours challenge the current scope of the Act.

[18] The authors note that much of this analysis predates the substantial 2021 budget increase for the Bureau.

Data and Competition Law Innovations in Select Other Jurisdictions

Europe

Possibly the biggest related legislative move internationally, the European Commission's (EC) Digital Markets Act[19] adopts a code of conduct-style approach to create guidelines for digital giants in their conduct with consumers, competitors and businesses that rely on their platforms. The current proposed legislation outlines a series of "do's and don'ts[20]" for companies qualified as gatekeepers to promote competition in the markets they occupy. The proposal lays out a list of concrete obligations (Article 5), as well as an additional set of more flexible obligations (Article 6) with their final design to be specified with input from stakeholders including the gatekeepers themselves. The proposed rules reflect the academic and political discussion of the role of unequal access to data as a barrier to entry in concentrated markets, and the role of data portability and transparency in leveling the playing field between platforms and the businesses that depend on them. Notable examples include restrictions on combining data from multiple platforms, relevant for companies owning multiple platforms such as Meta, barring the asymmetric use of data generated by third-party users of platforms to compete with those same users, and requiring platforms to provide advertisers and publishers with data that would allow them to audit prices paid and received for advertising services.

Somewhat surprisingly given the level of rhetoric and enforcement action originating from the EC, the Digital Markets Act relies on what are often referred to as "behavioural" approaches, guidelines on how and how not to act, and penalties for crossing them, to remedy issues in digital markets. Although the proposal leaves open the potential for "structural" responses for repeat offenders,[21] this approach differs from such approaches, which aim to change market outcomes by altering the structure of said market, whether through divestitures, dissolution or restrictions from entering related lines of business. This is surprising given the building push, at least in the U.S. enforcement community, to re-evaluate the presumed efficacy of behavioural remedies, particularly in merger enforcement,[22] and return to a focus on remedying structural rather than individual conduct issues.[23]

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[19] European Commission, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act) (2020).
[20] European Commission, The Digital Markets Act: ensuring fair and open digital markets (2020).
[21] "The Commission should investigate and assess whether additional behavioural, or, where appropriate, structural remedies are justified, in order to ensure that the gatekeeper cannot frustrate the objectives of this Regulation by systematic non-compliance with one or several of the obligations laid down in this Regulation, which has further strengthened its gatekeeper position." European Commission, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act) (2020).
[22] Kwoka and Moss, Behavioral Merger Remedies: Evaluation and Implications for Antitrust Enforcement (2011).
[23] Federal Trade Commission Chair Lina M. Khan, Vision and Priorities for the FTC (2021).

United States

In the United States, although still in the early stages of the legislative process, a suite of bills proposed by the House Committee on the Judiciary are the most recent policy efforts at the national level to modernize U.S. antitrust laws for digital markets. Although they use a unified approach for determining “designated platform” status (the equivalent of the EC's gatekeeper label) and setting fines for violations, each of the proposed bills focuses on addressing a different dimension of competition in digital markets. The American Innovation and Choice Online (AICO) Act[24] limits the ability of companies to use their control of platforms to engage in self-preferencing over competing companies that rely on their platform for their own survival. Shifting to addressing data as a barrier to entry for businesses and to switching platforms for consumers, the Augmenting Compatibility and Competition by Enabling Service Switching Act[25] creates portability and interoperability requirements for designated platforms in an attempt to create avenues for new entrants and allow consumers to shift between competing platforms more easily. The Ending Platform Monopolies Act[26] and Platform Competition and Opportunity Act[27] constitute the effort to strengthen the U.S. government’s ability to impose structural change in digital markets, with the former offering a structure-focused interpretation of the AICO Act, prohibiting platform ownership that creates conflicts of interest across lines of business (e.g. self-preferencing), and the latter increasing the presumption against mergers by dominant platforms involving competitors and potential competitors. Finally, the Merger Fee Modernization Act[28] increases the maximum fees charged by regulators to assess a transaction to reflect the higher complexity and resources required to evaluate larger transactions

Alongside this suite of proposed legislation, President Biden’s historic Executive Order on Promoting Competition in the American Economy[29] identifies three areas where his administration believes dominant technology companies are undermining competition and reducing innovation. They comprise "Big Tech platforms purchasing would-be competitors," including alleged "killer acquisitions" meant to shut down a potential competitive threat; amassing “too much personal data”; and unfair competition with small businesses through “limiting access and self-preferencing.” This paper acknowledges these prospects and seeks to evaluate the claims in a Canadian legislative context.

Compendium of International Policy Approaches to Promote Competition in Digital Markets

[24] 117th Congress, American Innovation and Choice Online Act (2021).
[25] 117th Congress, Augmenting Compatibility and Competition by Enabling Service Switching Act (2021).
[26] 117th Congress, Ending Platform Monopolies Act (2021).
[27] 117th Congress, Platform Competition and Opportunity Act (2021).
[28] 117th U.S. Congress, S.228 - Merger Filing Fee Modernization Act of 2021 (2021).
[29] Executive Order on Promoting Competition in the American Economy.

In addition, the G7 recently released a compendium of international policy approaches to promote competition in digital markets[30] in November 2021. The compendium documents the work of thirteen competition authorities to "discuss their respective approaches to promoting competition in digital markets, identifying commonalities as well as opportunities for cross fertilization." We excerpt key findings from this report as they provide a robust underpinning to the case study discussion that follows:

- Most agencies have opened investigations, conducted studies, or brought enforcement actions to address concerns about the **exercise of market power of platforms** e.g. in (i) digital advertising markets, (ii) app stores, and/or (iii) online marketplaces;
- The initiatives that most competition agencies are taking to address competition concerns in digital markets involve concerns about **issues of data and data aggregation as a barrier to entry, self-preferencing, parity obligations, non-competes, information exchange or price fixing, abuse of superior bargaining position, and other conduct**.
- In scrutinising mergers and acquisitions, many competition authorities have blocked or remedied deals involving concerns about **how the merged entity would use data to entrench market power**, mergers involving nascent digital competitors, and many vertical or horizontal mergers involving software, including in consumer-facing industries. Many contributions also highlight procedural reforms introduced to increase the scope of digital transactions subject to merger review, as well as proposals to change the substantive test for merger reviews in digital markets.

The compendium also summarized the key challenges that digital markets pose for competition policy and for the authorities responsible for competition law enforcement. We find that these are productive to republish in this paper. These key challenges are:

Market power

There are certain common features present in many digital markets which often lead to firms gaining a large and powerful position. These features may tend to increase market concentration, raise barriers to entry, and strengthen the durability of market power. These common features include: (i) **network effects**; (ii) **multi-sided markets**; and (iii) **the role of data**. This can cause markets to 'tip' in favour of one or a small number of large firms.

Challenges to existing competition approaches

Weaker competition in digital markets can lead to challenges for competition enforcement and policy, including:

- The effects may be different from traditional price effects, and challenging conduct **may require new theories of harm and new ways of demonstrating effects**.

[30] G7 & United Kingdom CMA, Compendium of approaches to improving competition in digital markets (November 2021).

- Features such as the multi-sided nature of online platforms and the provision of services at zero monetary price can be **difficult for courts and agencies to fit within traditional frameworks such as market definition**.
- Given…the interaction between competition and wider policy areas like data protection, consumer protection, and media sustainability, there is an **increasing need for regulators and policy makers to work together across disciplines and jurisdictions**.

The compendium isolated four key issues in digital markets: digital advertising, the role of algorithms, marketplaces and app stores, and mergers. The full compendium is excerpted in Appendix A.

This paper works to address all of the above key issues highlighted in the G7 compendium. "Digital advertising" is discussed multiple sections, "the role of algorithms," is touched on in "personalized" or algorithmic pricing, "marketplace and app stores" are discussed in the *gatekeeping* and *self-preferencing* case studies, and "mergers" are discussed in the case study on *killer acquisitions guided by data*.

Finally, the compendium notes that "these discussions come at a seminal point in competition policy, with governments and competition agencies around the globe reflecting on how to best address competition issues in digital markets." Yet Canada stands out among the thirteen competition authorities, as *"there have not yet been any reforms to Canada to better address digital competition issues, and there are currently no proposed reforms pending before national legislative or regulatory bodies*." Through the following case studies and associated discussion, we offer areas where Canadian competition authorities may be able to better address competition issues in digital markets. We excerpt the compendium in full in Appendix A.

Case Studies

As mentioned, recently, some competition scholars have asserted that the Competition Act is sufficiently "flexible" for a digital age. Yet we contend that this is difficult to conclude with any confidence when the Competition Bureau has taken on so few cases that are emblematic of the dynamics of the digital economy. Truly appreciating the Act's presumed flexibility requires further examination through hypothetical case exploration.

The nine cases we explore were selected with the intention to represent prevalent and potentially problematic behaviours that scholars and commentators have highlighted. These cases are not intended to represent distinct "antitrust" behaviours to be addressed under competition law. Rather, our approach for this analysis is to systematically examine each of these cases to determine if they create durable market power and whether they raise competition concerns.[31] By examining similarities and differences between these behaviours

[31] Our focus for this analysis is competitive harm related to market power, as understood in the traditional, neoclassical economic sense. We recognize that there are also other valid harms that result from reduced competition and increased concentration, including economic inequality and corporate

and their implications for competition and competition law, we then formulate classes of behaviour that are generalizable to different markets. There will be conceptual overlap between the cases, and we will use this overlap to identify these potential classes of behaviour. We explore these potential new classes of behaviour in the analysis that follows the case studies.

In this section, we consider a series of **nine** abstracted case studies that emulate antitrust probes or cases related to "Big Tech" firms in digital marketplaces in other jurisdictions. Given the dearth of current cases in Canada, we think that this is a productive approach to explore the Competition Act's flexibility and suitability for a digital age; as the data-driven or "digital" behaviours of the largest technology firms may be easily replicated by other data-driven firms within Canada's geographic borders. We find that in many instances, the very same behaviour that is being investigated by other antitrust authorities is replicated in Canada by virtue of its digital nature.

In each case exploration, we describe the "new" business behaviour; discuss the harm associated with that behaviour; consider whether it is currently captured by the Act, including the merger and abuse of dominance provisions;[32] consider whether other policy levers may address the behaviour more suitably (such as privacy or consumer protection legislation); and reference any relevant open cases or investigations.

Our analysis considers what would have to be true for the Bureau to investigate such a case as an abuse of dominance, asking: what evidence would need to exist, and how would it be obtained if the Bureau cannot conduct market studies?[33] We believe that exploring these questions is imperative in order to truly stress-test the current Act's purported flexibility.

While we initially hypothesized that we would be able to comment on evidence alongside the provisions of the Act, we have found that for the most part the paper's commentary identifies various *conceptual* gaps instead of *evidentiary* ones.[34]

This case study approach also enables us to both start from the assumption that the competition regulator is competent and ask: why is this behaviour still there? Perhaps the law is wrong, or insufficiently enforced.

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political influence. However, to address these concerns the Act would need to be fundamentally reformed, particularly the purpose statement, and such reform is outside the scope of this analysis.

[32] Predatory conduct, exclusionary conduct, exclusive dealing, tying and bundling, refusal to supply, disciplinary conduct, and business justifications.

[33] Currently, the Bureau can only compel businesses to disclose information during the course of an investigation, and the information they are entitled to is limited to the scope of the investigation. To enhance the Bureau's ability to enforce the Competition Act in the digital sphere, it should be given the same power to do in-depth market studies with businesses' own information. Canada's Competition Bureau needs more of a toolkit. If Canadian authorities could conduct a market study, businesses would be compelled to co-operate and provide information that illuminates market trends that are potentially anti-competitive.

[34] For example, for copycatting there is no amount of evidence that would allow the Bureau to take a case against Google. The evidence just doesn't exist, probably either because the effects are too long-term to effectively capture in an analysis or the data simply aren't available. Doing market studies probably wouldn't address this problem all that much because during the course of an investigation the Bureau does have substantial powers to compel information.

We anticipate that the behaviours discussed through the cases will be of interest to the Competition Bureau's new dedicated digital-economy branch[35]. However, it is also our position after conducting this review that the Bureau may not have the legislative capacity to discern some of these behaviours under the existing Act - further inhibiting enforcement in this regard.

The case studies initially discuss behaviours that take place in a marketplace context: gatekeeping, self-preferencing, and "copycatting." The specific example of labour market monopsony—also in a platform context—is also interrogated. The unique ability of algorithms to collude is explored in an analysis of "personalized" or algorithmic pricing. Two case studies look specifically at Internet of Things (IoT); one in a consumer context that considers connected cars and voice assistants, and another in a commercial context that considers data lock-in and proprietary farm equipment. The final pair of case studies look at data-driven joint mergers and joint ventures followed by killer acquisitions guided by data.

1. Gatekeeping[36]

From the Antitrust Chronicle:

> *In essence, the term "gatekeeper" seeks to capture the notion of a company or platform that mediates the public's access to information and commerce. Obvious examples include the prominent search, social media and online commerce platforms that have gained significant economic power in recent decades.*[37]

"Gatekeeping" is a broad behaviour typically associated with digital platforms that act as marketplaces. We include a case study on platform (specifically, app store) gatekeeping because it is a part of any conversation exploring competition and digital platforms, and because data is inherent to the digital platform model. Furthermore, there has yet to be an in-depth Canadian investigation into gatekeeping by a digital platform (although the Bureau is currently investigating Amazon). Thus, gatekeeping conduct has not been tested against the current provisions of the Act, making this conduct worth contemplating in relation to it.

Gatekeeping happens in contexts where a platform can control access to itself or can control the behaviour of firms within the economic ecosystem that it oversees. Platform operators can set terms that control behaviour because as arbitrators of the platform they determine whether and how third parties can access the consumers that use their platform. Platforms engage in gatekeeping when they set rules that may arbitrarily dictate whether and how third parties access and operate within a marketplace in ways that disadvantage or exploit third party users of the platform.

The case of app stores: payments and beyond

[35] Murad Hemmadi, Competition Bureau building dedicated digital-economy branch (November 2021).
[36] The authors note that ISED has a concurrent research paper that specifically explores gatekeeping.
[37] Competition Policy International, Antitrust Chronicle – Gatekeepers (February 2021).

In a mobile app store, gatekeeping could include limiting payment choices for consumers. Forcing app developers to use a platform's proprietary payment system limits choice and can drive up prices. Critics have said of Google's Play Store and Apple's App Store that their monopolistic control over the provision of Apps on iOS and Android devices, respectively, allow the companies to take large cuts of each payment because developers have no other choice if they want to get paid.

The recent cases against Apple taken in the U.S., EU and several other countries highlight the anticompetitive effects of limiting payment choices on market platforms. In the majority of cases, the contention pertains to rules imposed by Apple that require apps sold on the platform to use Apple's in-app payment system. According to these cases, this rule enables Apple to earn a substantial commission on sales, which could be passed on to consumers in the form of higher prices.

The EU Commission has stated that it finds that Apple's payment rules have "distorted competition".[38] In October 2021, the Dutch competition authority also found Apple's payment systems rules to be anti-competitive.[39] As of March of 2021, the UK's Competition and Markets Authority has also launched an investigation on the same basis.[40] In the US, Epic Games filed a private suit against Apple on this issue (and others), resulting in an order requiring Apple to allow app developers to include links to external payment options.[41] To settle an impending case against Japan's competition authority, Apple has also relaxed its in-app payment rules to allow certain apps to include links to their websites so that consumers can purchase these apps outside the platform.[42]

While rules related to in-app purchases have been the focus of recent investigations into Apple and its gatekeeping behaviours, Geradin and Katstifis[43] highlight other restrictive rules and behaviours imposed by Apple that may distort competition under EU competition law. Using established methods for determining antitrust markets, the authors conclude that Apple is a monopolist in the provision of iOS apps. From this monopoly position, it can also engage in exclusionary practices that violate EU law. They sort these practices into four types, based on case studies.

First, the in-app purchase requirement may be thought of as an exclusionary practice because it could make it more difficult for other apps on the platform to compete (on price, namely). Second, Apple may also use privacy as an excuse for exclusionary conduct. The authors describe an instance where Apple removed apps from its store that were offering a service similar to that which Apple launched. It removed these apps on the basis that they violated privacy conditions, without providing justification as to why. Third, Apple could limit

[38] Antitrust: Commission sends Statement of Objections to Apple on App Store rules for music streaming providers (April 2021) *European Commission*.
[39] Dutch watchdog finds Apple app store payment rules anti-competitive (October 2021) *Reuters*.
[40] CMA investigates Apple over suspected anti-competitive behaviour (March 2021) *UK CMA*.
[41] Judge orders Apple to allow external payment options for App Store by December 9th, denying stay (November 2021) *The Verge*.
[42] Apple to Allow Apps to Link Out to Their Websites for Sign-Ups (September 2021) *PC Mag*.
[43] Gerardin & Katsifis, "The Antitrust Case against the Apple App Store (Revisited)" (2020) TILEC Discussion Paper No. DP2020-035.

interoperability to exclude competitors similar to how it limited the functionality of the Tile device, which helps people keep track of and find lost items. These limits were the result of changes made to iOS 13 (not the app store directly) and followed an announcement that it would release its own Tile-like device with a corresponding app in its app store. Lastly, the authors point to self-preferencing as a form of exclusionary conduct whereby Apple privileges its own apps in search results on the App store platform.[44]

Furthermore, as the authors point out, because Apple manages the platform on which these potential competitors operate, it has access to consumer data that it uses to develop its own products. In this way, access to and use of data can add to and exacerbate the competitive harms related to competitor exclusion.[45]

The EU has explored whether Apple's norm of a 30% commission[46] from developers - a manifestation of gatekeeping - is an abuse of their dominant position.[47] This could be evidence that the market power of Apple or Google stems from dominance in operating systems. We also add that, on the issue of payment commission fees specifically, complete elimination of commission fees may also raise competition issues that should be contemplated under the Act. Perhaps a 0% commission fee for developers is a form of predatory pricing, whereby the firm deliberately sets the price of a product(s) below an appropriate measure of its own cost to eliminate, discipline, or deter entry or expansion of a competitor.

More recently, it has been reported that the EC is taking aim at Apple with respect to another gatekeeping practice related to its NFC chip technology. The technology is used in contactless payment on iPhones, and the Commission's argument is that Apple "locked out competing contactless payment services by restricting the use of the NFC chip inside iPhones."[48]

A recent report[49] from the Institute on Self-Reliance in the US found that Amazon is exploiting its position as a gatekeeper to impose steep and growing fees on third-party sellers. No comparable research exists in a Canadian context, which may prevent broader discussion of the implications and challenges of third-party marketplaces.

Competitive harms of gatekeeping

In sum, the competitive harms of gatekeeping rest on the ability of a platform to govern and control the market in which it also operates. In some instances, these platform operators may be monopolists, or hold a high degree of market power by virtue of having few competitors. Through their ability to control the market environment through rules, policies, or technologies,

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[44] Gerardin & Katsifis, "The Antitrust Case against the Apple App Store (Revisited)" (2020) TILEC Discussion Paper No. DP2020-035.
[45] Gerardin & Katsifis, "The Antitrust Case against the Apple App Store (Revisited)" (2020) TILEC Discussion Paper No. DP2020-035.
[46] While companies can place their apps on the App Store at no cost, Apple charges companies 30% from in-app purchases and 30% on subscriptions for the first year, then 15% thereafter.
[47] EU launches antitrust probes into Apple's App Store and Apple Pay (June 2020) *CNBC*.
[48] Apple to Face EU antitrust charge over NFC chips (October 2021) *Reuters*.
[49] Stacy Mitchel, "Amazon's Toll Road: How the Tech Giant Funds its Monopoly Empire by Exploiting Small Businesses" (December 2021) *Institute for Local Self-Reliance*.

platform operators can exercise their market power in a way that inhibits competition on the platform.

We find that gatekeeping behaviour may undermine competition in an exclusionary or predatory way. In the case of exclusion, the operator may set rules or implement policies or technologies that undermine competitors, with the effect of providing the operator with a relative advantage in the downstream market. We also hypothesize that platform operators could also leverage and protect their market power through predatory acts, which may have particular relevance in the zero marginal cost environment of a digital platform.

These gatekeeping behaviours may reduce product variety on platforms, lead to higher prices, or undermine innovation. Given their privileged position as the regulator of the market, platform operators have the power to dictate market outcomes without being subject to or challenged by free-market competitive forces. Therefore, we hold the view that legislative intervention is needed to address the competition issues raised by gatekeeping.

Gatekeeping under the Act: enhancing the abuse of dominance provisions

In Canada, the Commissioner's legislative tools for addressing gatekeeping are more limited than those of the European commission or other jurisdictions. The Act's abuse of dominance provisions would likely have limited ability to address excessive pricing (that is, unfair and supracompetitive pricing) made possible by Apple's in-app purchasing rules. While the Commissioner may be able to make the argument that Apple's in-app purchasing rules undermine competitors on the platform, we are not confident that under the current substantive test the Commissioner would be able to show that the conduct is anti-competitive.

Under the abuse of dominance provisions, the Commissioner may be able to address gatekeeping behaviours that specifically foreclose or exclude competitors or potential competitors, similar to those behaviours described by Geradin and Katstifis. That being said, as the Bureau's 2016 investigation into Google and its alleged self-preferencing of its own search platforms shows, it may be difficult to establish anti-competitive effects from some behaviours given the high evidentiary standards needed to establish a substantial lessening or prevention of competition. To address this issue, parliament should consider making changes to the substantive test (a substantial lessening or prevention of competition) used to identify anticompetitive conduct within the abuse of dominance provisions.

At present, the Commissioner is required to show, on a balance of probabilities, that the abusive conduct has led to specific negative outcomes (the consequentialist approach). The effects that are typically considered include higher prices, lower quality, or less innovation. However, the law in other jurisdictions, particularly the EU, requires that authorities show primarily that the conduct in question has taken place, and there is less emphasis on demonstrating that the conduct has caused certain harms (the deontological approach, or what some in Canada call a *per se* approach). We describe this difference in more detail in the case study on self preferencing.

We believe that to best address the competitive issues raised by gatekeeping, the substantive test for abuse of dominance should be modified to take a more deontological approach. A

more deontological approach may enhance the law's effectiveness at identifying clearly harmful conduct by assessing the conduct directly, rather than assessing it indirectly through its effects. This approach avoids the possible pitfall of the current test whereby anticompetitive conduct is likely taking place, but it may not be possible to generate sufficient evidence to show specific effects related to price, product variety, or innovation. A more deontological approach to assessing anti-competitive conduct may also lead to more predictable enforcement outcomes and may also better align Canadian law with those of other jurisdictions. We discuss these points further in the case study on self-preferencing.

Platform-specific legislation: an complement to competition law

To address gatekeeping and its negative effects, authorities in other jurisdictions have proposed and implemented other solutions beyond core competition legislation. Some jurisdictions have implemented legislation targeting digital platforms specifically. The EU, the UK and Germany have proposed criteria for assigning a special gatekeeper status to digital platforms.[50] Thus, another approach to addressing these issues other than reforming the Act's abuse of dominance provisions could be to implement digital-specific competition legislation like the EU's Digital Markets Act (DMA) or Germany's approach.[51]

In Europe, the Digital Markets Act explicitly imposes new rules regarding the behaviour of gatekeeper platforms. The European Commission's Digital Markets Act (DMA) establishes a set of narrowly defined objective criteria for qualifying a large online platform as a "gatekeeper". This allows the DMA to remain well-targeted to the problem that it aims to tackle as regards large, systemic online platforms.

These criteria will be met if a company: has a strong economic position, significant impact on the internal market and is active in multiple EU countries; has a strong intermediation position, meaning that it links a large user base to a large number of businesses; and has (or is about to have) an entrenched and durable position in the market, meaning that it is stable over time.

In Germany, competition law reform has included significant new rules regarding digital platform markets. It is the first jurisdiction that has an active 'gatekeeper' regime (via the German Federal Cartel Office's Act against Restraints of Competition, ARC).[52] In January 2021, Germany approved new domestic legislation on digital gatekeepers that uses a non-exhaustive list of softer indicators to flesh out what is meant by the definition, and their approach is not limited to the digital economy. A key element of the amendments to the German Competition Act is the modernization of abuse control. It will allow the regulator to prohibit large technology firms from engaging in certain types of conduct earlier, allowing preventative measures that may curb the market power of the large firms. In the assessment of market power, the Act now stipulates that access to data relevant for competition, and the issue of whether a platform has what is called, "power of intermediation," must also be taken into account. Another important new feature is that under certain preconditions the Bundeskartellamt can order in favour of dependent companies that access to data must be

[50] Vivek Mani, "Taming Gatekeepers – But Which Ones?" (February 2021) 12:16 National Law Review.
[51] The Digital Markets Act: ensuring fair and open digital markets (2020) *European Commission*.
[52] Amendment of the German Act against Restraints of Competition (January 2021) *Bundeskartellamt*.

granted in return for adequate compensation. Based on their new rules for large digital companies, they have initiated proceedings into Meta, Apple, Amazon, Alphabet and Google.[53]

The legislative interventions implemented by the EU and Germany have raised concerns about legislative fragmentation that can complicate compliance on global markets.[54]

More directly related to the issue of payment systems and commissions, South Korea approved a bill that bans major app store operators, including Apple, from forcing software developers to use their payment systems.[55] In 2019, Germany passed a law requiring Apple to open its mobile payments system to rivals for a reasonable fee. This demonstrates that competition policy is not the only way to address the gatekeeping of a proprietary payment system. Canada could consider legislation that addresses this potential behaviour by rejecting it, perhaps as part of a broader suite of policy changes related to payment modernization.

In sum, either digital-specific legislation or revisions to the Act seem appropriate to clarify Canada's stance on gatekeeping.

2. Self-preferencing

While self-preferencing is not a behaviour that is limited to the digital economy, discussions of the challenges for competitors raised by the activity of self-preferencing have reignited interest in the activity from scholars and lawmakers.

One potential definition of self-preferencing comes from the Digital Freedom Fund:[56]

> *Self-preferencing involves actions by an undertaking which are designed to favour its own products or services over those of its competitors by a platform that is open to other people's products.*
>
> *Self-preferencing is often described as a subset of a broader type of conduct, known as leveraging. Leveraging conduct involves the use of power in one market to strengthen a position in another market.*
>
> *From a competition law perspective, the overall concern with self-preferencing, and other types of leveraging conduct, is that an undertaking with a dominant position may engage in this conduct in order to enhance its own market position, and to prevent or inhibit the entry/expansion of other competitors. In other words, there is a*

[53] Proceeding against Apple based on new rules for large digital companies (Section 19a(1) GWB) – Bundeskartellamt examines Apple's significance for competition across markets (June 2021) *Bunderkartellamt*.
[54] Vivek Mani, "Taming Gatekeepers – But Which Ones?" (February 2021) 12:16 National Law Review.
[55] South Korea Becomes First Country To Ban Google And Apple Monopolies On App Store Payments (August 2021) *Forbes*.
[56] Self-preferencing and EU competition law (May 2020) *Digital Freedom Fund*.

concern that self-preferencing and/or leveraging conduct engaged in by dominant undertakings may produce exclusionary effects.

Enforcement agencies, such as the European Commission, have stated that such conduct may be considered anti-competitive when engaged in by a dominant digital platform that can leverage its market power to distort competition in the downstream market.[57]

Put simply: self-preferencing occurs when a firm that both owns and operates a platform (marketplace) privileges their own products or services in search. It is not a new business behaviour, and can also happen in a brick-and-mortar context - most notably in the context of grocery store shelving. In Canada, officials have not taken any cases on self-preferencing to date, although they investigated Google in 2016 on the issue.

Cases of self-preferencing

The most detailed examples we found that illustrate self-preferencing and its effects on competition involve Amazon and Google.

In 2020, the European Commission laid out a set of antitrust charges against Amazon focussed on its dual role as a platform for other sellers and a retailer itself on its own platform.[58] In the US, investigative journalism from The Markup, has found that Amazon puts its own "brands" first, above better-rated products.[59] It did this by using public records from the US Patent and Trademark Office and Amazon's own statements to identify more than 150 brands owned or registered by Amazon. They then analyzed search results on Amazon for different product inquiries and looked at what was placed in the first spot. They found that in 60 percent of cases, Amazon sold the spot to advertisers and added a public label indicating that the listing was "sponsored." Of the rest, Amazon gave half to its own brands and brands exclusive to the site, and the other half to competing brands. But Amazon brands and exclusives made up only 6 percent of all products in the sample, and competitors made up 77 percent. The Bureau may be hearing similar stories from Amazon's merchants of them being unable to reach customers from their open call.[60]

In 2017, the European Commission fined Google €2.42 billion for abusing its dominant position in online search to promote its own comparison shopping search service. The Commission found that Google "systematically [gave] prominent placement to its own comparison shopping service" on the main Google search page and "demoted rival comparison shopping services in its search results."[61] Google recently challenged the Commission's decision and lost.[62]

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[57] Ex ante regulation of digital markets (2021) *OECD*.
[58] Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices
[59] Amazon Puts Its Own "Brands" First, Above Better-Rated Products (October 2021) *The Markup*.
[60] Competition Bureau seeks input from market participants to inform an ongoing investigation of Amazon (August 2020) *Competition Bureau*.
[61] Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service
[62] Google loses key appeal against 2.4B EU shopping antitrust case (November 2021) *The Verge*.

In contrast, Canada's parallel investigation into biased Google search results and the company's preferential treatment of its own shopping search service ultimately found that there was insufficient evidence to show that these behaviours excluded rivals or caused a "substantial lessening or prevention of competition."[63] Acknowledging that the facts of the case may not be the same between the EU and Canada, the differing outcomes of the two investigations is nevertheless suggestive.

It is also critical to note that self-preferencing is not always an obvious activity. For instance, a firm may advertise a suite of private-label brands that are not clearly associated with the search platform. This is becoming a popular behaviour amongst online retailers in a Canadian context of modest market share, such as:

- **The Bay,** which was recently spun out of Hudson's Bay and has 12 private brands: En Thread, Core Life, Lord & Taylor, Design Lab, Black Brown 1826, 1670, Les Essentiels, Distinctly Home, Boutique, Kode, Glucksteinhome, and Littles;
- **Canadian Tire**'s consumer bands division boasts product lines like Mastercraft, Motomaster, Paderno, and more;
- **Costco** - Kirkland Signature (which generates about a quarter of Costco's sales)
- Mark's Work Warehouse showcases Dakota, Denver Hayes and WindRiver;
- **Loblaw's** owns and advertises for a range of products under the following labels: Equality, No Name, President's Choice, Joe Fresh (and more);
- **Metro** advertises and sells the private label brands Selection, Irresistible, Godiva, Hemisphere wine, and Première Moisson.[64]

The harms of self-preferencing, and the role of data

In a general sense, self-preferencing behaviour shares many similarities with gatekeeping. Indeed, in many ways gatekeeping and self-preferencing may be two facets of the same behaviour. As with gatekeeping, self-preferencing occurs when a firm operates a marketplace, like a platform, in which it also offers products and competes with other firms in that marketplace. The marketplace operator can give its products a superior position in the marketplace, namely by prioritizing their products in search results. Self-preferencing may stifle competition, as other competitors cannot achieve "choice" positioning in search and/or must pay (in the form of ads or loyalty discounts) in order to obtain equal access to the same customer base.

In a fair, competitive market, products may come to dominate markets by virtue of being superior to those of competitors in quality, price, or some other characteristic. However, through self-preferencing market operators may gain dominance in specific markets due to the fact that they operate and control how information is presented in the marketplace in which they sell their product. In this way, self-preferencing can undermine the competitive dynamic

[63] Competition Bureau statement regarding its investigation into alleged anti-competitive conduct by Google (April 2016) *Competition Bureau*.
[64] Buffalo Jeans: How Brand Licensing Creates the Illusion of Competition (August 2021) *regs to riches*.

of these markets, leading to poorer market outcomes. Self-preferencing constitutes an advantage that is not based on the merits of competition, but instead the degree of dominance that the self-prefencing firm has in another market.

However, notably in Canada, there is debate as to whether self-preferencing is a substantial threat to competitive markets. In "Up to the Task," Niblett and Sokol contend that self-preferencing is "*generally efficient and beneficial for consumers,"* and that *"self-preferencing in e-commerce [...] where the platform focuses on making its own product better, is not conduct that should raise concern*." They substantiate their claim with economic studies of the grocery store sector.

The argument posed by Niblett and Sokol provides the opportunity to clarify the concept of self-preferencing. First, much of the literature they put forward to support the claim that self-preferencing is beneficial is speaking primarily to the benefits of private-label products.[65] We want to clarify that self-preferencing and the introduction of private-label products (which we refer to as "copycatting" in the next section), are two related but distinct concepts. We further discuss the potential benefits of private-label products in the section on "copycatting".

Another theme that occurs in the literature they cite is the importance of stores placing private-label brands in a way that makes them competitive with other brands, particularly dominant national brands. Private-label brands can have a positive impact on competition by enhancing variety and providing competitive rivalry against dominant products. Furthermore, placing private-label products close to these leading national brands may enhance the competitiveness of the private-label products.[66]

However, we want to make the point clear that placing private-label products on a shelf (whether in a brick and mortar or digital context) in a way that makes them effective competition is not self-preferencing. It is true that a firm must have private-label products to self-preference, but firms can also have private-label products and not engage in self-preferencing. To reiterate, self-preferencing is the behaviour whereby market operators give their products preferential placement ***over those*** of other competitors, independent of the product's price, quality, or user reviews. When a market operator places its own products as the top search result because it controls search results, the behaviour is self-preferencing and it undermines competition.

Big data may exacerbate the harms of self-preferencing by enabling more sophisticated forms of self-preferencing more often. However, the role of data in self-preferencing is indirect and is dependent on copycatting behaviours that we will discuss in more detail in the next section.

Data can be used to identify opportunities for copycatting, and then the self-preferencing of that coppycatted product. Marketplace operators can derive information on demand and desirability of their competitors' products through what people search, "favourite," leave in their

[65] Geyskens, Gielens & Gijsbrechts, "Proliferating Private-Label Portfolios: How Introducing Economy and Premium Private Labels Influences Brand Choice" (2010) 47:5 *Journal of Marketing Research*; Chintagunta, Bonfrer & Song, Investigating the Effects of Store-Brand Introduction on Retailer Demand and Pricing Behavior (2002) 48:10 *Management Science*.
[66] Sayman, Hoch & Raju, Positioning of Store Brands (2002) 21:4 *Management Science*.

cart, or purchase frequently. Market operators can also infer information related to price sensitivity. The use of data in this way does not translate into a brick and mortar shopping experience.

As in the Amazon case, it should be considered whether using the data that a platform may collect from third-party sellers to enhance the competitive offering of its own retail business is appropriate and the implications of a platform's dual role as a platform for third party sellers while *also* being a retailer.[67] This is the core business structure that gives rise to behaviours like self-preferencing and copycatting.

Due to the pervasiveness of this self-preferencing on/by online platforms that also advertise products or services that they own, a satisfying policy response would be to address the behaviour itself; independent of the considerations of market size and dominance. A number of the concerns raised by self-preferencing (such as the potential for discrimination) may not relate solely to their potential anticompetitive effects.[68] The main challenge for regulators to address self-preferencing is related to the identification of limiting principles that can provide guidance as to when self-preferencing is anticompetitive (i.e., is there a predictable set of circumstances under which self-preferencing is or should be unlawful/an abuse of dominance under the Act?).

Self-preferencing under the Act

Regarding whether self-preferencing is currently captured under the Act, Blake's law firm notes the following in a recent brief on Competition Law and the Digital Economy in Canada:[69]

> *Though the Bureau has not yet engaged in any enforcement action related to self-preferencing, technology firms should be aware that the Competition Act contains provisions regarding abuse of dominance that could provide a legal basis for challenging this type of conduct. A successful challenge by the Bureau could result in behavioural remedies as well as significant monetary penalties.*

In "Up to the Task," Niblett and Sokol conclude that, "*Under the current law in Canada, the practice of self-preferencing is generally permissible. But the Competition Bureau may elect to investigate if there is a suspicion that the preferential conduct is exclusionary in nature and constitutes an abuse of dominance*." They make the further claim that, "*If self-preferencing and restrictions on access to data are truly exclusionary and have anti-competitive effects, then such behaviour will be captured under section 79 of the Competition Act, the prohibition against abuse of dominance. Under this provision, firms that are dominant in a market are prohibited from engaging in a practice of anti-competitive conduct that substantially prevents or lessens competition*" (5).

[67] A Prime example of the issue with Big Data? – European Commission issues Statement of Objections in Amazon probe (November 2021) *Freshfields Technology Quotidienne*.
[68] Pedro Caro de Sousa, What Shall We Do About Self-Preferencing? (June 2020) *Competition Policy International*.
[69] Competition Law and the Digital Economy in Canada (2019) *Blakes*.

Despite arguments put forward by Blakes and Niblett and Sokol, it is difficult to square claims that the Act's abuse of dominance provisions are adequate in addressing the harms from self-preferencing with the fact that the European Commission fined Google €2.42 billion for self-preferencing behaviour that the Bureau found to be unproblematic (assuming that the conduct in both Canada and the EU was similar). Some may argue that the EC's actions against Google constitute over-enforcement, and may even be inhibiting pro-competitive behaviour. However, we do not hold this view, given the harms of self-preferencing behaviour we have previously outlined. There are inherent problems caused by self-preferencing behaviours that should be addressed through competition law or other legislation.[70]

Specifically, we are of the view that changes are needed to the abuse of dominance provisions to adequately address anti-competitive self-preferencing, as well as other abuses of dominance. Specifically, changes to the substantive test used to evaluate anti-competitive conduct are needed.

At present, to launch a successful case the Commissioner must show that the conduct in question has generated specific anticompetitive effects in the market. The typical effects considered are namely price, quality, and innovation, as implied by the purpose statement of the Act. This approach to assessing anti-competitive conduct has been called a "consequentialist" approach, and is sometimes also called a "rule of reason" test, lifting from language in US jurisprudence.[71]

In contrast, the approach for evaluating anti-competitive conduct in other jurisdictions, like the EU, is more deontological.[72] That is, anti-competitive behaviours are identified through the character of the behaviour itself rather than its measured outcome. Some in Canada and elsewhere may refer to substantive tests based on this logic as *per se* tests, and the criminal provisions of the Act follow this logic.

The announcements made by the EU and the Bureau with respect to their investigations of Google illustrate the differences in the consequentialist and deontological approaches. In the EC's announcement on fines, it states that Google has been found to violate EU antitrust rules because the behaviour of self-preferencing "stifl[ed] competition in comparison shopping markets". By systematically giving prominent placement to its own comparison shopping service and demoting rival comparison shopping services in its search results, consumers were more likely to click on links to its service over links to Google's competitors. The EC's press release goes on to state,

> *"[e]ven on a desktop, the ten highest-ranking generic search results on page 1 together generally receive approximately 95% of all clicks on generic search results (with the top result receiving about 35% of all the clicks). The first result on page 2 of Google's generic search results receives only about 1% of all clicks. This cannot just be*

[70] Furthermore, given the reality that enforcement happens in a world of imperfect information, it is also very possible that the outcome of the Canadian investigation is an example of Type II error in enforcement.
[71] Jedlickova, Beyond the Economic Approach: Why Pluralism is Important in Competition Law (2018) *The University of Queensland Journal*.
[72] Jedlickova, Beyond the Economic Approach: Why Pluralism is Important in Competition Law (2018) *The University of Queensland Journal*.

explained by the fact that the first result is more relevant, because evidence also shows that moving the first result to the third rank leads to a reduction in the number of clicks by about 50%. The effects on mobile devices are even more pronounced given the much smaller screen size."

The self-preferencing behaviour of Google was found to be anti-competitive because by preferencing its own service in the search results, Google was giving its own service a "significant advantage" over competitors, thus stifling competition on its platform. It is the behaviour of self-preferencing itself that was deemed anti-competitive.

Like the EC, the Competition Bureau found that "Google often displays its services in prominent places" on its main search website. In its investigation, the Bureau explored whether this practice undermined the incentive for rivals to compete with Google or reduced "product quality, choice, or innovation." Despite establishing that the self-preferencing behaviour was taking place, the Bureau did not find sufficient direct evidence that the behaviour led to higher prices, less variety, or stifled innovation. Google's self-preferencing conduct was not found to be anti-competitive because the Commissioner was unable to find evidence that the conduct led to distinct harms (like higher prices, or less variety or innovation). The conduct was evaluated on its effects, rather than on the specifics of the conduct itself.

Advocates for a consequentialist approach to evaluating anti-competitive conduct may argue that the Canadian approach is superior because it is purportedly more sophisticated from an economic theory perspective. It requires investigating officers to undertake an in-depth economic analysis of the conduct to determine whether, on a balance of probabilities, the conduct has led to specific harms. However, from a broader policy perspective, there are several limitations with this style of substantive test.

First, to establish an abuse of dominance under a consequentialist substantive test, far more evidence is required. Not only must the Commissioner establish that the conduct has taken place (setting aside potentially valid business justifications for the conduct), but he also must establish that the conduct leads to a reduction in price, quality, selection, or innovation. Under a deontological test, the Commissioner may not be required to show the effects of the conduct to establish an abuse of dominance. The extra step needed to meet a consequentialist substantive test means that more analysis and data is needed to construct a compelling case. There is the possibility that lack of data may prevent enforcement from identifying what may otherwise be anti-competitive conduct.

Second, because the consequentialist approach requires an in-depth analysis to identify and in some instances quantify the competitive harm of a behaviour, it may be a less predictable form of enforcement. When anti-competitive behaviours are more codified, like under an deontological approach, it may reduce the complexity of cases, leading to greater certainty.

Furthermore, particularly in cases where the Commissioner is assessing whether certain conduct constitutes a prevention of competition, it is questionable whether even the most sophisticated of economic methods will ever be able to accurately determine the effects of certain conduct. Markets and economies are dynamic and there are a multitude of variables, known or unknown, that would need to be considered to accurately assess the impact of conduct over time. Not only may consequentialist approaches be less predictable, but they

may not even be feasible or realistic in some cases.[73] In this way, a more deontologically oriented substantive test may be better suited to proactively address competition concerns.

Ultimately, we argue that a deontological substantive test is not unsophisticated from an economic perspective. Rather, it is indicative of a different understanding of competition law that views clear rules of conduct as foundational to a well-functioning and fair economy.[74]

Furthermore, moving away from the consequentialist substantive test we have today need not lead to over-enforcement of the law, as some critics may claim. Over- and under-enforcement are legitimate problems of competition law. The concern as it is described in the antitrust literature, most notably US Justice Easterbrook's seminal "error cost" argument, is that over-enforcement is more costly in a general sense than under-enforcement. Thus, judicial decision making should be calibrated to avoid over-enforcement. [75]

The idea is often described as Type I and Type II error. Type I error refers to over-enforcement, where the judiciary prohibits business conduct that is benign or even beneficial. Type II error occurs when the judiciary fails to identify or address anti-competitive conduct (under-enforcement). Competition law should seek to minimise Type I error, while Type II error is argued to be permissible.

A core assumption of the argument is that monopoly (and market power more generally) is not durable in the long-run. Even if anti-competitive behaviour is permitted, over time markets will naturally self-correct through the inherent market forces of competitive rivalry. The process may take time, but market power will erode.[76] The argument has parallels to Schumpeter's notion of creative destruction and the idea of "dynamic competition" evoked at times in the Canadian context. Indeed, drawing from Shumpeter, some in Canada have argued that a certain degree of market power could be beneficial. Incentivised by the excess profits made by firms that hold market power, competitors may create innovations in an attempt to capture those profits, benefiting society at large.[77]

Easterbrook's assumption is questionable for a few reasons. First, even at the time Easterbrook put forward his analysis, his stance on the natural competitiveness of markets was somewhat extreme given the state of economic theory at the time (although he was not

[73] Jedlickova, Beyond the Economic Approach: Why Pluralism is Important in Competition Law (2018) *The University of Queensland Journal*.
[74] Jedlickova, above, summarizing the work of Laura Guttuso, discusses how deontological approaches to competition law are anchored in the Ordoliberal tradition of economic thought. We do not provide an overview of Ordoliberalism here, but her paper and others cited here provide essential background. For other explanations of the Ordoliberal tradition, see:
Drexl, The European Economic Constitution and Its Relevance to the Ordo-Liberal Model (2011) 4 *Revue Internationale du Droit Économique*; Pavlos Roufos, Ordoliberalism Out of Order? The Fragile Constitutionality of Greek Austerity (Part One) (May 2020) *Legal Form*.
[75] Easterbrook, Limits of Antitrust (1984) 64:1 *Texas Law Review*; Hovenkamp, Antitrust Error Costs (2021) U of Penn, Inst for Law & Econ Research Paper No. 21-32.
[76] Easterbrook, Limits of Antitrust (1984) 64:1 *Texas Law Review.*
[77] See for example, Chaisson & Johnston, Canada's (In)efficiency Defence: Why Section 96 Does More Harm than Good for Economic Efficiency and Innovation (2019) *Canadian Competition Law Review*.

alone in his view).[78] Second, even if markets were naturally more competitive over three decades ago, we likely cannot make the same claim today. While we have limited data on the state of competition and monopoly in Canada, the information we do have suggests that industries are becoming increasingly concentrated and trending towards monopoly.[79] Lastly, even if markets are naturally self-correcting, we should question whether long-term concentrations of market power are acceptable from an economic fairness perspective.

By proposing that Canada contemplate a more deontological approach to substantive tests, we are also inviting policy makers to explore a reorientation of how we think about competition. Perhaps competition is not the natural state, continuously self-reinforcing and self-correcting. Rather, it may be that competition is a fragile state that needs to be protected with clear and effective competition laws. A review of the innovation literature is outside the scope of this paper, but we believe it is worth questioning whether the Schumpeterian dynamics assumed by those that believe over-enforcement is more dangerous than under-enforcement actually take place in markets.

Prescribing the ideal substantive test for abuses of dominance, or other civil aspects of the Act, is outside the scope of this paper. In our view, the optimal substantive test depends on the purpose of the Act, as established by the purpose statement. It also depends on our understanding of the legitimate and relative dangers of under- or over-enforcement. **Policy makers will need to contemplate whether it is more acceptable to have a more consequentialist substantive test that may miss some anti-competitive conduct or have a more deontological test that may prevent behaviours that are benign (or potentially socially beneficial)**. The relative risks of these two approaches depend, in turn, on how we understand the nature of competition as an ongoing social dynamic.

Alternatives to abuse of dominance

Beyond competition law, there are a few other policy interventions that could contribute to an investigation into self-preferencing. Given the mandate to inform government and business approaches to data-driven issues and oversee new regulations for large digital companies, the yet-to-be-announced Data Commissioner may be concerned with the activity of self-preferencing and associated implications for independent businesses seeking to access markets as third-party sellers.[80]

Other interpretations of this activity may consider self-preferencing to be a form of **misleading advertising**.[81] From the Competition Bureau's website:

> "*The misleading advertising and labelling provisions enforced by the Competition Bureau prohibit making any deceptive representations for* ***the purpose of***

[78] Hovenkamp, Antitrust Error Costs (2021) U of Penn, Inst for Law & Econ Research Paper No. 21-32.
[79] Bawania & Larkin, Are Industries Becoming More Concentrated? The Canadian Perspective (2019).
[80] Budget 2021.
[81] Misleading advertising and labelling, *Competition Bureau*.

> ***promoting a product*** *or a business interest, and encourage the* ***provision of sufficient information*** *to allow consumers to make informed choices*."

It could be argued that self-preferencing a private-label brand on an online marketplace is misleading as insufficient information is directly provided to the consumer to inform their choice (i.e. the product is presented as being a different brand than the marketplace). Consumers expect that the results provided from searching an online marketplace are those that match the query entered, and have not been distorted to push the market's own products. In other words, one theory of harm that would apply equally to supermarkets or Google or Amazon could be in this realm of **deceptive marketing**.

Under this interpretation, adding sufficient disclosure, such as text that says something like "featured from our brands," could be a satisfying remedy to add more transparency to the digitally-driven advertising practice. Citizens can use a form[82] to notify the Competition Bureau if they believe that a company or an individual has contravened the Competition Act. It is unknown to us whether a case of self-preferencing has ever been examined by the Bureau through this form.

Other legislators are considering whether and how to respond to the activity of self-preferencing more directly.

A proposed bill in the US that would prohibit dominant online platforms from favouring their own products or services.[83] A recently-proposed piece of legislation in the US, the American Choice and Innovation Online Act (HR 3816)[84] proposes to inherently define self-preferencing as an anti-competitive activity. It would ban large platforms like Amazon or Google from promoting other services or products that the platforms themselves provide when that offering would compete with another company using the platform. In the EU, the recently-announced Digital Markets Act bans self-preferencing in search results. In the case of the DMA, any type of self-preferencing is outlawed.

The Japanese Digital Platforms report[85] considered digital platforms as **essential facilities** to which special duties should attach. We discuss the concept and opportunity of essential facilities further in the IoT case studies.

The Furman Report[86] recommends subjecting companies with strategic market statuses to **a code of competitive conduct.** Such a code could regulate instances of platforms giving preferential treatment to their own upstream or downstream products and services

Yet another policy proposal involves **requiring the adoption of non-discriminatory rankings** (suggested by the competition authorities of Belguim, Luxembourg and the Netherlands, which would be imposed ex-ante).

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[82] Complaint form, *Competition Bureau*.
[83] Klobuchar, Grassley, Colleagues to Introduce Bipartisan Legislation to Rein in Big Tech.
[84] H.R.3816 - American Choice and Innovation Online Act.
[85] Act on Improving Transparency and Fairness of Digital Platforms (TFDPA).
[86] Unlocking Digital Competition (March 2019), *Report of the Digital Competition Expert Panel* (UK).

The Stigler Report[87] recommended **a new regulator** that would be responsible, inter alia, for imposing non-discrimination requirements and interoperability requirements on companies.

Amid these policy proposals, additional potential policy work that is relevant to self-preferencing is the broader prospect of regulating or creating better rules for algorithms. Empowering citizens with **algorithmic choice** would allow people to reject or turn "off" self-preferencing in an online marketplace. Related, the recently-proposed legislation Filter Bubble Transparency Act, "a bill to require that internet platforms give users the option to engage with a platform without being manipulated by algorithms driven by user-specific data," would enable end users on social media to reject a recommender system outright.[88]

We further note that digital-specific legislation (such as the Digital Markets Act) may be a potential avenue for addressing self-preferencing.

Further discussion regarding the potential harms of self-preferencing is warranted in the Canadian context.

3. "Copycatting"

We use the placeholder of "copycatting" to refer to the ability of firms that operate marketplaces, such as platforms, to derive insights based on customer data – both directly volunteered and also "exhaust" that may be derived (e.g. purchase history, wish list, etc.) – in order to identify products in the marketplace that the firm can replicate. While copycatting is not a digital-only activity - certainly, emitting popular gods through knock-offs has long been a feature of the economy - it can occur more quickly, with greater frequency and precision in a digital context.

In the context of digital marketplaces and platforms, copycatting behaviours can often go hand-in-hand with the gatekeeping and self-preferencing behaviours discussed in the previous sections, and may compound one another. Upon replicating a popular product, a marketplace operator may then engage in gatekeeping to exclude the original seller of the product or service from this market. This act of replication followed by exclusion was recently illuminated in a *Fast Company* article, "Some companies rip off products, target imitates entire brands."[89] The marketplace operator may also copy a product and then engage in self-preferencing by placing this product as a top search result within its marketplace, or otherwise modifying information presented on the platform to give this product greater visibility over that of other competitors.

Our contention is neither that copycatting itself is a novel form of abuse nor that the evidentiary burden to prove these harms is inadequate as illustrated through rampant copycatting. Rather, we believe that the intensely data-driven nature of the activity, coupled with gatekeeping and self-preferencing potential, is advanced and must be discussed. To our knowledge, there have

[87] Stigler Committee on Digital Platforms: Final Report (September 2019), *Stigler Center for the Study of the Economy and the State*.
[88] S.2763 - Filter Bubble Transparency Act.
[89] Some companies rip off products. Target imitates entire brands (October 2021), *Fast Company*.

not been any cases or investigations into copycatting in Canada, but the issue is of growing concern in other jurisdictions.

With that said, the Bureau is currently investigating Amazon. Copycatting is not the focus of the investigation, based on publicly available information. However, perhaps through this investigation the Bureau has heard confidential concerns from merchants that the prospect of being replicated by Amazon or by one of Amazon's more than 100 private label brands has deterred or concerned a Canadian merchant from participating in their online marketplace.[90]

Copycatting and data

What makes copycatting unique, and more problematic, in the digital context is the role of data in helping firms identify popular products or features to replicate. One of the most vivid examples of how firms use data to facilitate copycatting is Facebook's purchase of Onavo in 2013.

From popular media coverage, it is well-documented that Facebook has copied popular competitors many times.[91] When it purchased Onavo in 2013, a "user surveillance company", the platform enabled Facebook to learn what people were doing online when they were not interacting with a Facebook product.[92] Facebook's use of Onavo was noted by some as hurting innovation "by creating a strong disincentive for investors and start-ups to put money and effort into creating products Facebook might copy".[93] Australia's Competition and Consumer Commission is currenting suing Facebook over its use of the app, claiming Facebook misled users by stating that users' data was kept private when it was actually being used to 'spy' on competitors.[94]

Copycatting, data, and platforms - compounding effects

When platforms, particularly those that operate marketplaces, use data to copy firms that operate in the marketplace, competitive harms can be compounded. Not only can market operators that also sell products in these markets use data to mimic competitors in the marketplace, but by virtue of being market operators they can also give their products an artificial advantage by engaging in gatekeeping and self-preferencing behaviours. What is more, copycatting may be easier to carry out in the platform context given that the market operator can set rules in the market that facilitate copycatting. For example, third-party sellers may have to agree to exploitative Terms and Conditions that do not sufficiently protect them from replication and exclusion, or if not exclusion, price discipline.[95] To illustrate copycatting in the platform context, we draw on examples from Amazon and Apple.

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[90] All You Need to Know About Amazon's Private Label Brands (July 2021) *Pattern*.
[91] Thomas Smolders, 10 times Facebook copied a competitor (May 2020) *Medium*.
[92] Federal Trade Commission vs. Facebook Inc., Case No.: 1:20-cv-03590.
[93] Facebook's willingness to copy rivals' apps seen as hurting innovation (April 2017) *Washington Post*.
[94] Australia sues Facebook over its use of Onavo to snoop (December 2020) *TechCrunch*.
[95] How to Save Democracy From Technology (November 2020) *Foreign Affairs*.

In 2020 the EC stated that Amazon breached antitrust laws by making use of data it collects from third-party vendors to inform its marketing strategy for its private-label products. The Commission stated that the use of such data "allows Amazon to avoid the normal risks of retail competition and to leverage its dominance in the market for the provision of marketplace services". The EC also launched an investigation into Amazon's self-preferencing of its own products, highlighting again the compounding and complementary nature of copycatting and self-preferencing.[96]

In our analysis of gatekeeping, we alluded to how Apple engaged in both copycatting and gatekeeping behaviours. Specifically, we discussed how Apple mimicked "Tile," which is a consumer electronics company that produces tracking devices that users attach to their belongings, when Apple launched its AirTags product in the spring of 2021.[97] When Apple launched AirTags, it later made a change to the Apple operating system that made Tile less compatible.

The AirTags example demonstrates the implications of the combination of both copycatting and gatekeeping. Through the App Store marketplace, Apple had direct access to information that demonstrated the popularity of Tile. This data enabled Apple to replicate the product before exerting its dominance through its OS update; restricting Tile's access to the "Find My" network. In terms of the implications of the addition of Apple's Air Tags to the market, revenue for Tile was up, though the CEO has been vocal[98] about the unfairness of Apple's decision.[99]

The harms, and benefits, of copycatting

In some instances, copycatting can be pro-competitive. The classic example of pro-competitive copycatting is with private-label products in the grocery store sector. In certain contexts, these products can enhance competitive rivalry in a market, leading to more variety, lower prices, and potentially greater product innovation.

On the surface, data could arguably enhance the competitive benefits of copycatting. With greater insight into the preferences of consumers, the copying firm would be able to introduce products or innovations that better meet the needs of consumers, one-upping competitors in the market and providing greater value to consumers. However, when firms have exclusive access to this data, like in the case of online market platforms, copycatting could be a strategy to undermine competition. Furthermore, in these situations, copycatting may be compounded with other behaviours such as gatekeeping and self-preferencing as a means to dominate markets and undermine, if not eradicate, competition.

The distinction between copycatting and competition that generates meaningful social benefits lies in the accessibility of the relevant data to other firms and the strategic intent of the copying firm. Consider, for example, an online marketplace operator that collects data on the sale of

[96] Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices.
[97] AirTags: Apple's Item Trackers - Everything We Know.
[98] "Prober insists Apple and Samsung took advantage of their first-party platforms to give themselves something nobody else would have access to."
[99] AirTags Are the Best Thing to Happen to Tile (November 2021) *Wired*.

products on its platform. The operator can use this data to identify high-volume products that it could also offer as a private label product. All else being equal, if the platform launches a product that competes with the incumbent product, providing now two alternatives in the market, then the use of data to create and launch this product could be seen as being pro-competitive.

However, as a platform operator, all else is not equal. For starters, the platform itself has an advantage over the incumbent by its access to platform data that the incumbent firm does not have. By having more information, the platform operator has greater insight into the market in which it now competes. It may use this insight to out-compete the incumbent. The strong competition introduced by the platform operator may be beneficial to consumers in the short-run, but in the long run we could expect the operator to become dominant in, or even come to monopolize, the market.

In this hypothetical example, the platform's dominance is conditional on it having exclusive access to valuable data. Unless there existed some technology that would completely revolutionize or make obsolete the product market in which the platform operator is now dominant, it is not obvious how a new entrant could effectively challenge the dominance of the platform operator since it likely cannot access this critical data.[100] This example could also be generalized to include firms that do not operate marketplaces, but still have access to exclusive data that gives them a dominant position in the market and ultimately insulates them from competitive pressures (like Facebook's use of Onavo).

Within a market, firms may compete on several different vectors, such as proprietary technologies and intellectual property, supply-chain advantages, and branding to name a few. Firms may have advantages in these areas, leading them to become more dominant in the market. The power and relevance of many of these advantages, like intellectual property or branding, depends on the degree to which consumers (or purchasers more generally) value them. Proprietary data can provide firms with unparalleled insight into the needs and desires of consumers as it relates to several vectors of competition.[101] Likewise, data that gives firms the exclusive ability to enhance plant operations and efficiency can also result in dominance that ultimately undermines competition. In this way, data itself is not a vector on which firms directly compete. Rather, proprietary data can give firms insight into different vectors of competition, providing them with competitive advantages that are relevant to the market.

Again, while there may be benefits of this competition in the short-run, in the long run these privileged firms may come to dominate markets because they have exclusive and powerful insight that their competitors are unable to access. Access to this data may be the result of

[100] It is also worth considering that if both the operator and the incumbent both had access to the same data, perhaps the competitive rivalry between them would carry on for longer, allowing for greater innovation within the market that ultimately benefits consumers.

[101] It may be the case that the copying firm does not have sufficient data to gain insight into every vector on which firms in the market compete. For example, perhaps the data provides insight into desirable product features, but not product branding. In this case, the power the data provides to the copying firm is limited, thus the copying firm would have less dominance in the market. However, in many of the popular examples of copycatting we examined, which relate to large digital firms, firms are able to acquire and leverage powerful data that can be used to provide advantages that may ultimately undermine competition. While not all instances of copycatting with data are harmful to competition, as we have stated before, some instances can be harmful.

the firm's dominance in another sphere, as may be the case with online marketplace operators. Supplementary data that further enhances the firm's position may also be purchased through data brokers.

Furthermore, the dangers of data and copying may be exacerbated in the context of digital platforms like marketplaces. If the copying firm also operates the marketplace in which it competes, it may also engage in gatekeeping or self-preferencing behaviours to gain an artificial advantage in the market. Through its privileged role as operator of the platform, the copy firm could essentially *take* the market from the incumbent firm, rather than enter the market and directly compete with the incumbent in ways that are generally seen as socially beneficial, like on price or innovation. Market acquisition in this way may not happen immediately, but it is likely less socially beneficial than direct, long-term market competition.

Lastly, we want to emphasise that while the competitive impacts of copycatting may be mixed (dependent in large part on the copying firm's access to exclusive data) it is important not to conflate the potential benefits of copying with other harmful behaviours like self-preferencing and gaekeeping. These three behaviours are closely related to each other; copying is a precondition for self-preferencing, and a root mechanism for each of these three classes of behaviours is market operators acting as competitors in the markets they regulate. Despite their similarities, gatekeeping, self-preferencing, and copycatting are not the same, as we have detailed. It could be possible to have situations where firms copy the products of other firms, enhancing competition, while engaging in self-preferencing or gatekeeping behaviours that exclude competitors and undermine competition. Furthermore, even in instances where copycatting creates positive market outcomes in the short-term, in the long-run competition may be undermined as the copying firm may be empowered with exclusive data, giving it a competitive advantage that cannot be effectively rivalled.

"Copycatting" and the Act

While other jurisdictions have investigated platforms for using their data to enter product markets, and Canada has also launched an investigation into Amazon, we believe it is unlikely that the Commissioner would be able to effectively address the issue of copycatting within the current abuse of dominance provisions of the Act. While moves to exclude the original product after launching its own - whether by making it obsolete or self-preferencing - could be interpreted as a 'classic' abuse of dominance, the act of copying is unlikely to fall under the same provision.

Copying is not an inherently anti-competitive act. The core issue behind copycatting is the use of exclusive data held by a competitor to dominant markets. Under the current Canadian framework, refusal to give access to some data may be seen as an abuse of dominance, in very limited situations (such as in the 2016 case of TREB v Commissioner of Competition, where the competitors were also agents and members of the Real Estate Board). Section 75 of the Act (refusal to deal) may also be relevant in select circumstances. However, there is nothing that specifically points to refusal to give access to data as being recognized and investigated as an abuse of dominance.[102]

[102] See Competition Bureau, Abuse of Dominance Enforcement Guidelines, at example 6, where the example described contemplates an entrant that needs to access essential data. The anticompetitive

Another important aspect of copycatting is that its negative effects accumulate over time, and may not be immediate. The Act and associated jurisprudence does not provide the Commissioner or the Tribunal with the conceptual tools to assess and proactively address the likely long-run impacts of using data to copycat competitors or otherwise further dominate markets.

As discussed before, behaviours are generally deemed anti-competitive under the various civil provisions of the Act if they are likely to create anti-competitive effects (a consequentialist approach). Simply using one's dominant position to exclude a competitor is generally not seen as anti-competitive unless the Commissioner can show that this behaviour has led to higher prices, lower quality, or less innovation.

Furthermore, in instances where the firms have ceased the problematic conduct, the Bureau can only investigate within three years after the conduct has ended (according to section 79). Since the conduct needs to have occurred within the last three years in order to be challenged by the Commissioner, It may be impossible for the Commissioner to take a case based on the long-term effects of the conduct within the market. Even if he could pursue conduct that happened more than three years ago, it may be difficult, if not impossible, to collect sufficient data to show on a balance of probabilities that the conduct resulted in specific economic harms, given the complex economic analyses that would need to be completed.

Reforming the substantive test for anti-competitive conduct within the abuse of dominance provisions so that cases are less reliant on effects (consequentialist) and are more focused on behaviours (deontological) could be a solution. Reforming the relevant subsection of Section 79 to remove the three-year time limit the Commissioner has for investigating abuses of dominance could also be beneficial.

"Copycatting" beyond the Competition Act

One relevant policy lever for addressing harmful copycatting is **intellectual property** (IP). While it has been noted that competition law can conflict with the goals of intellectual property law, IP is a vehicle to protect the design of products or services that may be vulnerable to replication online.[103] With digital products, this could be an instance of reverse engineering or copying the intent of a product rather than a direct intellectual property violation. We note that there are provisions against self-preferencing in the Digital Markets Act and that the UK is reinventing their digital policy post-Brexit. At the very least, Canada's competition legislation should be in conversation with these new laws from peers. Canadian consumers and

conduct contemplated in this example consists of the contracts that the dominant firm enters into with other firms that provide sources of input data. This example is significantly different from what we have contemplated in this case study. It is unlikely that the current Canadian framework can address the competition issues posed by companies that sell Voice Assistant or Connected Car manufacturers, where the problems arise from the built-in data collection and control of these very manufacturers that have strong incentives to consolidate and no need to purchase data from other input sources.

[103] How Competition Law Intersects with Intellectual Property and What You Should Know (October 2016) *Oyen Wiggs*.

merchants deserve to have a clear understanding of the law's interpretation of these activities and we cannot simply hypothesize.

From a market structure perspective, one mechanism or approach that avoids these risks is simply having merchants sell **directly to consumers (DTC)**, as facilitated by Shopify and firms like it. This means that firms can forgo a digital marketplace. However, this may not be a viable option for many firms that require access to a particular platform in order to advertise to and "reach" a desired audience.

If a platform is launching a similar product (either in the name of the firm or as a private label) as a result of taking advantage of data-driven insights that only it has, this may require **additional legislation** that goes beyond pure antitrust law if it is a harmful practice.

A third, and related, policy mechanism that could be meaningful is related to **privacy policies and consent.** Privacy law generally requires full and informed consent from individuals, it does not apply in this business to business context. However, it may be the case that a "price" or "cost" of participating on an online marketplace is the ability of the marketplace to derive or extract insights from another [independent] firm's product. Leveraging privacy obligations to hide, justify, or enact anti-competitive practices is problematic. Indeed, Terms of Service that enshrine a vulnerability to replication and exclusion from a digital marketplace may be an abuse of dominance. It may be that mandating the conditions that enable or legitimize copycatting are **unfair trading conditions**.

4. Labour market monopsony

Across the globe, competition issues in labour markets are generally under-investigated by competition authorities. To our knowledge, there is no litigated case in the world that considers the role of data in labour market monopsony. Therefore, for this section we do not present specific cases of potentially harmful conduct. Rather, we move directly to discussing the harms related to labour market monopsony and, when possible, illustrate with examples.

Despite relatively little attention from competition authorities, anti-competitive conduct in labour markets can impose significant harms on workers. Firms can wield labour-market monopsony power to suppress wages and other compensation (like benefits, time off, etc.), and reduce overall work quality and stability. Traditionally, cases taken by authorities (and private litigants) have pointed to wage-fixing agreements, and non-compete and non-poaching agreements as strategies used by firms to exert monopsony power. Mergers can also enhance monopsony power by reducing competition. In the US some scholars have also argued that digital platforms like Uber are, in essence, a price fixing scheme among contract drivers.

While there are some specific behaviours that firms engage in that undermine competition in labour markets and hurt workers, we want to highlight that monopsony power in labour markets is also inherently problematic. Policy makers should not only be concerned with behaviours that seek to enhance monopsony power. We are of the view that policy makers should also aim to prevent - and even reduce - monopsony power itself, regardless of whether firms are engaging in specific anti-competitive behaviours that undermine competition. Labour markets are different from other markets because they involve people and their labour, not

objects or abstract services. People are entitled to different competitive conditions than goods or services by virtue of their humanity and these conditions should ensure just working conditions and compensation while also meeting the needs of employers.

In this section, we focus less on specific firm behaviours that protect and abuse monopsony power in labour markets and more on trends in data use and technology that are enhancing monopsony power.

Harms: data, algorithmic management, and platforms

In labour markets, firms are able to express monopsony power in new ways through the use of data. Algorithmic management represents a major intersection between data and monopsony power, and we view it as a novel manifestation of labour market monopsony facilitated by data. While management through algorithms is purported to enhance operational efficiency, research undertaken by journalists and others shows how these systems can unfairly undermine work quality and workers' dignity.[104] Within the context of a monopsonistic labour market, workers have few other options for employment, and may be forced to endure sub-standard and sometimes exploitative employment under the management of algorithms powered by data.[105]

Not only is data used in new ways within labour markets, sometimes to the detriment of workers, but the rise of gig work intermediated by digital platforms (like Uber, Instacart, Skip the Dishes) means that employers are better positioned to collect data on worker activities. Furthermore, the possession of data may also bestow firms with greater monopsony power. For example, in his book *Arriving Today*, Christopher Mim describes data and information asymmetries as a mechanism to achieve monopsony and observed that, "*a number of shipping platforms allow shippers to see what rates their competitors are paying, which leads to a form of "monopsony" in which the buyers of truckers' services hold the balance of power and truckers have none.*"[106]

Digital platforms themselves, particularly two-sided markets, raise issues related to shifting monopsony power that disadvantages workers. These markets may be predisposed to greater degrees of monopsony power through the platform operator's privileged role in these markets as a regulator and collector of user data. For example, reports suggest that these firms can reduce compensation to contractors without justification.[107] As the regulator of the market, the platform operator can set rules or impose (dis)incentives to influence workers (and

[104] Min Kyong Lee et al, Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers (2015) Proceedings of CHI '5; Jeroen Meijerink et al, Having their cake and eating it too? Online labor platforms and human resource management as a case of institutional complexity (2020) *International Journal of Human Resource Management*.
[105] Delivery Workers, Trapped in the System; Management by Algorithm: Amazon's Tracking System Can Allegedly Fire Workers Automatically; Amazon's New Algorithm Will Set Workers' Schedules According to Muscle Use, Fired by Bot at Amazon: 'It's You Against the Machine'.
[106] Christopher Mims, ARRIVING TODAY: From Factory to Front Door—Why Everything Has Changed About How and What We Buy (2021).
[107] CBC Marketplace investigation into Instacart throttling wages has yet to prompt a policy response from the Competition Bureau or labour officials, Uber And Lyft Take A Lot More From Drivers Than They Say.

consumers). Disincentives against "multi-homing" – where workers participate on multiple, competing platforms – increases switching costs for workers and thus increases the platform's monopsony power. Carrot-and-stick incentives based on data collected from the platform, like rating systems, bonuses, and the threat of being punished by management algorithms (for not taking certain jobs, for example) compel workers to log on and take jobs to which they may not otherwise consent.[108] The ability to impose these incentives provides platform operators with greater monopsony power that they can then leverage to extract economic surplus from workers and consumers.

Some scholars have also argued that some platforms are, in essence, a price-fixing scheme between contract workers that is facilitated by the platform, and that these platforms should be prosecuted under competition law in the US and EU.[109] The profound ability of platforms in particular to create and exercise monopsony power, particularly as market regulators, raises the question of whether these firms should have a greater responsibility under the law to "ensure that competition on their platforms is fair, unbiased, and pro-users".[110]

Solutions within the Competition Act

The increasing use of worker data by firms and the rising prevalence of worker platforms may be enhancing monopsony power and enabling firms to express that monopsony power in new ways. However, most of these trends do not necessarily illustrate new, distinct behaviours that are anti-competitive, strictly speaking. Thus, competition law, as it is currently conceptualized, may have limited ability to address the specific problems of labour market monopsony driven by data and platforms.

However, one change parliament could make to the Act that would make it better able to address labour-market monopsony behaviours in general is to **reform the provisions related to criminal conspiracies**. Section 45 of the Act does not recognize conspiracies to fix wages as a criminal offence. Rather, investigations into collusive agreements to fix wages would need to be taken under civil provisions of the Act, which impose a legal test of anti-competitiveness that is more difficult to meet. In his submission, Iacobucci advocates for reforming Section 45 so that it covers conspiracies to fix the price of inputs, and we agree with this call.[111]

Changing section 45 would not only enhance the fairness of labour markets overall, but it may make it possible for the Commissioner to pursue cases against digital platforms on the basis that they are conspiracies to fix the compensation of contractors operating on the platform, as some scholars have proposed.

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[108] Alex Rosenblat, Uberland: How Algorithms Are Rewriting the Rules of Work (2018); Doorn & Chen, Odds stacked against workers: datafied gamification on Chinese and American food delivery platforms (2021) *Socio-Economic Review*.
[109] Updating Antitrust and Competition Policy: Labor Issues (May 2021) Yale University: Thurman Arnold Project; Monopsony and the Business Model of Gig Economy Platforms – Note by Marshall Steinbaum; Bekisz, When Does Algorithmic Pricing Result In an Intra-Platform Anti Competitive Agreement or Concerted Practice? The Case of Uber In the Framework of EU Competition Law (2021) *Journal of European Competition Law & Practice*.
[110] Cremer et al, Competition Policy for the Digital Era (2019) *European Commission*.
[111] Iacobuci, Ed. Examining the Canadian Competition Act in the Digital Era (2021).

Another immediate change that could be made to address labour market monopsony issues more generally is for the Commissioner to **assess the potential labour market impacts of mergers**. Under the current legislation the Commissioner could proactively prevent accumulations of monopsony power by investigating whether reviewable mergers are likely to result in a lessening or prevention of competition in labour markets. However, to date there is no evidence that the Bureau has undertaken a serious investigation of a merger's impact on labour market competition. This shortcoming may be the result of lack of expertise in labour market competition, which likely reflects a broader deficit in the competition policy law community globally as authorities start to take notice of these issues.

The abuse of dominance provisions and other civil (non-merger) provisions of the Act are likely not useful in addressing the problems raised by monopsony power that we have previously outlined. The shortcoming of these provisions lies in the fact that they are intended to address specific behaviours that undermine competition (for example, in the case of abuse of dominance, the behaviours must be exclusionary, predatory, or disciplinary). Poor working conditions caused by algorithmic management, unpredictable compensation, and other characteristics of data-driven platform work are not anti-competitive behaviours in the strictest sense. They are symptoms, not causes, of a lack of fair competition in the market. Competition law, as it is currently conceptualized and designed, cannot directly address these harms, just as competition law is not responsible for regulating prices in a given market.

Competition law has a role to play in preventing accumulations of monopsony power that lead to the abuse of workers, both in data-driven markets and beyond. However, other policy interventions may be better suited to address the specific harms arising from data and platforms within labour markets.

Solutions beyond the Act

While monopsony in labour markets may be deemed an algorithmic abuse of dominance under the Act, perhaps some of the associated harms could be countered with greater **algorithmic transparency**. If a technology company's algorithms were auditable, policymakers would have a better understanding of their functionality and could better counter anti-competitive behaviour.[112] In the public sectors, **algorithm registers** - an overview of the artificial intelligence systems and algorithms used by a government - are becoming more popular in order to increase transparency. Perhaps businesses should also have algorithm registers.

A more productive avenue for addressing abuses of dominance, powered by data or otherwise, within labour markets may be to establish **separate, complementary competition legislation targeted specifically at employers**. This legislation may be akin to the digital platform laws put forward in the EU, Germany, the US, and elsewhere, but with a specific focus on abuses that happen in employer-worker relationships. In a Canadian context, such legislation could be provincial in nature. A provincial competition authority could address issues of provincial significance, focussed on small business and workers with deep expertise in the economies of the region in collaboration with the respective ministry of labour. It would

[112] Brown et al, The algorithm audit: Scoring the algorithms that score us (2021) *Big Data & Society*.

be a strong policy instrument to deal with competition issues that federal legislation is currently silent on.

Similarly, labour policy in general may be better suited to immediately address the harms made possible through monopsony power and the use of data to enhance that power. Solutions include bans on specific behaviours, and also policies that promote and protect unionization. Related, unionization can serve as a countervailing force against the monopsony power held by firms.[113]

5. Algorithmic and "personalized" pricing

Algorithmic pricing has been called an "antitrust hot button,"[114] and is highly relevant to this report given its high reliance on data. In this case study, we discuss two facets of algorithmic pricing: personalized pricing and algorithmic pricing more broadly. Personalized pricing can be understood as a specific form or subtype of algorithmic pricing. While personalized pricing is a form of algorithmic pricing, we have chosen to pay special attention to personalized pricing in this analysis because it has unique implications for consumers that are beyond the concerns raised by algorithmic pricing in general.

We begin this section by discussing personalized pricing and its potential harms and benefits. We then turn to the potential harms of algorithmic pricing and solutions under competition law. We conclude with a discussion of policy solutions outside of competition law that could address the issues raised by algorithmic pricing and personalized pricing more specifically.

Personalized pricing overview

Personalized pricing uses automation (increasingly, artificially intelligent systems) to target users with a price that matches their personal buying threshold. It is distinct from "dynamic" pricing, which looks at the broader market rather than the individual customer. The OECD defines personalized pricing as "the practice whereby companies can use information that is observed, offered voluntarily, inferred or collected about individuals' conduct or characteristics, based on what the business thinks they are willing to pay."[115]

Personalized pricing depends on the collection and processing of consumer data. Effective mechanisms for personalized pricing require three sources of data: volunteered data, observed data, and inferred data. Before the use of big data and AI systems, companies relied mainly on volunteered information and partially on observed information. The introduction of better technologies that can track and identify patterns means that companies are relying more heavily on the third category: inferred data.[116]

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[113] Beyond Antitrust: The Role of Competition Policy in Promoting Inclusive Growth (September 2016) *Remarks at the Searle Center Conference on Antitrust Economics and Competition Policy*.
[114] Algorithmic Pricing: Candidate for the New Competition Tool? (2020) *Global Competition Review*.
[115] OECD, "Personalized Pricing in the Digital Era" (November 2018) Background Note.
[116] While the use of this data sometimes falls under the protection of privacy laws, this is not always the case. The significance of this fact is discussed in "Integrating consumer privacy and competition".

More analysis of the competitive implications of personalized pricing is relevant because this is an increasingly common practice. A survey by Deloitte involving over 500 companies found that, among all retailers that have adopted AI to personalise consumer experience, 40% of them used AI with the specific purpose of tailoring pricing and promotions in real time":[117]

> *"Further evidence of personalised pricing has been uncovered by some journals that identified companies setting personalised prices based on consumer information. A Wall Street Journal investigation in 2012 detected that the retailers Staples and Home Depot, the education technology company Rosetta Stone and the financial company Discover Financial Services have personalised prices based on different consumer characteristics, such as their geolocation, income level, browsing history and proximity to rival's stores, among others (Valentino-DeVries, Singer-Vine and Soltani, 2012)."*

The benefits and harms of personalized pricing

Personalizing pricing is a form of price discrimination. Unlike more familiar forms of price discrimination, personalizing pricing is exceedingly precise, and may be one of the closets real-life examples of prefect (first-degree price) discrimination.

Price discrimination is not nessasarily harmful. In fact, in some ways it can be beneficial to consumers and also enhance the efficiency of markets.[118] Price discrimination can open up markets to tranditinally underserved consumers by offering lower prices to consumers that have a lower willingness to pay (i.e., consumers that would not otherwise be able to afford the product). Serving these consumers expands the output of the market, reduces deadweight loss, and increases allocative efficiency.

A 2018 OECD note on "Personalized Pricing in the Digital Era," notes that, "personalised pricing, like any price discrimination, is typically pro-competitive and often enhances consumer welfare. As compared to more traditional forms of price discrimination, personalised pricing generally has more accentuated effects, having the potential to optimise static efficiency and incentives for innovation."[119]

However, although price discrimination may open up markets to traditionally underserved consumers and may lead to greater allocative efficiency, some consumers may not be better off with price discrimination. With the use of powerful datasets, firms may price discriminate to charge higher prices to consumers that already purchase the product (have a higher willingness to pay), capturing surplus from these consumers. A 2016 paper on Competition Law and Data jointly published by France and Germany raises the concern that, "as a consequence of data-based price discrimination, some consumers would end up paying higher prices for a given good or service but some others would receive better price offers than in the absence of discrimination."

Furthermore, the practice of personalised pricing raises questions of fairness and transparency. Under personalized pricing systems, pricing is murkier and the balance of power

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[117] "Personalized Pricing in the Digital Era" (November 2018) *OECD* at 14; 'Consumer Experience in the Retail Renaissance: How Leading Brands Build a Bedrock with Data' (June 2018) *Deloitte Digital*.
[118] The antitrust implications of pricing algorithms (2021) *Alvarez & Marsal Holdings*.
[119] OECD, Personalised Pricing in the Digital Era (2018) Background note.

between firms, armed with sophisticated datasets, and consumers shifts in favour of firms. In their "note on the future of personalized pricing: case for concern," van der Rest, Sears, Miao & Wang note that the ethical and legal nature of personalized pricing initiate broader discussions about issues such as dishonesty, unfairness, injustice, and misconduct in pricing and revenue management practices.[120] Research done by Haucap, Reinartz, and Wiegand found that when consumers were exposed to different types of differentiated pricing in a large-scale experiment, participants did not like the idea in principle regardless of whether or not they benefited from the initiative.[121]

The fairness and transparency aspects of personalised pricing and other algorithms that target consumers with unprecedented precision are highly relevant as these types of algorithms become more common. One can imagine scenarios where personalized pricing is used to discriminate against unwanted riders in riding-sharing apps. For example, if the app deems an area more dangerous, it may impose a higher price on consumers that have the area set as their home location or as their destination. These algorithms may create or reinforce social inequities that our society is working to address.

Ultimately, there is strong evidence to suggest that firms are increasingly making use of personalized pricing as a way to price discriminate with unprecedented precision. While these forms of price discrimination may expand markets to consumers that may otherwise be priced out and enhance the efficiency of markets, personalized pricing may also lead to higher prices paid by current consumers. It may also undermine transparency and market fairness, and research suggests that consumers may find it generally undesirable.

Price discrimination under the Act

The 2016 paper Competition Law and Data jointly published by France and Germany notes that price discrimination has not been explicitly considered under European Law: "to be considered as either an abuse of dominant position or a vertical restraint, its effects on competition, and not only on consumer welfare, would have to be demonstrated; the absence of any proportionate justification would also have to be ascertained. The situation under national competition law, however, might be different. Provisions governing unilateral conduct may indeed be stricter".[122]

Similarly, it is not clear how the downsides of personalized pricing can be effectively addressed under Canada's competition law, even if revisions to the Act were considered. The problems of price discrimination both generally and specific to personalized and algorithmic pricing may be better addressed through other policy areas, such as consumer protection.

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[120] van der Rest et al, A note on the future of personalized pricing: case for concern (2020) *Journal of Revenue and Pricing Management*.
[121] Reinartz et al, Price Differentiation and Dispersion in Retailing (2018) *Selected Publications of the IFH-Förderer*; When Customers Are — and Aren't — OK with Personalized Prices (2018) *Harvard Business Review*.
[122] Competition Law and Data (May 2016) *Autorite de la Concurrence (France) & Bundeskartellamt (Germany)* at 22.

Harms of pricing algorithms: explicit and tacit collusion

Beyond personalised pricing, pricing algorithms more broadly may also raise competition concerns, specifically with respect to collusion. The first landmark case on pricing algorithms facilitating collusion was the "Poster Cartel" case decided by the US district court of Northern California in 2015. To implement their agreements, the defendant and his co-conspirators adopted specific pricing algorithms for the sale of certain posters with the goal of coordinating changes to their respective prices and wrote computer code that instructed algorithm-based software to set prices in conformity with this agreement.[123]

In the EU, the issue of pricing algorithms was considered by the Court of Justice of the EU in the E-TURAS case. It was determined that 30 travel agencies and E-turas coordinated their behaviour with regard to the discounts for online travel bookings through the E-TURAS system and thereby restricted competition.[124] In 2018 the EU Commission also emphasized that pricing algorithms can also facilitate vertical price fixing, in particular, in maintaining resale prices.[125]

In these cases, algorithms were used to facilitate explicit collusion between conspirators. At core, the conduct is not notably different from traditional collusive arrangements. However, some have pointed out that pricing algorithms may have a role to play in facilitating tacit collusion.[126] In these instances, businesses may not explicitly collude to fix prices or allocate markets, but with familiarity with eachother's pricing behaviours and detailed market information these firms may be able to, in effect, collude without striking a formal agreement to do so.

Pricing algorithms can create favourable conditions for tacit collusion in markets by increasing transparency and the speed at which prices change in a context where firms are optimizing their prices using these sophisticated programs. Through our search, we were unable to identify examples of tacit collusion. Not only are these arrangements not explicit, thus hard to identify, but as we explain in more detail in the next section, competition law is not an effective tool for addressing tacit collusion. Thus, there are no cases from which we can draw.

Explicit and tacit collusion under the Act

In the Canadian context, concerted efforts by firms to collude via pricing algorithms could be illegal under the criminal conspiracy provisions of the Act (section 45). However, when pricing algorithms lead to tacit collusion between competitors, the Commissioner has far fewer tools for addressing the anti-competitive conduct.

The result is a situation where firms jointly set higher prices without direct communication between them, meaning that this behaviour cannot be addressed by the Act's criminal

[123] Former E-Commerce Executive Charged with Price Fixing in the Antitrust Division's First Online Marketplace Prosecution (April 2015) *US Department of Justice*.
[124] Eturas – Any conclusions on platform collusion..? (January 2016) *Kluwer Competition Law Blog*.
[125] Algorithms and Collusion - Note from the European Union (2017) *OECD*.
[126] The antitrust implications of pricing algorithms (2021) *Alvarez & Marsal Holdings*.; Deng, What Do We Know About Algorithmic Tacit Collusion? (2018) *Antitrust*; Algorithms and Collusion - Note from the European Union (2017) *OECD*; ALGORITHMS AND COLLUSION: Competition policy in the digital age (2017) *OECD*.

conspiracy provisions. In fact, there are no provisions within Canada's competition law, or the law of major jurisdictions like the US and EU, that can effectively address tacit collusion.

It is generally understood that prevention is the best solution to tacit collusion. Competition authorities should leverage merger regulation to prevent market concentration, which is a general pre-condition to tacit collusion.[127] Beyond merger control, competition law may not offer many solutions to addressing tacit collusion both in general or related to algorithmic pricing. Other policy interventions may offer better solutions that can invite more transparency to the practice, and potentially offer consumers more agency; such as the ability to opt-out of the practice.

The limits of competition law and alternative policy solutions

Pricing algorithms raise two broad issues for policymakers. The first issue pricing algorithms raise for policy makers relates to personalizing pricing specifically. While personalizing pricing may enhance market efficiency and open up markets to consumers that would otherwise be excluded, these algorithms also raise issues around fairness and transparency. We are of the view that competition law is not an adequate tool for addressing the specific fairness and transparency issues resulting from personalized pricing.

The second major issue, which applies to pricing algorithms more broadly, is **explicit or tacit price collusion**. The Competition Act is equipped to address explicit collusion through its conspiracy provisions. However, tacit collusion is an issue that competition law in general has been unsuccessful at addressing to date. The traditional solution to tacit collusion under competition policy has been to prevent the conditions for tacit collusion, which for the purposes of competition law enforcement is market concentration in markets where information is widely available. However, with the introduction of pricing algorithms and greater access to data, markets are transforming to become more hospitable to tacit collusion. Competition authorities have few tools to address this trend.

There is a need for transparency with and scrutiny of [pricing] algorithms. A productive policy intervention could be **algorithmic auditability for accountability.** This could help avoid the conditions for market collusion in the first place. Alongside consideration from competition law and an exploration of algorithmic auditability, there are other relevant policy levers; like privacy authorities and consumer protection authorities.

The FTC is considering drafting new rules on the use of consumer data in a bid to crack down on privacy abuses and discriminatory algorithms, according to a December 2021 letter by agency Chair Lina Khan.[128] The effort could lead to "market-wide requirements" targeting "harms that can result from commercial surveillance and other data practices."[129] Such an intervention could have implications for algorithmic pricing regimes.

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[127] Algorithms and Collusion - Note from the European Union (2017) *OECD.*

[128] FTC considers drafting new regulations on data and algorithms to protect consumer privacy and civil rights (2021) *CNN*.

[129] FTC considers drafting new regulations on data and algorithms to protect consumer privacy and civil rights (2021) *CNN*.

6. Consumer IoT Ecosystems: Connected Cars and Voice Assistants

Internet of Things (IoT) devices produce, collect, and analyze a huge amount of data on user biometrics (voice data), behaviour, device use, and the physical environment surrounding the IoT ecosystem. For this case study, we examine voice assistants and connected cars given their rising prevalence. We also choose these examples because they raise important adjacent issues in other, related domains, like smart device manufacturers, insurance companies, repair and maintenance services and other complementary services.

In the case of voice assistants, the ecosystem consists of voice assistant providers, smart home device manufacturers and users.[130] Often, or in the case of companies like Google, Apple, Amazon, and Samsung, the voice assistant providers and the smart home device manufacturers are the same firm. There is however more diversity in the device segment of the ecosystem which is more fragmented with several device manufacturers. Meanwhile, clear dominance has begun to emerge in the voice assistant providers segment with consumers being limited to voice assistant products like Alexa, Siri, and Google Home.[131]

For connected cars, the ecosystem consists of vehicle manufacturers (which manufacture the physical vehicle with built-in software), car users/owners, all external vehicles or infrastructure that communicate with the vehicle, as well as any services that can be offered to car users (repair, car parts, apps to plug in to the car, etc). The connected car concept can include several forms of communication, all of which rely on the success of interoperability and communication of "in-vehicle data": vehicle to vehicle communication (ex. two cars of different make), vehicle to cloud/internet, vehicle to infrastructure.[132] The scope of connected technologies in vehicles is broad, and can enable several new functionalities including innovative repair and maintenance services, navigation, parking applications, entertainment, and innovative insurance schemes and services.[133]

As Wolfgang Kerber outlines, a key evolution in the connected car ecosystem is the push by original equipment manufacturers (OMEs, i.e., car manufacturers) towards the co-called "extended vehicle concept" whereby data collected from vehicles is transmitted directly to the OMEs. In this arrangement, the OMEs have exclusive access to the data. Furthermore, under this concept the OMEs would also have proprietary technical access to the car, meaning that independent service providers, like repair and maintenance businesses, cannot gain direct access to the car. Safety and security arguments are often used to justify this type of arrangement, but the consequence of the extended vehicle concept is a closed system where the OMEs have a "monopolistic gatekeeper position" (p. 390).[134]

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[130] Sector Inquiry into Consumer Internet of Things (June 2021) *European Commission*.
[131] Google Voice Assistant Under New EU Antitrust Investigation (2021) *MLex*; Siri and Alexa are at the center of the European Union's probe into the 'Internet of things' (2021) *Fortune*.
[132] Connected and Automated Vehicles (2018).
[133] Kerber, "Data-sharing in IoT ecosystems from a competition law perspective: The Example of Connected Cars" (2019).
[134] Kerber, "Data-sharing in IoT ecosystems from a competition law perspective: The Example of Connected Cars" (2019).

The key theme across these two markets is the collection and consolidation of data through the IoT network. In the case of voice assistants, data is collected on user interactions and device use, information about when and how users interact with other devices. These data sets can be leveraged to infer patterns that help predict future user behaviour. In the case of connected cars, data is collected on driver behaviour, geolocation, app usage within the car, car use, car conditions, and sensors can pick up physical information about the external and internal environment in the car. Similarly to smart home devices, this information gives way to strong inferential capabilities.

Competitive harms related to consumer IoT ecosystems

The very nature of IoT devices - that each is produced and sold by one firm - gives way to problems related to access to data and interoperability. Firms that manufacture complementary devices or that operate in an adjacent or downstream market related to IoT ecosystems often need access to the data, to technical information, or to the ecosystem itself to function properly.[135]

In a preliminary inquiry into the IoT sector, the European Commission identified two reasons why consumer IoT ecosystems dip to dominance:

1. Excessively data-driven and in control of data that is incredibly private and revealing;
2. Interoperability - ability of IoT devices to communicate with each other and other devices.[136]

This means that the way IoT devices are designed - meaning, choices about how they collect and share data, and how they communicate with other devices - are essential. These choices determine the quality of innovation and competition in the IoT consumer devices ecosystem.

The data issues arising from IoT networks are akin to those that we discussed in the copycatting case study. The analysis we present in that case study is mirrored by the analysis done by the EC's preliminary inquiry into the IoT sector. The report highlights the substantial, even insurmountable, **barriers to entry** that come with the data inherent to these networks. The report explains that as a result of their relative power (i.e. being at the nexus of data collection), these firms can control the data flows between the stakeholders in the ecosystem and can leverage this advantage into adjacent markets.[137]

For example, leading voice assistant providers have a massive advantage on their competitors (whether these are new entrants in the voice assistant market or other smart home devices that rely on the connection to the voice assistant device). At the root of this advantage is their ability to easily improve the quality of their voice recognition technology through algorithmic training, including machine learning. Meanwhile, other voice assistant or smart home device providers do not have consistent and immediate access to relevant data on the use of their

[135] Kerber, "Data-sharing in IoT ecosystems from a competition law perspective: The Example of Connected Cars" (2019).
[136] Sector Inquiry into Consumer Internet of Things (June 2021) *European Commission*.
[137] Sector Inquiry into Consumer Internet of Things (June 2021) *European Commission*.

services and smart devices on third-party voice assistants and smart device operating systems.

In the connected cars context, the providers of the connected car can in practice lock out all types of communication and data exchange conceivable. This means that these manufacturers can collect and process data en masse and derive insights from aggregated information. While this can help them improve their own products, it also has the potential to lock out competitors and to further entrench their dominant and powerful position in the ecosystem.

With respect to data, IoT ecosystems present essentially the same competition issues as copycatting. However, IoT ecosystems are unique from copycatting in the issues they raise around interoperability. In this analysis, we do not aim to give a comprehensive overview of the competition issues surrounding interoperability as these issues have been thoroughly discussed in other contexts and do not relate directly to data. Rather, we want to highlight the interplay between interoperability and data within these ecosystems.

By reducing interoperability, dominant firms within the ecosystem can create and exert greater control in related markets and within the ecosystem. Dominant firms may be incentivised to reduce interoperability to prevent potential competitors from entering the ecosystem. Related, dominant firms may also want to reduce the number of firms in the ecosystem to prevent them from accessing data from the network since this data could provide a competitive advantage within the ecosystem. Thus, **reduced interoperability could be an exclusionary strategy for protecting or creating data dominance**.[138]

Solutions under competition law

In the copycatting case study, we suggested that under the current Canadian framework, refusal to give access to some data may be seen as an abuse of dominance (or refusal to deal) in very limited situations. Thus, the civil provisions are not likely to be useful in addressing competition issues associated with data in these contexts. In that case study, we suggest that reforming the substantive test for anti-competitive conduct within the abuse of dominance provisions so that cases are less reliant on effects (consequentialist) and are more focused on behaviours (deontological) could be a solution. We also recommend reforming the relevant subsection of section 79 to remove the three-year time limit the Commissioner has for investigating abuses of dominance could also be beneficial. The same recommendations also apply to IoT ecosystems.

Restrictions in interoperability can also have significant impacts on competition in IoT ecosystems and be used to protect dominance resulting from exclusive access to data. Section 77 of the Act deals with anti-competitive, exclusionary behaviours of exclusive dealing,

[138] For the purposes of this case study, we focus on how reduced interoperability could be an exclusionary strategy, and we also discuss data volume as a barrier to entry. We also keep in mind that IOT systems can accrue powerful supplementary datasets that further entrench a firm's market dominance; such as through voice marketing systems or GPS tracking. However, we have limited additional discussion of these issues. These are complex interactions deserving of further research in a Canadian context.

tied selling and market restriction, and could potentially be applied in instances where technology providers use strategies to restrict purchaser's ability to acquire or use other technologies. The abuse of dominance provisions (section 78 and 79) may also have bearing. Section 78 (g) describes a potentially anti-competitive act whereby "adoption of product specifications that are incompatible with products produced by any other person and are designed to prevent his entry into, or to eliminate him from, a market."

However, as we have discussed before, while these sections of the Act may speak to some of the potential anti-competitive acts related to interoperability, it may be difficult to meet the legal test necessary to successfully deter these anti-competitive behaviours. Reforming the substantive test for assessing anti-competitive conduct in these sections of the Act so that they follow a more deontological logic, rather than a consequentialist approach, could enhance the effectiveness of the Act and enable more proactive enforcement, like we discussed in the case study on copycatting.

While interoperability can have substantial impacts on market competitiveness and fairness, competition law has limited tools for enhancing interoperability. The main means by which competition law can improve interoperability within a market is through remedies for conduct found to be anticompetitive.[139] Regulatory interventions may be more effective at fostering interoperability in commercial IoT ecosystems and beyond.[140]

Interventions outside of competition law

A related policy intervention that is outside of competition law is the mandating of meaningful **API access**.[141] [142] A 2019 paper from Moziila documenting a "framework for forward-looking tech competition policy," advocates that the future of tech competition must be built on interoperability.[143] APIs can provide interoperability for data and services under pro-competitive terms. Cory Doctorow also points to the promise of interoperability in his end of year essay for the Electronic Frontier Foundation.[144] A key consideration in designing an optimal interoperability environment is the data format(s), so that the sharing of data is actually useful. This is something that can be regulated.

More user-friendly design of the privacy policies for connected devices; namely, making them opt-in and/or having an opt-out option, would also be ideal as an intervention to moderate the power between these firms and individuals. This would be an area for the Privacy

[139] Data Portability, Interoperability and Digital Platform Competition (2021) *OECD*.
[140] From 'walled gardens' to open meadows (2021) *Ada Lovelace Institute*.
[141] Online Platform Competition Is Hard to Address.
[142] See, for example, Hemphill & Wu, "Parallel Exclusion" (2013) *Yale Law Journal*.
[143] "Digital platforms can offer data and functionality through APIs in scope and with terms that enable downstream innovation and interoperability. While updating APIs is a normal part of technology development and growth, significant changes to APIs that impact downstream activity, whether to the data offered through them or to the protocols or policies by which the APIs are accessed, can pose significant harm to competition".
[144] The Future is in Interoperability Not Big Tech: 2021 in Review (2021) *Electronic Frontier Foundation.*

Commissioner to offer perspective. In 2020, the Privacy Commissioner published new privacy guidance on the Internet of Things for manufacturers and Canadians.[145]

We also identify two key areas for the new role of Data Commissioner: **access to data** and **data sharing**, and the consideration of **privacy as a barrier**.

With regards to access to data and data-sharing, we raise the following four questions for further consideration: Should consumers have access to non-personal information as well? Should data portability cover inferred information in addition to the volunteer/observed personal information? Should manufacturers of these "nexus" connected/smart devices (that control and manage data flows in the ecosystem) be required to interoperate with devices that want to plug into the ecosystem? Should manufacturers of nexus devices be required to share key data with firms that want to plug into the ecosystem?

Further analysis of the suite of policy opportunities related to IOT is warranted.

With regards to evaluating privacy as a barrier to entry, we note that IoT home and consumer ecosystems are complex in that they control both personal and non-personal information. They also deal with individual-level and group-level data sets. These distinctions require the attention and close collaboration of different enforcement agencies. The complexity of the data sources, inputs and outputs in these ecosystems risks becoming a source of market dominance itself. Without clear industry standards and without collaboration between privacy, consumer protection, and competition authorities, anticompetitive acts can become *de facto* industry practice. Without proper competition investigations and *complementary* privacy regulations, there is a risk that companies will use privacy as a justification for their anticompetitive acts.[146] There is also a risk that companies will violate privacy regulations in order to gain competitive advantages. Especially when regulatory penalties for breaches of data protection are too low to deter violations, there is a risk that violations of privacy regulations will be used strategically to entrench dominance.

These two distinct scenarios (**privacy as a justification**; **privacy violations as a path to dominance**) must be considered in conjunction with competition concerns.

A recent example of a "new" IoT for the home is the "M-Pwr Smart Door" from Masonite, which is hardwired to the home and has a Ring video doorbell and Yale smart lock built in. It is the first residential exterior door to integrate power, lights, sensors, a video doorbell, and a smart lock in the door system. Though we have separated discussion of IOT ecosystems between consumer and commercial considerations for the purposes of this paper, we also flag that connected cars may soon be linked to connected homes; merging these dual sets of considerations. Recently sponsored content in Wired magazine from Ford predicted that,

[145] New privacy guidance on the Internet of Things for manufacturers and Canadians (2016) *Office of the Privacy Commissioner*.

[146] We have already seen this in many anticompetitive acts taken by Apple against nascent app developers and other competitors. See Geradin & Katsifis, "The Antitrust Case Against the Apple App Store" (2021) *Journal of Competition Law & Economics*. See also Douglas, "Digital Crossroads: The Intersection of Competition Law and Data Privacy" (2021).

"Soon, SYNC Connect will be compatible with Amazon Echo, so you will be able to simply voice control your car from the comfort of your home."[147]

7. Commercial IoT Ecosystems: data lock-in and proprietary farm equipment

In this case study, we focus on issues in IoT ecosystems within a commercial context, specifically with respect to farm equipment. While commercial and consumer IoT ecosystems differ in important ways, from a competition standpoint the problems arising from these networks are largely the same. Thus, we do not present an analysis of the intersection of IoT ecosystems and competition law in this section, as it would be redundant to the analysis we presented in the last section. There remain important differences between the consumer and commercial spheres with respect to other policy interventions, which we highlight at the end of this section.

The dialogue between farmers and farm equipment manufacturer, John Deere, has been widely publicized.[148] At the core of the debate is the ability of farmers to repair their own equipment, bought from popular farm equipment manufacturers (for example, John Deere). As currently sold, farmers and mechanics cannot access the equipment's software underbelly -- that in practice dictates access to the whole product, including the ability to replace and fix the physical components -- and therefore can only access repair services through the manufacturer.

To date, this conversation has been framed in terms of intellectual property rights (accessing software source code) and the right to repair electronics. The latter has been proposed by legislation across the US and Canada.[149] The US FTC recently issued an executive order to "condemn restrictions imposed by manufacturers on products that make them more difficult to repair independently".[150] The FTC's recent report on the right to repair rightly explains that the unavailability of repair options is a competition issue, arising in manufacturers' restriction of aftermarket competition.

IoT equipment manufacturers' collection of **aggregated** farm data is a distinct concern for competition policy. The company itself has acknowledged the role of data in its work as it sees

[147] How connectivity is driving the future of the car (February 2016) *Wired*.
[148] Farmers Fight John Deere Over Who Gets to Fix an $800,000 Tractor (March 2020) *Bloomberg*; Foulton et al, Digital Technologies and the Big Data Revolution in the Canadian Agricultural Sector: Opportunities, Challenges, and Alternative (August 2021) *Canadian Center for the Study of Co-operatives*.
[149] Nixing the Fix: An FTC Report to Congress on Repair Restrictions (May 2021) *Federal Trade Commission* at 47.
[150] 'Right to repair:' FTC vows to 'root out' illegal repair restrictions on phones, fridges & more (July 2021) *CNN*.

itself as a technology company, not just a farm equipment company.[151] Combine harvesters, a key product for farm equipment manufacturers, collects massive amounts of farm data as it operates through farm fields:

- "*GPS records the combine's precise path through the field;*
- *Sensors tally the number of crops gathered per acre and the spacing between them;*
- *On a sister machine called a planter, algorithms adjust the distribution of seeds based on which parts of the soil have in past years performed best;*
- *Another machine, a sprayer, uses algorithms to scan for weeds and zap them with pesticides;*
- *All the while sensors record the wear and tear on the machines, so that when the farmer who operates them heads to the local distributor to look for a replacement part, it has already been ordered and is waiting for them.*"[152]

Farmers have documented examples of restrictive contractual terms that have the effect of data lock-in.[153] Beyond contracts, the very way that farm equipment coupled with proprietary software is designed ensures that the manufacturer retains exclusive control over the data. While farmers may be able to **see** their own data, this access is mediated through the farmers' individual account with the equipment manufacturers.[154] This means that they have no ability to copy, process, share, or run their own analysis. The software that runs this interface is proprietary. Research has observed that there is often "a lack of clarity on whether farmers are able to transmit data generated by a service provider on their farm to other service providers".

Equipment manufacturers can aggregate this large amount of data to gain insights and predict farming outcomes on a large scale.[155] This raises concern about the information asymmetry between manufacturers and farmers and whether manufacturers are able to benefit from this predictive capability. Models that lock data into proprietary machines also raise competition concerns about **downstream agricultural market services**.[156] Atik and Martens (2020) observe that "the arrival of digital data in agriculture opens the possibility to realise productivity

[151] Access To Big Data Turns Farm Machine Makers Into Tech Firms (December 2020) *Forbes*.
[152] See above.
[153] Issues around data governance in the digital transformation of agriculture – the farmers' perspective (October 2020) *OECD Working Party on Agricultural Policies and Markets*.
[154] Atik and Martens, "Competition Problems and Governance of Non-personal Agricultural Machine Data: Comparing Voluntary Initiatives in the US and EU" (2020) *Technical Report to the European Commission* at 38: "The reality of data-driven agricultural business models is that manufacturers of agricultural machines and devices design the data architecture in such a way as to retain exclusive control over access to the data. That enables them to foreclose downstream agricultural services markets that depend on these data. Also, agricultural technology providers' de facto control on the historical farm data sets locks their customer farmers in their systems due to the lack of a clear mechanism to force these companies to transfer the related data when farmers desire to switch service providers. This reduces competition in these markets and may increase prices which eventually reduces farmers' welfare".
[155] Access To Big Data Turns Farm Machine Makers Into Tech Firms (December 2020) *Forbes*.
[156] Atik and Martens, "Competition Problems and Governance of Non-personal Agricultural Machine Data: Comparing Voluntary Initiatives in the US and EU" (2020) *Technical Report to the European Commission* (authors argue that their research shows "how data-driven agricultural business models lock farm data into machines and devices that reduce competition in downstream agricultural services markets").

gains through precision farming. It also raises questions about the distribution of these gains between farmers and agricultural service providers."

On a smaller scale, "the availability of historical series of agricultural data can be very important for farmers, as comparisons over relatively long spans of time on the same data point (e.g. a field or livestock unit) can be used to develop models and services that are better tailored to their needs and production conditions."[157]

While the right to repair initiatives taken by governments may help farmers access repair services at lower cost, that solution does not directly address the data concerns inherent in commercial IoT networks. It is possible to envision a situation where the right to repair solutions lead to the manufacturers building APIs and more technical access to the device, while very strongly maintaining control over the information currently locked in the device (and the information that is derived from these devices on a large scale).

Policy opportunities outside of competition law

IoT amplifies concerns about a potential increase of surveillance and tracking. For this reason, **enhanced user privacy rights** are a suitable policy response.

Unver (2021) points to a **"layered" regulatory model** that can respond to the independent layers of information and communication technology systems.[158] Their proposal describes a "bottom up, ex-ante and holistic approach" that can address wide-ranging gatekeeping activities.

We also reiterate and stress the urgency around **meaningful data portability** that goes beyond the basic ability of a user to request a copy of data. In this instance, we re-emphasize the worker lens as a unique facet of the competition considerations raised. This is somewhat distinct from the consumer-centric and highly individualized privacy rights conversations as it can also cut across a profession.

8. Data-driven Mergers and Joint Ventures

In recent years, there have been several mergers and joint ventures that are ostensibly motivated by the acquisition of data that can then further empower the purchasing firm. It is not possible to identify how many mergers take place or joint ventures are formed with the motivation of consolidating data. However, for this analysis we will highlight four notable deals: the 2020 acquisition of Credit Karma by Intuit; Wealthsimple's purchase of SimpleTax, the temporary joint venture of Starbucks and Aeroplan, and Google's acquisition of Fitbit.

In November 2020, the US DOJ committed to not challenge Intuit's acquisition of Credit Karma on the condition that Intuit divest Credit Karma's digital do-it-yourself tax preparation software.

[157] See above at 22.
[158] Unver, Threading the needle from 'interoperability' to 'gatekeeping': quest for a layered model (2021) *International Review of Law, Computers & Technology*.

The divestment requirement was based on the DOJ's finding that the deal would substantially lessen competition in that market.[159] As Sasan Goodarzi explained in an interview, Credit Karma's tax preparation software was not an important aspect of the deal for Intuit: *"But what makes Credit Karma the most special is not just the scale of customers—which by the way has not been replicated by anyone—it's their data."*[160] Credit Karma provided free credit score tracking, much like Canada's Borrowell. By acquiring Credit Karma, Inuit gained access to data on user income and ability to make loan payments that it could use to expand into offering other financial products.

In Canada, about one year earlier, Toronto-based fintech Wealthsimple Inc. purchased the Vancouver-based SimpleTax for an undisclosed sum. Wealthsimple's 2019 acquisition of SimpleTax is superficially similar to Intuit's 2020 acquisition of Credit Karma. SimpleTax offered it's own do-it-yourself tax filing software, building its user base through a clear and strong privacy policy. Wealthsimple, like Credit Karma, has access to user's financial information and wealth holdings. While SimpleTax clarified that data would not be accessible to Wealthsimple without consent, it is possible to consider whether there are potential data synergies that Wealthsimple could leverage that are similar to those between Intuit and Credit Karma. Based on publicly available information, we do not find evidence that the Bureau reviewed the deal, likely because it did not meet the merger notification thresholds.

Another Canadian-specific case of a likely data-motivated deal is the joint venture between Starbucks and Aeroplan, announced in March 2021. The partnership allows users to link their Aeroplan and Starbucks Rewards accounts and earn points under both systems when making purchases. By bringing these two loyalty programs together, the firms could likely merge and expand their data holdings.

To date, we do not find any evidence that authorities in North America have considered the competitive impacts of mergers and joint ventures that combine data held by the parties. However, the EU Commission did challenge Google's acquisition of Fitbit on the basis that allowing Google to combine its user profiles with the health data of Fitbit users would create barriers to entry in the online advertising space, to the detriment of advertisers who would likely have to pay higher prices. The parties agreed to a remedy which would forbid Google to combine its advertising data with the biometric data of Fitbit for consumers based in the EU. To our knowledge, this merger has not been investigated or challenged in Canada (or the US), meaning that in Canada Google may have linked its data with Fitbit's biometric data.[161]

Competition challenges of data-driven mergers

The EU decision highlights that the core harm that can arise from mergers (or joint ventures, since they are evaluated using substantially the same evaluative framework) that combine firm data is not an immediate substantial lessening or prevention of competition in the market

[159] Justice Department Requires Divestiture of Credit Karma Tax for Intuit to Proceed with Acquisition of Credit Karma (November 2020) *US Department of Justice*.
[160] Why Intuit bought Credit Karma in one of the biggest fintech deals of 2020 (December 2020) *Yahoo Finance*.
[161] Mergers: Commission clears acquisition of Fitbit by Google, subject to conditions (December 2020) *European Commission*.

where the firms overlap, like the removal of a competitor from the product market. Rather, the issue with these mergers that they can fundamentally change the structure of a market (which is likely not the product market where the parties' products overlap, if there even is overlap) by creating, in essence, a "super competitor" that will likely not be usurped by a new or current competitor and thus cause long-term competitive harm.

By creating a powerful data holding through the merger that cannot realistically be obtained by other firms, the merger creates a barrier to entry for other firms that wish to challenge the merged firm.[162] Exclusive access to highly insightful data could provide the merged firm with a competitive advantage that cannot realistically be challenged, ultimately leading the firm to dominate or monopolize the market in the long-run. It is conceivable that the only way that a new entrant could challenge the dominance of the merged firm would be to create a product that is so revolutionary that it makes the dominant firm's product obsolete.The dynamic we outline here is similar to the data dynamics we have described in the copycatting case study and subsequent studies.

Data mergers and competition law

Through our analysis, we find both regulatory and legal challenges that could prevent the Commissioner from pursuing data-motivated mergers that undermine competition. On the regulatory side, the Merger Enforcement Guidelines (MEGs) show that the traditional method of evaluating mergers may overlook key characteristics of data-motivated mergers, leading to under-enforcement. On the legislative side, the jurisprudence related to prevention of competition may be too narrow to address the competitive harms resulting from data-driven mergers, and we are not optimistic that the current substantive test for mergers can adequately address these types of cases.

For simplicity, the focus of our analysis here is on mergers and the merger provisions of the Act. However, this analysis can also apply to joint ventures, which are assessed in a similar way both by the Bureau and under the Act.

Limits in the MEGs

We have identified two limitations in the MEGs that may prevent the Commissioner from identifying potentially harmful, data-driven mergers.

First, in most instances where data causes a competition concern, we would expect the harms to occur in a market where the merging parties do not overlap, as in the cases we described in the previous section. In fact, the parties' products may not overlap at all. However, in MEGs imply that the relevant product markets are assumed to be markets in which the parties' products overlap.[163] If the Commissioner is evaluating mergers based on whether both firms operate in the same product market, he may be missing competition issues resulting from the acquisition of data.

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[162] Mergers: Commission clears acquisition of Fitbit by Google, subject to conditions (December 2020) *European Commission*.
[163] Merger Enforcement Guidelines.

Second, barriers to entry, or more generally market factors that may inhibit timely entry or expansion of competitors, are generally understood to be exogenous to the merger. In the MEGs, examples of barriers to entry include regulatory barriers, high sunk costs, challenges in operating at sufficient scale to be profitable, costs advantages of incumbents, and the maturity of the market.[164] However, lifting from the EC's language on the Google-Fitbit merger, the merger itself creates barriers to entry. More specifically, the merged firm's exclusive access to superior data prevents entry/expansion of effective competitors. In a way, the barrier posed by access to data is similar to the barrier posed by incumbent cost advantages. New competitors may face higher costs of entry and expansion relative to incumbents that may benefit from favourable agreements with long-time vendors or other arrangements they have by virtue of being in the market for longer.

However, what makes data different as a barrier to entry is that it is the result of the merger. That is, the barrier to entry is endogenous to the merger, not exogenous. This way of understanding barriers to entry is not captured within the MEGs.

In sum, developing a merger case that considers the impact of merged datasets requires a fundamental rethink of the traditional method by which mergers are evaluated. The disconnect between the MEGs and the realities of mergers involving data suggests a need for the MEGs to be reviewed and updated.

Limits in the legislation

If the Commissioner were to make an argument against a data-motivated merger, similar to that made by the EC regarding the Google-Fitbit merger, the Commissioner would likely need to show that, post-merger, 1) there is likely to be a substantial lessening or prevention of competition (SLPC) in the relevant market from the merger and 2) that there is unlikely to be timely competition in the market sufficient to discipline that exercise of market power.

At a high level, we believe there are two challenges that would need to be overcome to successfully address anti-competitive, data-driven mergers. Furthermore, we are not optimistic that these challenges will be overcome without legislative changes.

The first challenge has to do with the consequentialist nature of the substantive test used to evaluate mergers. Like with the civil provision of the Act, the Commissioner is required to show that anti-competitive effects, like price increases, are a likely outcome of the merger. In the case of a merger like the Google-Fitbit merger, the anti-competitive effects would likely manifest in the medium- or long-run since the impact of the merged firm's dominance would take effect over time. The anti-competitive effects of the merger would likely follow those that we outlined in the copycatting and IoT case studies. By virtue of having exclusive access to a powerful dataset, the merged firm has the capacity to dominate the relevant market in the long-run.

[164] Merger Enforcement Guidelines.

Given that the competitive effects are likely to manifest in the medium- or long-term, it would be exceedingly difficult, if not impossible, to meaningfully predict the anti-competitive effects of the merger. The evidence of potential anti-competitive effects would likely be qualitative, based on the views of market participants, and may be in large part conjecture. This situation is vulnerable to Type II enforcement error (permitting the merger even though it is anti-competitive). To address this issue, the substantive test for evaluating mergers would need to change.[165]

The second issue is the conceptualization of competitive harm. Again, in the case of data-motivated mergers, the competitive harm comes from the merged firm's access to powerful data that it then uses to dominate markets. In a sense, the argument follows a structuralist approach to understanding competition and the conditions for competitive markets: The merger creates a dominant firm that is unlikely to be rivalled by competitors, enabling it to further dominate the market and exert its market power to the detriment of consumers and society at large. While there may be specific behaviours the firm could undertake to foster and exercise its market power, as we discussed before it would be difficult if not impossible to identify them since they would likely manifest in the medium or long term.

We are of the view that a structuralist argument against a merger would likely be unsuccessful given the logic and philosophy underpinning competition policy in Canada. A structuralist argument in this context would not rely on market shares necessarily, but still evaluates the merger based on its "share" or prominence in the market. While market shares are used to identify potentially anti-competitive mergers within the MEGs for the purposes of enforcement, it is not possible for the Tribunal to block or modify a merger solely on the basis of market shares, as outlined in section 92(2) of the Act. For example, if a merger were to create a monopoly in a relevant market, the Tribunal would not be able to issue an order against that merger solely on the basis that the merger creates a monopoly.[166] This provision of the Act could make it difficult for the Tribunal to justify taking action against a merger like the Google-Fitbit transaction.

In our view, section 92(2) of the Act is one manifestation of what we see as a generally greater tolerance towards dominance and market power held by the Canadian competition law and the broader competition policy system in Canada.[167] Indeed, the very structure of our

[165] Another way to understand the core argument against data-motivated mergers like the google-fitbit merger is to see these transactions specifically as a prevention of competition. By increasing barriers to entry, the merged entity is preventing competition in the marketplace. There is well-established jurisprudence outlining how prevention of competition is assessed under Canadian law. However, this case law deals more with the notion of "killer acquisitions", which we discuss in the next section, then prevention of competition in this context.

[166] This section of the Act has also played a role in permitting anti-competitive mergers in Canada, most notably the transaction between Superior Propane and ICG propane. The deal led to the creation of monopolies in several communities in Canada. If the Tribunal were able to issue an order against a merger on the basis of market shares, it would have been empowered to block these mergers to monopoly solely on the basis that they created monopolies.Section 92(2) runs counter to the basic and uncontroversial understanding we have regarding the relationship between market structure and anti-competitive outcomes.

[167] Another clear example of Canada's tolerance to market power is section 96.1, the so-called efficiency defence. Under the defence, mergers that are likely to be anti-competitive but create sufficient cost savings are permissible. Yet another example is the way that barriers to entry are considered when a merger is evaluated.

substantive tests within the civil provisions of the Act (including mergers and joint ventures) reflect a greater reluctance to address the harms of dominance and market power more broadly. Our tests not only require enforcement to anticipate and provide concrete proof of competitive harms, which may not be possible in some instances, but also limit the time horizons in which enforcement can take meaningful action to address competitive harms (i.e., time limits for taking merger or abuse of dominance cases). This philosophy of greater tolerance towards market power and relative reluctance to intervene in markets for fear of over-enforcement may prevent the Commissioner or Tribunal from applying the law in cases of data-motivated mergers in a way that protects competition.

In sum, challenging a merger on the basis that it creates a dominant firm runs counter to what we believe to be implicit assumptions underpinning Canadian competition law. Namely, that dominance and monopolization are not inherently problematic and that it is more harmful for authorities to block a pro-competitive merger than it is to permit an anti-competitive merger. We discuss the problems with these stances in our discussion of the error-cost framework in the case study on self-preferencing.[168] These implicit assumptions manifest in our current laws, which sanction and will likely continue to sanction anti-competitive mergers (like the merger between Superior Propane and ICG Propane) unless reforms are made.

Indeed, a very likely (and we think likely successful given the guiding philosophy of Canadian competition policy) counter-argument to a challenge against a data-motivated merger like the Google-Fitbit transaction is that such a transaction would, in fact, be *pro-competitive*. By merging datasets, the merged firm would be able to create innovations in the market, benefiting consumers. Furthermore, competition policy should be in the business of "protecting competition, not competitors". Therefore, this more structuralist approach to assessing mergers is inappropriate because it undermines potential innovations in the market palace to the benefit of competitors that would be disadvantaged by these innovations.

We believe that this argument has several potential flaws. One key issue is that it emphasises the benefits of data in launching and creating innovative products while ignoring or de-emphasizing the potential long-term consequences of the firm's behaviour. It also ignores or deemphasizes how the creation of innovative products could happen in tandem with clearly anti-competitive behaviours like self-preferencing and gatekeeping to reinforce dominance. We touch on these themes in our analysis of copycatting, specifically our review of the paper by Niblett and Sokol.

Another issue with the argument is that it devalues the role of market structure in promoting and protecting competition. Rejecting the possibility that market structure has any role to play in fostering competition is extreme and unrealistic. While market structure may not be the sole determinant of market outcomes in all cases, in some contexts – like mergers to monopoly or cases involving tacit collusion – a market's structure (and other characteristics) is highly determinative.

[168] In sum, we maintain that these stances are based on the assumption that markets are naturally competitive and that market power erodes over time. However, this assumption is not consistent with the (little) data we have on competition trends in the Canadian economy.

Another argument against addressing harmful data-motivated mergers under the merger provisions of the Act could be that the Act's abuse of dominance provisions, or some of the other civil provisions of the Act, could address the long-run anti-competitive outcomes of the merger should they come to pass. In fact, one may argue that the abuse of dominance provisions are a better tool for addressing the potential competitive harms of data-motivated mergers. Addressing anti-competitive conduct from data-motivated mergers with the abuse of dominance provisions may make it easier to identify specific anti-competitive behaviours and their effects.

We agree that taking conduct under the abuse of dominance provisions in this context may enable the Bureau to collect stronger evidence to make a case, and all else equal be more successful in curbing anti-competitive conduct. However, as we have outlined in other sections, there are also significant limitations to the abuse of dominance provisions as they stand today. In order for the provisions to address many of the issues resulting from data-driven dominance, changes would likely have to be made to the legislation in accordance with the recommendations we have put forward.

Another shortcoming of using the abuse of dominance (and similar) provisions rather than merger control is that they only address behaviours that undermine competition. They cannot address market power and dominance itself, only the exercise of that market power/dominance. Merger control is uniquely positioned to prevent accumulations of market power and dominance.

Some degree of market power and dominance may be acceptable post-merger, particularly if it is likely that current or future competitors can discipline an exercise of market power in the short-term. However, we hold the view that market power presents a serious problem in our economy that our merger control laws are not adequately addressing. Trends in concentration in Canada and evidence on the effectiveness of merger control in the US speaks to this point.[169] There is a need to rethink our merger provisions to prevent accumulations of market power across all markets, including markets affected by data-motivated mergers. The abuse of dominance provisions may be able to address or deter anti-competitive conduct related to data-motivated mergers when it arises. However, they cannot prevent such abuses to the same extent that merger control law can by outright preventing accumulations of market power.

Solutions within the Competition Act

To address the competition issues raised by data-driven mergers, we believe that the **substantive test for mergers needs to change** so that it is more consistent with that of the EU. This change would include moving to a more deontological method of evaluating anti-competitive conduct, including evaluating how mergers can change the structure of markets. Under this approach, it may be valid in some instances to challenge mergers on the basis of market share, or even more specifically, "data share." Furthermore, the new substantive test

[169] Bawania & Larkin, Are Industries Becoming More Concentrated? The Canadian Perspective (2019); Blonigen & Pierce Evidence for the Effects of Mergers on Market Power and Efficiency (October 2021) *National Bureau of Economic Research*.

may also be based on a reevaluation of the role of Shumpetarian competition – both its desirability and functionality as a vehicle for innovation.

Interventions outside of competition law

Competition law remains generally unconcerned with the *acquisition* of power.[170] Data protection and privacy concerns may fall into a blind spot. Again, **privacy issues** are naturally raised in concert with these competition issues, further warranting more integration and collaboration between the Bureau and the Privacy Commissioner of Canada.

As discussed in the Google-Fitbit case, there has been one case where a "**data wall**" has been put in place as a 'remedy; to limit the aggregation of data sources and mitigate dominance in a particular market. This is an example of an innovative remedy that focuses on the data aspect. Canadian policymakers could similarly consider data walls as a potential remedy under the Act.

We also generally suggest that the role and value of data[171] be considered in merger reviews, as a way to discern whether an acquisition is "killer."

It is challenging to situation c**onsumer welfare concerns**[172] in the context of data driven mergers and joint ventures. We note that following the announcement of the conclusion of the Google-Fitbit case, several civil society organizations wrote a joint declaration[173] stating their concerns regarding the merger. Canada's Public Interest Advocacy Centre was among the signatories. These interest groups were generally pointing to harms that may be the result of newfound dominance, but that cannot be quantified at the time of merger. The consumer welfare standard is ambiguous in this regard. No competition law as it currently exists can protect consumers in the future.

As the European Data Protection Board recognises, the time has come 'to assess longer-term implications for the protection of economic, data protection and consumer rights whenever a significant merger is proposed.'[174] Lynskey recommends a more "cautious" approach to data-driven mergers.[175]

A more sophisticated analysis and appreciation of the role of data in motivating but also valuing mergers is warranted in Canada.

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[170] Lynskey, A Legal Response to Data-Driven Mergers (2019).
[171] Strauss et al, Crouching tiger, hidden dragons: How 10-K disclosure rules help Big Tech conceal market power and expand platform dominance (2021) *UCL Institute for Innovation and Public Purpose.*
[172] (Sensitive) Data Mergers and Consumer Welfare (2021) *Institute for Internet & Just Society*.
[173] Common Statement: CONSUMER AND CITIZEN GROUPS HAVE SERIOUS CONCERNS ABOUT GOOGLE FITBIT TAKEOVER.
[174] European Data Protection Supervisor Opinion on coherent enforcement of fundamental rights in the age of big data.
[175] Lynskey, A Legal Response to Data-Driven Mergers (2019).

9. Killer Acquisitions Guided by Data

"Killer acquisitions" refer to when incumbents acquire nascent competitors to neutralize them.[176] The strategy is often referred to as "burying instead of beating". The term was first employed in the pharmaceutical sector. But in recent times, the term has broadened to cover other industries, notably the tech sector. In that sector, companies allegedly acquire startups to acquire their technology, either to quell a nascent threat, or to integrate it to their own offerings, further entrenching their dominance. For example, the website "Killed By Google," documents 'killer' acquisitions that have ceased to exist since purchase by Google, and offers commentary on the firm's acquisition history.[177]

Firms may choose to purchase rivals before they can become a threat, before the acquisition becomes reportable under the current merger notification thresholds, and/or before reliable data becomes available for competition authorities to assess the transaction. The acquisition of nascent competitors may harm competition when: the target has recently introduced a product that directly competes with the acquirer's products; when the target's products are weak substitutes for the acquirer's but they may grow closer in time; or when the target will in the future introduce a competing product in current or new product markets.

Data factors into the acquisition of nascent competitors, because incumbent firms may use data to identify potential up-and-coming competitors to acquire. For example, in its monopolization case against Facebook, the FTC argued that Facebook utilized data that tracked the "growth and popularity of other apps" (p. 22). Facebook accessed this data through its acquisition of Onavo in 2013, a "user surveillance company" that "marketed itself to users as providing secure virtual private networking services, but—unknown to many users—it also tracked users' online activity." (p. 22). While Facebook shut down Onavo in 2019 in response to public scrutiny, it continued to track user activities with the goal of identifying nascent competitors it could acquire.[178]

It is not clear to what extent firms use data to identify potential competitors with the aim of acquiring them. However, if, like Facebook, firms are acquiring data to monitor potential competitors, then the role of data brokers may be salient. Data broker organizations and the markets they operate in are generally opaque, and there has been little research on data brokers and competition policy.[179] In fact, there has been little research done on data brokers in general. However, the FTC has done some work on data brokers, calling for great transparency and accountability in a 2014 study.[180] Canada's privacy commissioner has previously opened a probe into Canadian data brokers' privacy practices, and has undertaken two studies in 2014 and 2018.[181]

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[176] Acquisitions of "Nascent" Competitors (August 2020) *The Antitrust Source*.
[177] Killed By Google.
[178] Federal Trade Commission vs. Facebook Inc., Case No.: 1:20-cv-03590.
[179] How Do Competition Policy and Data Brokers Shape Product Market Competition?; Bounie et al, Selling Strategic Information in Digital Competitive Markets (2018) *European Commission*.
[180] Data Brokers: A Call for Transparency and Accountability (2014) *Federal Trade Commission*.
[181] Privacy commissioner opens probe into Canadian data brokers' privacy practices; Data Brokers: A Look at the Canadian and American landscape (2014) *Office of the Privacy Commissioner*; Back on

Harms of killer acquisitions and the role of data

The problem posed by killer acquisitions is the same as that posed by anti-competitive mergers in general: mergers can remove competitors from markets, bestowing the acquirer with market power that it can then use to increase prices, reduce product quality, or otherwise impose harm in the market. Acquiring potential competitors differs slightly in that the acquirer is seeking to prevent competition, thus protecting its market power so that it can continue to exercise it.

The acquisition of nascent competitors, including killer acquisitions, has been advanced as one possible cause of growing markups and concentration at the sector and market level.[182] Within the pharmaceutical sector specifically, Colleen Cunningham, Florian Ederer and Song Ma, show that "killer acquisitions" are a real phenomenon that undermine innovation. Furthermore, many of these mergers do not meet notification thresholds, meaning that they are likely not reviewed by competition authorities.[183] As mentioned at the Competition Bureau's Data Forum held in 2018, the UK's Digital Competition Expert Panel also found that some problematic mergers were missed by authorities.[184] However, recent analysis concludes that killer acquisitions are rare.[185]

There is contention within the competition policy community, particularly in Canada, as to whether "killer acquisitions", data-driven or otherwise, are a valid competition issue. Killer acquisitions were discussed in 2019 at the Competition Bureau's Data Forum, where some participants made the point that many startups, particularly in the tech space, seek to be acquired and that acquisition is the only exit strategy of tech entrepreneurs.[186] However, we would argue that the fact that acquisition is the only exit strategy for some tech entrepreneurs may be a problem in itself because it suggests that there is little possibility for firms to enter the markets of the globe's largest tech firms to become competitors. This state of the tech space also challenges the assumption held by other thinkers in the competition policy space that dynamic competition -- i.e. Schumpeterian creative destruction -- exists and can serve as an effective force against market power.

As illustrated with the Facebook example, firms may use data to identify potential acquisition targets. We do not see data fundamentally changing the way killer acquisitions are undertaken. Rather, data may make it easier for firms to identify potential threats to acquire. In this way, the use of data may lead to more harmful acquisitions, or increase the frequency of killer acquisitions.

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the Data Trail: The Evolution of Canada's Data Broker Industry (2018) *Office of the Privacy Commissioner*.

[182] Executive Summary of the Roundtable on Start-ups, killer acquisitions and merger Control (June 2020) *OECD*.

[183] Cunningham et al, Killer Acquisitions (2021) *Journal of Political Economy*.

[184] Discussing competition policy in the digital era (August 2019) *Competition Bureau*.

[185] Latham et al, Beyond Killer Acquisitions: Are There More Common Potential Competition Issues in Tech Deals and How Can These Be Assessed? (May 2020) *Competition Policy International*.

[186] Discussing competition policy in the digital era (August 2019) *Competition Bureau*.

Killer acquisitions under the Act

Under the merger provisions of the Act, the Commissioner does have the ability to challenge mergers that are likely to undermine potential competition in the relevant market. There is also jurisprudence on the issue, and through this case law a robust framework for evaluating mergers that neutralize potential competitors.[187] However, there are aspects of the Act and the Notifiable Transactions Regulations that could prevent the Bureau from effectively identifying and challenging mergers intended to neutralize nascent competitors.

First, the merger notification thresholds, which require parties to notify the Bureau of a merger if the target's assets or sales in/from Canada are greater than the $93M floating rate and when the combined assets of the two parties in/from/to Canada are greater than $400M,[188] may not be sufficiently low to capture mergers intended to neutralize nascent competitors. The Commissioner has the power to review any Canadian merger, regardless of its size. However, it is not realistic for the Bureau to monitor all mergers and acquisitions that take place in Canada, making the notification thresholds critical for identifying mergers that undermine potential competition.

Second, the Commissioner has limited ability to challenge mergers that have already been completed. The implication is that if the Bureau misses a merger that neutralizes a nascent competitor, it is unlikely that it will be able to retroactively address the competitive harm caused by the merger through the merger provisions of the Act. Specifically, the Commissioner can only challenge a merger within one year after the transaction is completed. In contrast, authorities in the US can review a merger transaction anytime. There are no time restrictions.[189]

Some have argued that reforms to Canada's merger control laws and regulations are not necessary because the Act's abuse of dominance provisions could be used to address anticompetitive harm that results from purchasing nascent competitors.[190] However, the abuse of dominance provisions would be insufficient at addressing the problems resulting from killer acquisitions for the same reason we discuss in the data-motivated mergers case study. The abuse of dominance provisions can only address exercises of market power. They cannot reduce market power directly. Given recent trends in concentration in Canada and questions as to the effectiveness of merger control in the US (which shares many similarities with merger control in Canada), we maintain that market power is problematic in itself.

Solutions within the Competition Act

Changing the notification thresholds for mergers could be a helpful measure for addressing killer acquisitions. However, this change may also pose challenges to the Bureau as it would increase the volume of mergers to review. Unless changes to the notification thresholds were

[187] The Concept of Potential Competition – Note by Canada (2021) *OECD*.
[188] Pre-merger notification transaction-size threshold decreases to $93M in 2021 (February 2021) *Competition Bureau*.
[189] Patel, Merger Breakups (2020) *Wisconsin Law Review*.
[190] Iacobucci, Examining the Canadian Competition Act in the Digital Era (September 2021) *Senate of Canada*.

coupled with more funding for enforcement, we are skeptical that such a change would be that effective.

Rather, we believe there are important changes that should be made to the Act that have the potential to be more effective. First, the Bureau should be empowered with the ability to compel information for the purposes of market studies. Enabling the Bureau to undertake market studies could be relevant as a monitoring exercise to help detect killer acquisitions. Second, the Act should be revised so that there is no longer a time window in which the Bureau must investigate a merger. This change would bring our law into alignment with the US.

Additional interventions

Though it has yet to be debated at length, there is currently proposed legislation in the US, the Platform Competition and Opportunity Act.[191] The legislation is intended to "help stop anticompetitive mergers and acquisitions by dominant online platforms." Under the bill, the largest tech monopolies will have the "burden of proving that further acquisitions are lawful and good for the American people."[192]

Case Study Summary

This paper comments on the role of data in a digital economy in two main ways. It discusses the implications for competition law of historically new and increasingly popular business behaviours in a data driven economy; and in so doing, identifies opportunities for other policy instruments to address the 'harm' caused by the activity while also making specific recommendations to update the Competition Act where appropriate. We generally find that when a behaviour has competition implications that occur independently of market share or

[191] Cotton, Klobuchar Introduce Bipartisan Legislation to Protect Competition and Consumer Choice Online (November 2021) *US Senate*.
[192] A direct excerpt from the proposed legislation:

At a moment when the digital economy has become highly concentrated and prone to monopolization, the Platform Competition and Opportunity Act will halt further harmful consolidation by:

- Giving antitrust enforcers stronger authority to stop acquisitions by dominant platforms that primarily serve to kill competitive threats or enhance the platform's monopoly power, including acquisitions:
    - Of direct competitors;
    - That reinforce or expand a platform's market position;
    - Of potential competitors; and
    - Of data that strengthen or expand a platform's dominance.
- Shifting the burden in merger enforcement to dominant platforms to demonstrate the merger is not anticompetitive.
- Striking the appropriate balance for merger enforcement in digital markets by permitting dominant platforms to make acquisitions that do not threaten competition or enhance monopoly power.

size that it can be addressed through complementary policy options. We summarize our proposed cross-cutting approach in the conclusion.

The overwhelming theme in each of these studies is the **role of data in creating and entrenching market dominance and the current gaps in Canada's competition law in conceptualizing this dominance**. When firms, particularly platform operators, have exclusive access to valuable market data, they are able to achieve unparalleled market dominance. This dominance may be difficult - if not impossible to challenge - creating the conditions for entrenched dominance and potentially monopoly over the long term.

We generally find that a data-driven context exacerbates pre-existing competition problems that are worthy of attention from policymakers. In instances where a firm both owns and operates a digital platform, extreme competitive advantages can be developed that are unlikely to be overcome through competitive forces. This paper has sought to discuss some of the tension(s) between privileged access to data and consequences for competition.

Through the nine case studies, we have shown that some data-driven behaviours are difficult to fully appreciate without knowing more details about the software and algorithms that mobilize these behaviours. Across the case studies, the anti-competitive implications of the behaviours can be unclear. For instance, is copycatting always anti-competitive as a behaviour, or (when) does leveraged dominance in related markets play a role?

The three main policy instruments we point to that can support comprehensive competition modernization for a more inclusive digital economy are: **privacy law**, **consumer protection**, and provincial **labour law**(s). In our analysis, the provinces emerge as promising vehicles to play a supportive, supplementary role that addresses some current outstanding gaps. They must be considered as a critical part of any cross-cutting approach to improving the legislative environment for competition.

Ultimately, we find that focusing on abuse(s) of dominance without considering the mechanisms that data-driven firms may employ to accrue market power is a fundamental shortcoming with the focus of Canadian competition law.

New behaviours

One major theme of this paper is the description of new behaviours or combinations of behaviours (such as copycatting) that may not be well conceptualised under the current Act. These data-driven activities may contribute to the achievement and maintenance of market dominance. In the instances where they may not, we point to their growing ubiquity as a competition-related issue deserving of attention from policymakers in order to better empower consumers, workers, and entrepreneurs. To the extent that these behaviours are norm-setting, they may in aggregate act to create new barriers to entry for other firms to merely participate in digital markets. This may also disadvantage consumers, as individuals may be unable to discern digital manipulations like self-preferencing and personalized pricing that are not clearly disclosed. Indeed, these machinations may be essentially unavoidable in an online context. However, there are a suite of complementary policy tools outside of competition law that can help bring clarity to these activities for the consumer (and bring more fairness to digital

marketplaces through basic disclosure). We generally organize these opportunities under the theme of "transparency."

Basic transparency for consumers and merchants also emerges as a theme in this paper in light of various information asymmetries that arguably disadvantage platform participants and advantage platform (owners) in unique ways. The various surveillance-based activities of platforms may not be discernible to others that are using or participating on them, as information is collected through growing cookies or purchased from third-party sources (data brokers). Much of this murkiness risks being deemed "deceptive marketing" under the Act.

For instance, shoppers may not appreciate that they are receiving an advertised price that is calibrated to an inferred threshold based on demographic and other information that a platform has used to profile them (algorithmic or "personalized" pricing). We posit that consumers should be able to opt-out of (a better design would be to opt-in to) personalized pricing. They should also be entitled to the right to understand why they received a certain price (algorithmic explainability). Relatedly, merchants should not have to make themselves vulnerable to replication and price discipline in order to participate in online marketplaces (copycatting). The risks of participating in an online marketplace should be better addressed.

Precluding a satisfying policy response is more direct engagement with entrepreneurs and business owners in Canada. We take inspiration from the work of "Access to Markets" in the US through the American Economic Liberties Project, which works to foreground the challenges that entrepreneurs and independent businesses face in competing with corporate monopolies and policymakers at the federal and local levels.

Modernizing competition law in Canada

The common finding arising from the case studies is that in order to proactively and adequately address competition concerns driven by data, policy makers will need to rethink the fundamentals of Canada's competition law. This includes rethinking the standards by which we evaluate and judge anticompetitive conduct and our conceptions of competitive dynamics in data-driven markets.

As Iacobucci has also pointed out, **data can exacerbate pre-existing competition issues**.[193] Many of the proposed changes to the Act that have been called for in the past could help address these issues, such as reforming section 45, changing merger thresholds, and enforcing the Act in labour markets. In these cases, expanding the breadth of the law and the conduct covered makes sense.

There are straight-forward amendments to the Act that can address the issue of data dominance, like extending the window of time the Bureau has to investigate anti-competitive conduct. However, to adequately address these issues, we find that the substantive test used to evaluate anti-competitive conduct needs to be re-evaluated. Evaluating conduct based on the character of the conduct (deontological), rather than its effects (consequentialist), may

[193] Iacobucci, Examining the Canadian Competition Act in the Digital Era (September 2021) *Senate of Canada*.

make enforcement of the law and case outcomes more predictable. It may also better enable the law to proactively address competition concerns since it is unlikely for the Commissioner to be able to anticipate, let alone find evidence for, all the long-term outcomes of specific conduct.

Evaluating competitive conduct based more on heuristics than effects is economically sophisticated and will not lead to substantial harm through over-enforcement. A rules-based approach to evaluating conduct is traditionally anchored in an understanding of competitive behaviour more broadly that differs from the “laissez-faire” school of thought that underpins the Act. This laissez-faire perspective assumes that markets are naturally competitive and that over-enforcement presents more dangers than under-enforcement. Typically, more rules-based approaches to evaluating anti-competitive conduct are based on the understanding that without institutions in place to maintain competition, markets tend to monopoly.

In reality, it is likely that both positions are correct, depending on the specifics of the market and the time horizon one uses when making judgements on the durability of dominance. However, the case studies illustrate that the increasing use of data by firms, along with the digitization of commerce more generally, has led to more durable dominance and market power. Given that data is becoming more ubiquitous in Canadian commerce, we assume that dominance and its long-run consequences will also become more common. In light of these trends, policy makers should re-evaluate the substantive tests used to evaluate anti-competitive conduct such that they rely less on the assumption that markets are naturally competitive and more on the assumption that markets tend towards dominance.

Integrating consumer privacy and competition

The case studies also highlight the importance of addressing digital policy issues in tandem. This includes consumer privacy concerns in data-driven markets. Data-dominant companies often have access to and control of large amounts of private information. Their control over this information is subject to legal obligations imposed by privacy laws. In Canada, personal information is overseen by the Personal Information Protection and Electronic Documents Act and provincial equivalents. Canadian privacy law has fallen behind international standards for data protection, such as the General Data Protection Regulation in the EU and the growing number of state bills introducing privacy reforms in the US. Data protection laws that set a strong baseline of protections for consumers are a prerequisite to healthy competition in data-driven markets.

Data-driven dominance exacerbates consumer privacy issues and leaves privacy protection in the hands of a few, dominant companies that control user data and use it to further entrench their dominance. Many of the behaviours identified in the case studies rely on the use of personal information that is voluntarily shared, observed or inferred about consumers. In some cases, the use of this information falls within the ambit of private sector privacy laws. In other cases, when the information is anonymized or aggregated in ways that do not allow for re-identification, the information is not within the scope of privacy laws. Regardless of whether information falls within the privacy law framework, consumer privacy always interacts with data-driven behaviours.

Few competition cases to date, including the dispute between the Commissioner and the Toronto Real Estate Board (TREB) in Canada[194] and the Facebook case in Germany[195], have considered the relationship between competition law and data protection law. These cases exemplify two key intersections between competition law and privacy interact, respectively: instances where privacy is used as a business justification for anticompetitive conduct, and degradation of consumer privacy as a form of competitive harm and a reduction of consumer welfare. These are only two emerging examples of the relationship between these two areas of law. As Erika Douglas argues in her comprehensive review of the interaction of privacy and competition, "data privacy will likely grow in its relevance to abuse of dominance investigations and cases".[196]

The relationship between privacy and competition law requires further study. Some commentators, such as Ed Iacobucci, believe that privacy should not be a concern of competition policy. Other scholars have highlighted the need and potential to consider privacy in competition and antitrust analysis.[197] These arguments understand privacy as an element of product quality that ought to be taken into consideration when evaluating merger effects or effects of anticompetitive conduct. Both sides of this divide agree that consumer privacy and competition law interact, but disagree on exactly how this should be addressed by competition policy. The complexity of this interaction and the appropriate range of policy responses to the issue could be the subject of another research paper.

Regardless of whether privacy becomes an established consideration in competition analyses, data-driven dominance inevitably interacts with consumer privacy. Dominant firms can have both positive and negative impacts on the level of privacy afforded to consumers. For example, in April 2020, Apple decided to require user consent when an application tracked the user's movements through other applications and Apple's ecosystem. The consent requirement is, when considered through a privacy lens, a positive development that gives users more control over their information. It simultaneously impacts the viability of many applications that rely on advertising revenue that is dependent on precise consumer targeting. The rule applied to all applications except Apple's negative apps, putting non-native apps at a competitive disadvantage. This is an example of a positive privacy effect colliding with a negative competition effect. One can also imagine the negative impacts of a data-dominant firm on consumer privacy. The greater the accumulation and aggregation of data points about consumers, and the demographic communities they belong to, the more precise the targeting and personalized experience provided to all users. While personalization has clear benefits to user experience, the potential for negative long-term impacts is difficult to overstate: dominant firms can engage in discriminatory behaviour beyond pricing, implement sophisticated

[194] *Toronto Real Estate Board v. Commissioner of Competition*, 2017 FCA 236.
[195] Antitrust case against Facebook's 'super profiling' back on track after German federal court ruling (June 2020) Tech Crunch; Klaus Wiedemann, A Matter of Choice: The German Federal Supreme Court's Interim Decision in the Abuse-of-Dominance Proceedings Bundeskartellamt v. Facebook (Case KVR 69/19) (2020) *IIC* at 1171.
[196] Douglas, "Digital Crossroads: The Intersection of Competition Law and Data Privacy" (2021).
[197] See for example, Lynskey, "Considering Data Protection in Merger Control Proceedings" (June 2018) OECD at 5; Competition Merger Brief" (May 2017) *European Commission* at 5 (loss of privacy as parameter of consumer choice).

manipulation systems, and make AI-based decisions about individuals based on systematic behaviour tracking.

In addition to further research, the complex interaction between consumer privacy and competition policy requires collaboration between the Competition Bureau and the Privacy Commissioner. This recommendation is echoed in the recently released G7 Compendium on data protection and competition enforcement:

> "*The use of data is core to many digital platform business models, whose services are often offered 'for free' in exchange for consumer's data. Access to large datasets can contribute to a platform's strong market position which can be leveraged to collect more data to better target consumers and develop products and services. This cycle can make it difficult for new entrants and innovative challengers to compete. Competition agencies are therefore regularly considering how the ways in which platforms collect consumer data affect markets. This increasingly involves working closely with data protection and consumer enforcement authorities.*"

Areas of Further Study on Consumer Privacy and Competition Policy

As identified above, the exact interaction of consumer privacy and competition is an evolving policy issue that requires further research and development. The G7 Compendium on data protection and competition enforcement highlights that competition authorities are increasingly aware of the importance of consumer privacy concerns on their enforcement activities. Some areas for further research include:

- *How can a modern Canadian digital policy framework facilitate collaboration between privacy and competition regulators?*
- *What role should privacy concerns (such as a degradation of privacy protections) play when in the Bureau's analysis of mergers and potentially anticompetitive conduct?*
- *How should competition authorities approach balancing privacy and competition interests?*
- *It is widely accepted that consumer privacy preferences do not reflect consumers' actual market behaviour. How can, and should, competition policy address market failures related to consumer privacy?*

One particular area that deserves further regulatory scrutiny is the use of dark patterns and other manipulative design architecture online. Privacy law–with its overreliance on data subject consent–is inadequate at regulating dark patterns and manipulative online designs that lead people to reveal more about themselves in order to access "free" services. Part of the struggle is because often these are not questions of "privacy" per se, but questions about corporate behaviour and consumer manipulation. Companies use behavioural psychology to determine how to extract as much information as possible from their consumers. We ask: how can competition law help here? Should it? We also point to dark patterns as a rich area for further analysis in our suggestions for additional case studies.

Addressing information asymmetries through consumer protection

Canada's decoupling of consumer protection authority (provincially) from competition policy (federally) may disadvantage regulators as many of the data-driven behaviours that facilitate and cement data-driven advantages for firms rely on the participation of individuals.

This is partially why we see a role for the provinces to support achieving the goals of algorithmic transparency and explainability, alongside other challenges for businesses, such as: coercive contracts.[198]

Translating digital platform issues to labour law

In addressing gaps in current competition law that under-serve workers, we take inspiration from Eric Posner's "How Antitrust Failed Workers" and the recent paper from the Centre for Canadian Policy Alternatives, "Check and balance: the case for improving Canada's Competition Act to protect workers."

We find that data can exacerbate monopsony harms by powering algorithmic management as a way of reducing work quality. Further, while data has a role to play, the fundamental issues of monopsony power remain largely the same as in non-data contexts. Labour law is another necessary policy area that can be concurrently modernized in order to better protect another critical class of stakeholder: workers. When workers are participating in work matching activities on a platform, issues related to monopsony arise.

While we have considered proposing revisions to section 45 of the Act, it is not clear how the abuse of dominance provisions could be used to protect workers; since the fundamental issue we identify is structural, not behavioural. Further, we acknowledge that competition law is legislation that regulates how firms can leverage their market power in labour markets and that the abuse of dominance provisions does not adequately address uses of market power to exploit workers.

As discussed, the algorithmic application of data-driven insights is exacerbating the harms of monopsony when platform companies are governing the terms of competition for labour (or competition for products or services). However, in order for this behaviour to fall under the Act, we would need to totally re-conceptualize what abuse of dominance looks like: the relationship between employers and employees is markedly different than that of a consumer and a firm. Rather than re-thinking the abuse of dominance provisions, we propose that new, labour-focussed legislation at the provincial level could be a more satisfying response to these pressing issues.

The markets have a structure such that employers can leverage monopsony power to the detriment of workers. Proactive measures may be a better solution. Another useful intervention could be to **consider labour markets in merger investigations**.

[198] Ending Corporate America's Coercive Contracts

Issues raised by monopsony power can be mitigated by separate legislation that could additionally address the issue of pervasive worker surveillance while also seeking to mitigate the increasing data-fication of work, such as factory quotas (E.g. model California legislation, AB-701 Warehouse distribution centers, which regulates the use of production quotas in warehouse distribution centres). Such legislation would complement the recommendations in this paper as they pertain to commercial markets.

We argue that it is insufficient to only consider digital platforms from a consumer perspective. We must also consider the implications for the experience(s) of workers that are dependent on platforms to match them to job opportunities.

Exploring data as an essential facility

There has been some academic debate over recognizing data sets or databases as an essential facility that firms would have duties to share.[199] Under competition law, the designation of essential facility is traditionally reserved for infrastructural assets that are impossible to replicate (such as railroads, or telecommunications networks). In the European Commission's report on modernising competition policy for the digital area, Cremer et al discuss the implications of conceptualising databases in such a way.[200] Cremer et al argue that the 'essential facilities' doctrine is not the right framework to address competitive issues that arise in data-driven markets.

Instead, the authors re-conceptualize this topic as a question of whether dominant firms should have duties to consider access to data requests that balance the interests of the dominant firm and their competitors. This is an area that requires further study in Canada. Should data-dominant firms have special obligations toward (nascent) competitors? Should data sharing and access to APIs (and therefore, interoperability) be mandated? We recommend this topic for further research and consideration.

Abuses of digital dominance

Another core area of commentary concerns the implications of certain digitally-driven behaviours for formal competition law insofar that they constitute an abuse of dominance. Where possible, we have indicated where Canadian competition law lags behind the realities of a new economy.

While there are secondary issues related to competition law that are best addressed through other instruments, this does not negate the urgent need to rethink and revise Canada's

[199] When does information become an essential facility?; Church, The Lamentable Rise of an Expanded Essential Facilities Doctrine in Canada: The Troubling Economic Foundations of the Toronto Real Estate Board Decision (2018) *Canadian Competition Law Review*.
[200] Cremer et al, Competition Policy for the Digital Era (2019) *European Commission*.

Competition Act alongside the use of other policy tools in order to provide a clear set of rules that ensure fair competition in the online marketplace.[201]

The policy innovations being explored in peer jurisdictions related to self preferencing and gatekeeping should prompt Canada to systematically address each under the Act in a public memo.

Changes to the substantive test for abuse of dominance

Our analysis demonstrates that the current consequentialist approach for evaluating anti-competitive conduct is not well-suited to addressing dynamic competition concerns. It may be incredibly difficult, if not impossible, to predict the outcomes of markets. In a data-driven, digital context, the consequentialist approach fails and is likely unable to capture the numerous variables. We propose a more rules-based approach that may be less flexible, but more predictable.

We also observe that dominance and negative effects accumulate over time. For this reason, we proposed that time limits for abuse of dominance investigations be relaxed in order to empower enforcers with greater flexibility.

Conclusion: Cross-cutting approach

The themes in our proposed cross-cutting approach are: addressing new forms of market power, improving regulator capacity, introducing new vehicles for transparency, and addressing complexity.

Though unrelated to any of the case studies above, we note that generally, Canada's whistleblower protection is weak.[202] This is relevant as filing a complaint using the Competition Bureau Online Complaint/Enquiry Form is a viable way to report a complaint related to the Competition Act. It may be that in lieu of market students, market actors and workers are important sources of information for the Bureau that must be protected. In the US, Senator Klobuchar's Plan to Protect Whistleblower Information intends to protect whistleblowers from retaliation. Alongside better protections for whistleblowers, the Government of Canada may want to create a modest reward to incentivize whistleblowing, with the ambition of catalyzing more cases.

This paper started by summarizing much of the current conversation on competition policy in Canada. We note that many of the recommendations that are generally debated among experts are 'zombie' in that they have been present for years and are often re-litigated and re-visited. These include calls for budget increases that can support more enforcement, private action rights, potentially dropping or modifying the efficiency defence, and debate regarding

[201] Minister of Innovation, Science and Industry Mandate Letter.

[202] Canada's current legal framework for whistleblowing is outdated and out of step with internationally recognized best practices. The most serious deficiencies are 1) lack of protection for public sector whistleblowers, either at a federal or provincial level, and 2) an almost complete lack of coverage of the private sector.

the need, opportunity, cost and potential downsides of empowering the Competition Bureau to conduct market studies.

Some of this paper's analysis suggests that one of the new or more complex challenges related to competition in a data-driven market is less about incumbency or size of market share, and moreso about the progresstive ubiquitousness of new norms around business behaviours that create inherent challenges and potential barriers to entry for competitors.

Our proposed approach differs from more traditional proposals that may be more familiar for decision-makers. We advocate for the Ministry of Innovation, Science and Economic Development (ISED) and the Competition Bureau to consider new ways to conceive of the role of data during merger reviews. We argue for a more holistic and integrative approach with privacy authorities, and introduce a labour lens to platform-related issues; honing in on a major contemporary limitation of the current Competition Act.

This paper provides an overview of the strategies and tactics of leading digitally-enabled firms in obtaining and maintaining "data dominance" through discussions of gatekeeping, self-preferencing, and "copycatting." It also acknowledges that platforms tend to collect supplementary information from customers via their online "exhaust," in order to isolate additional insights that can further entrench their dominance and even act as a barrier to entry. Firms may also purchase datasets from third-parties (data brokers) to further enhance their strategic competitive advantage through data and/or acquire firms that currently hold data that is of competitive interest to the purchasing firm so that they may assimilate the data set(s) and/or neutralize a popular competitor (data-driven mergers). As part of any competition modernization exercise, it will be critical for Canada's competition authority to consider redefining "dominance" via volume and maybe even richness of data, and also understand the competitive harms that can flow from dominant firms that hold large volumes of information.

Throughout the case study discussions, the paper also discusses the various ways in which data dominance may be leveraged within markets to increase profits and protect against competition from new entrants; raising urgent considerations for the potential of increased intersectionality between privacy policy and competition laws and enforcement considerations. Through this, we echo the "need for a transversal coordinated approach to economic regulation in the digital age," that Dr. Jennifer Quaid advocates for.[203]

In our increasingly digital age, it makes little sense to consider competition policy in isolation. The intersections between data-dominant firms' practices to obtain, control, and leverage data and competition concerns invoke **privacy reform**, **consumer protection** support, and **labour law** alongside strategic modifications to the existing Competition Act. We describe our coherent, cross-cutting policy approach that we believe will aid in preserving and encouraging competition in data-driven markets (including traditional industries embracing digital adoption) where there may be a data-dominant incumbent.

Briefly, this proposed approach accomplishes the following objectives:

[203] Citation forthcoming: Prof JA Quaid - submission to consultation of the Competition Act

- ➔ It **improves the legislative capacity** for the Competition Bureau in a digital era;
- ➔ It suggests **additional considerations** that can be incorporated in the **merger review** process (via the Merger Enforcement Guidelines);
- ➔ It introduces **new transparency requirements** for firms engaging in data-driven behaviours that have implications for competition;
- ➔ It **empowers consumers** to make more informed, independent choices related to some of these problematic behaviours;
- ➔ It **protects workers** by recognizing and addressing the inability of competition law to address monopsony power in labour markets and recognizing wage-fixing as a criminal offense;
- ➔ It **empowers entrepreneurs** that promote their products in app stores;
- ➔ And it promotes **productive collaboration with relevant government actors to achieve regulatory coherence.**

Improved legislative capacity

Ultimately, the most polarizing aspect of our proposal is the provocation that policymakers will need to contemplate whether it is more acceptable to have a more consequentialist, substantive test for the civil provisions of the Act, including the merger provisions, that risks missing some anti-competitive conduct in a digital context or whether it is more appropriate to adopt a more deontological test that may prevent behaviours that are benign (or potentially socially beneficial).

We rationalize changes to the substantive test for abuse of dominance because we conclude that this is the best way to address the competitive issues raised by gatekeeping. We also suggest reforming the relevant subsection of section 79 in order to remove the three-year time limit that the Commissioner currently has for investigating abuses of dominance in order to enable more flexibility in potentially re-examining past behaviours that may not have been well-captured under the Act.

We also echo Iacobucci's suggestion that the Ministry reform the provisions related to criminal conspiracies, as section 45 of the Act does not currently recognize conspiracies to fix wages as a criminal offence. Reforming the provisions related to criminal conspiracies so that it covers conspiracies to fix the price of inputs will improve the ability of the Act to respond to data-driven behaviours, particularly in labour markets.

Incorporating additional concerns in the Merger Enforcement Guidelines

Alongside concrete legislative improvements to the Act, we have suggested that the role of data be broadly taken into consideration during the merger review process. We feel strongly that the role and value of data should be considered when evaluating a merger. We also suggest that the potential labour market impacts of mergers should be another consideration. Substantively, we advise that policymakers address two limitations in the MEGs that may

prevent the Commissioners from identifying potentially harmful, data-driven mergers: that they parties' products may not overlap at all, and the ability of a merger to create a barrier to entry. Such regulatory modifications will invite a fundamental rethinking of the traditional method by which mergers are evaluated.

Empowering consumers through transparency and choice

Beyond legislative strengthening, we call on policymakers to introduce new requirements for firms that are actively deploying some of the data-driven behaviours illuminated through the case studies. Basic disclosure obligations should exist for firms engaged in self-preferencing and/or personalized, algorithmic pricing. We also suggest that the consumer would benefit from a mandate that requires firms to label self-preferencing; understanding the actively as inherently being a form of misleading advertising. We further propose a mandate that firms explain the inputs and output of personalized pricing schemes to the customer (similar to the Facebook feature, "Why am I seeing this ad?"). We believe that the Ministry should work with other policy actors to achieve algorithmic transparency and auditability for transparency. This group could also consider the benefit(s) of algorithm registers for private firms.

We find that information on mergers in Canada is lacking, and also propose a dynamic database of all mergers that concern at least one Canadian firm so that policymakers and researchers can better identify emergent trends as well as mergers of interest for potential review.

Further research is required that could systematically review the current Terms and Conditions of the largest online marketplaces in order to understand the potential vulnerabilities of third-party sellers (e.g. replication) that are inherent to participation in contemporary online marketplaces.

Canadian policymakers should also monitor the recently-announced work on new rules on the use of consumer data that the FTC is considering, as there may be opportunities to make connections to ongoing privacy reform efforts.

Alongside empowering consumers through better disclosure, labelling, and explainability of some of these behaviours, we believe that individuals require the ability to make informed, independent choices related to some of these behaviours. Namely, they should be able to turn "off" self-preferencing in favour of experiencing non-discriminatory tankings, and they should also be able to opt-out of personalized pricing without penalty, instead receiving the lowest price possible.

Supporting workers through platform power and IoT limitations

Our proposed approach also acknowledges the experiences and challenges of workers in the digital economy; both in terms of navigating platform-based matching opportunities and through access to data and interoperability functions so that as a purchaser, the individual has more choice.

We have pointed to the opportunity for supplementary legislation that is worker-focussed. A provincial competition authority or provincial labour legislation would regulate conduct that hurts worker and consumer that would fall under the authority's jurisdiction, such as:

- Specific abuse of dominance or competitor collaboration provisions that are specific to labour markets;
- Wage collusion among firms;
- Price discrimination;
- And others.

The province cannot create criminal laws. This presents a challenge for implementing effective provincial competition regulation that takes on a labour perspective. However, it is not a massive barrier as there is a lot of room in the civil sphere. A provincial Commissioner of Competition could take cases to a provincial court, or a specialized tribunal, or the Competition Tribunal. The province could also empower private access to the Tribunal, which means that other parties could bring cases forward. A federalist model of competition policy is present in both the US and the EU.

Promoting entrepreneurship by opening payment processing to third-party operators

This empowerment extends to entrepreneurs, as we advocate for new legislation that would open up app store payment processing to third-party operators in order to lessen market control payments and allow for more innovation. API access will also enhance choice and innovation.

Promoting and permitting productive collaboration with relevant government actors

Finally, we have identified areas of policy collaboration across privacy, consumer protection, and labour authorities both federally and sub-nationally in order to better understand these digital behaviours, identify reasonable policy solutions, and better protect consumers while promoting competition. More robust privacy legislation is anticipated, and this may help to manage/mitigate these [new] abuses and promote dynamism. We also anticipate that many of the issues raised in this paper could be part of the focus of the new Data Commissioner.

Final Notes

We believe that competition frameworks in Canada need to fundamentally shift away from price-based competition considerations that do not and cannot capture the role and value of consumer data in driving firm valuation. Concurrent to this, we must also reconsider the concept of "harm" within Canadian competition policy in order to prevent new digital monopolies and promote better integration with related policy levers. At present, the law only

cares about valuation in order to establish jurisdiction. However, what really matters in our increasingly digital society is the (potential) ability of data on the firm's **ability to do harm**.

Quite simply: the traditional model of consumers buying widgets at a given price just doesn't make sense in a digital context. When consumers are trading their digital data in exchange for a product or service, the harms are broader than just price. The core issue to consider is also not about efficiency - the current organizing principle of Canadian competition policy - as it is not clear what an "efficient" social media company or an "efficient" media sector would look like.

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Appendix A: Long List of Potential Recommendations

Non-Legislative

Engage a broader diversity of perspectives

1. **Strike an internal Tech Task Force within the Competition Bureau to focus specifically on monitoring compliance in tech.**

(as the FTC created in 2019).

This could be similar to what was proposed in the 2020 Conservative platform, "Creating a technology task force within the Competition Bureau to examine whether dominance and anti-competitive behaviour of big tech is damaging to Canadian industry." However, we think that the "Big Tech" lens is unhelpful, and the focus should instead be on data-driven activities and digital firms.

2. **Engage entrepreneurs and small businesses owners in these debates.**

We note that these voices are absent in a Canadian context and take inspiration from the US work on "Access to Markets." The initiative is working to document the challenges that entrepreneurs and business owners face in accessing markets. Our observation is that a direct conduit for the voices of these stakeholders is absent in Canada, and that this could compromise nascent conversation on competition policy reform in Canada.

Data Sharing

3. **Explore mechanisms to share data for competition.**

This could be achieved through mechanisms such as data trusts or the creation and sharing of synthetic data sets. The data portability mechanism in previously-proposed privacy legislation would also be helpful here, but that is on an individual-basis and would not help smaller firms compete.

Database

4. **Create a searchable database of mergers.**

Current databases like Mergermarket, Refinitive, and Mergr are US-focussed and privately held. Perhaps a collaboration with Corporations Canada could at least create a

comprehensive database on the mergers of Canadian firms. A publicly accessible dataset that is maintained over time will be valuable to researchers and academics, and will also allow Canada to better track consolidation in general. It is possible that such a database could be monitored by an algorithmic system

Research

We also recommend subsequent investments in competition-relevant research that can continue to inform ISED and the Competition Bureau, and empower researchers, such as:

5. **Study the potential economic harms caused by data-opolies and determine whether the Competition Act could be modernized.**

This is one of the recommendations from the 2018 ETHI Committee Report (vii).

It echoes the observations made in a 2018 report from Stucke: Should We Be Concerned About Data-opolies?

> *With the rise of a progressive antitrust movement, the power of Google, Apple, Facebook, and Amazon is now topical. This article explores some of the potential harms from data-opolies. Data-opolies, in contrast to the earlier monopolies, are unlikely to exercise their power by charging higher prices to consumers. But this does not mean they are harmless. Data-opolies can raise other significant concerns, including* ***less privacy****,* ***degraded quality****, a transfer of wealth from consumers to data-opolies,* ***less innovation and dynamic disruption*** *in markets in which they dominate, and political and social concerns.*
>
> *Data-opolies can also be* ***more durable*** *than some earlier monopolies. Moreover, data-opolies at times can* ***more easily avoid antitrust scrutiny*** *when they engage in anticompetitive tactics to attain or maintain their dominance.*

We find no evidence that Canada has studied data-opolies.

6. **Study the dynamics and implications of self-preferencing on/by Canadian marketplaces.**

This paper discusses self-preferencing, but cannot comment with any greater detail on the scope of this behaviour in the Canadian marketplace. We believe it is worthy of further investigation.

7. **Study the relationship(s) between data brokers and competition in Canada.**

The data broker industry is highly relevant to the intersection(s) of privacy and competition law. Brokers are an additional way that firms can accrue and maintain market power as they blend the data that is volunteered to them with what they may infer and/or obtain from web-

tracking (e.g. through cookies). We note that the Privacy Commissioner of Canada has previously surveyed the landscape of data brokers in Canada and the US.[204]

8. **Study big data and differential pricing.**

See: Big Data and Differential Pricing (February 2015) from the Obama administration. Greater detail on how and where differential pricing may be being deployed would be valuable.

Maintenance of the Act

9. **Maintain the relevance of the Competition Act through mandated reviews.**

Commit to reviewing the Act every 5 years so it remains current (e.g. 2009-2021 is a 12 year period during a transformative time, and there hasn't been enough attention to the file over this period).

Legislative

The G7 compendium discusses strengthening institutional capacity and building institutional knowledge as two key mechanisms to strengthen institutional capacity. It further summarizes reforms to existing powers and approaches.

> "*There is growing consensus that additional mechanisms, powers, or safeguards are necessary and existing approaches should be modernised or strengthened to address the specific attributes of digital markets. While the reforms and reform proposals vary in content and scope, most facilitate easier or faster agency intervention or contemplate new regulatory regimes."*

10. **Commit to a comprehensive review of the Competition Act.**

We agree with Commissioner Boswell that a comprehensive review of the Competition Act is overdue. Our analysis has demonstrated why a 'case' approach is unlikely to create useful references for future analysis. Addressing any of the issues discussed in the nine case studies of this paper as a "one-off" in a more modest, piecemeal approach will be cumbersome.

11. **Consider assigning a special "gatekeeper" status to digital platforms of all kinds.**

Canadian policymakers should closely observe the EU's work on ascribing "gatekeeper status," as it could act to set a new precedent. Regardless of whether it may be beneficial for Canada to model or mimic this framework, the Ministry should be prepared to comment on the rationale for our policy response (or lack of one) to what may become a new norm.

12. **Consider a ban on the activity of self preferencing.**

[204] Data Brokers: A Look at the Canadian and American Landscape

This is currently being debated in the US. If a new "norm" is set whereby self-preferencing is deemed to be an inherently anti-competitive activity, Canada will need to directly address any divergence with a clear opinion.

13. **Consider whether algorithmic personalised pricing should be banned as an unfair commercial process.**

Chapdelaine provides parameters to delineate when algorithmic personalized pricing should be banned as a form of unfair commercial practice violating privacy norms.[205] Another option considered is not to ban any form of algorithmic personalized pricing per se but to require stringent disclosure obligations from suppliers to consumers about suppliers' use of consumers' personal data in setting differential prices, with a genuine and valid opportunity for consumers to opt out of this process.

At the very least, we advocate that customers should be informed when a pricing algorithm is being used to determine the price that they are paying. This can be achieved through basic disclosure.

14. **Empower consumers with the ability to turn "off" self-preferencing wherever it may occur.**

This paper advocates for better consumer rights in response to various digitally-driven behaviours. Alongside disclosure that a product is owned in some way by the platform operating it (again, disclosure) and a clear disclaimer that self-preferencing is occurring during a search activity, an individual should have the ability to turn "off" self-preferencing in favour of a different organizing principle governing their search (e.g. sorting by price, alphabetically, by volume, etc).

15. **Mandate that app-makers be allowed to use outside companies to process payments on their apps in app stores such as Google's Play Store, Apple's App Store, and Shopify's App Store.**

South Korea introduced the world's first national law opening app store payments to competition in August 2021. The new law prohibits app store platforms from requiring developers to use the app store's payment processing services for in-app purchases.

In the US, the Open App Markets Act would require companies that control operating systems to allow third-party apps and app stores.

16. **Mandate that private-label products be labelled to disclose the parent company, both in a digital and a brick-and-mortar context.**

This is related to achieving transparency and empowering customers with more agency. Alongside knowing re: self-preferencing, they should be able to know when a product is owned by the very same platform/marketplace that they are using. While this may ultimately be a consumer protection issue, it is related to advertising and labelling. Further, it is an opportunity

[205] Algorithmic Personalized Pricing

for a proposal from Canada to contribute to the ongoing international dialogue on modern competition issues in a digital context.

Privacy

17. Amenda PIPEDA to allow better collaboration between the Privacy Commissioner and the Competition Bureau.

Amend PIPEDA be amended so that a framework could be established "allowing the Competition Bureau and the Office of the Privacy Commissioner to collaborate where appropriate".[206]

PIPEDA be amended "to allow the Privacy Commissioners to share certain relevant information in the context of investigations with the Competition Bureau, other Canadian regulators, and regulators at the international level, where appropriate".[207] Testimony from experts noted that data-opolies can profit by "getting users addicted to spending more time on their platform.

Market Studies

18. Empower the Bureau to conduct Market Studies.

Another major barrier to enforcing the law in the digital space is that the Competition Act does not allow the Bureau to undertake market studies. In other jurisdictions, like those in the US, competition authorities can study specific markets by compelling information from businesses. This enforcement tool is very powerful because it allows agencies to identify problems that may not be revealed through publicly available information. For example, the FTC issued special orders to the "big five" tech companies – Google, Amazon, Apple, Facebook and Microsoft – as part of a study into acquisitions they made from 2010 to 2020. It may not be a coincidence that less than a year later the FTC brought a case against Facebook regarding its acquisitions of Instagram and WhatsApp.[208]

Purpose Statement

19. Host consultations on the optimal substantive test for abuse of dominance and potentially amend the purpose statement of the Act.

Abuse of Dominance Provisions

[206] Policy Proposals for PIPEDA Reform to Address Artificial Intelligence Report
[207] Democracy Under Threat: Risks and Solutions in the Era of Disinformation and Data Monopoly
[208] Excerpted from: The State of Competition Policy in Canada: Towards an Agenda for Reform in a Digital Era

Abuse of dominance by digital platforms is often focussed on the use and access of essential data; this is an idea where Canadian competition law does not have much experience.

20. **Broaden the abuse of dominance provisions to address the activity of "copycatting" followed by exclusion from a marketplace or under-pricing.**

21. **Adopt some recommendations from the Wetston paper related to abuse of dominance:**
    a. Expand to reach and consider anti-competitive conduct that benefits competitors;
    b. Increase monetary penalties to create more of a deterrent and better finance/remunerate/compensate the Bureau for their work.

22. **Update the substantive test used to evaluate anti-competitive conduct.**

We are of the view that changes are needed to the abuse of dominance provisions to adequately address anti-competitive self-preferencing, as well as other abuses of dominance. Specifically, changes to the substantive test used to evaluate anti-competitive conduct are needed.

23. **Reform the substantive test for anti-competitive conduct within the abuse of dominance provisions.**

Reforming the substantive test for anti-competitive conduct within the abuse of dominance provisions so that cases are less reliant on effects (consequentialist) and are more focused on behaviours (deontological) could be a solution.

24. **Remove the time limit that the Commissioner currently has for investigating abuses of dominance.**

Reforming section 79 to remove the time limit the Commissioner has for investigating abuses of dominance could also be beneficial.

25. **Reconsider past recommendations from INDU Committee re: predatory pricing and behaviour:**
    a. *The Government of Canada, after consulting with stakeholders, should consider amending paragraphs 50(1)(b) and 50(1)(c) of the Competition Act by replacing the phrase "or designed to have that effect" with the phrase "and designed to have that effect." In this way, the criminal predatory pricing provisions would require evidence of both "pricing below cost" and the intent of "lessening competition or disciplining or eliminating a competitor."*
    b. *The Government of Canada, after consulting with stakeholders, consider adding a new predatory pricing provision in the reviewable civil section of the Competition Act, possibly to be made applicable to the abuse of dominant position provision (section 79). The Government of Canada should also give consideration to ensuring that both the alleged predator has "market power" and the practice in question would "lessen competition substantially."*

Consideration should be given to introducing new enforcement guidelines for predatory pricing under the abuse of dominant position provision.

c. *The Government of Canada should study the impact of amending section 78(i) to state: "selling products at a price lower than average variable cost for the purpose of disciplining or eliminating a competitor."*

Enforcement

It is our position that investing more in the enforcement of an Act that is out of date/does not properly conceive of all of these new behaviours does not serve Canadians well.

26. Continue dialogue with experts about the Act's presumed flexibility to address these new behaviours.

New Remedies

27. Consider a "data wall" as a prospective remedy when a data-driven merger would create massive competitive advantages.

This is discussed in the case study on killer acquisitions.

Merger Control

Existing rules for reviewing mergers and acquisitions need to be reshaped to respond to the market realities of a digital context.

28. Consider the role and value of data when evaluating mergers.

Consumer data should be a primary review factor in digitally-relevant mergers. This paper acknowledges that dominant companies can strengthen their market dominance by accessing consumer data from acquisition targets (start ups for other companies from different markets), and that these types of mergers have beneficial efficiency outcomes because of data set accumulation. At the same time, exclusive access to data is an anti-competitive force. These acquisitions can bring about "concentration in control over valuable and non-replicable data resources" that can significantly entrench the dominant position of an already-dominant firm or platform.

The role of data is a blind spot in current Canadian competition law.

Other

Competition-Adjacent

We further advise greater collaboration and coordination with other relevant government actors, such as provincial ministries of labour and consumer protection authorities.

Labour

29. **Coordinate with provincial policy actors on new, labour-specific legislation that addresses monopsony issues and platform work.**

Consumer Protection Authorities

30. **Establish more regular liaison with provincial consumer protection authorities.**

This could be through an annual summit that connects the Commissioner to all provincial and territorial competition authorities.

Data Commissioner

31. **Brief Canada's new Data Commissioner on the key findings of this report.**

Privacy Commissioner

32. **Enable more collaboration between the Privacy Commissioner and the Competition Bureau.**

Digital Safety Commissioner

33. **Brief the new Digital Safety Commissioner on the key findings of this report.**

We are not making the arguments for an independent, platform-specific regulator to focus on these issues, rather, we are arguing for better coordination and competition with existing regulators that are relevant to competition enforcement.

Appendix B: Competition Bureau Canada - Compendium of approaches to improving competition in digital markets

Canada - Competition Bureau Canada

The Competition Bureau's (CBC) vision is to be a world-leading competition agency, one that is at the forefront of the digital economy and champions a culture of competition for Canada.

Whether you have sought to use enforcement or non-enforcement tools, law enforcement or regulatory action to address such issues. You may wish to highlight any particularly relevant cases.

Enforcement

The Competition Bureau is focused on safeguarding and promoting competitive markets in the digital economy. Our enforcement actions demonstrate this focus.

Abuse of Dominance

The Bureau proactively seeks information from market participants about potentially anti-competitive conduct in digital markets.

> (a) In 2019, the Bureau issued a call-out to market participants for information to inform potential investigations into anti-competitive conduct by firms in digital markets.78 We heard concerns from a wide range of stakeholders and received meaningful submissions from businesses that compete in the digital economy, industry and trade associations and Canadian consumers. This exercise identified specific issues that are relevant to current enforcement considerations.
> (b) Last year, the Bureau invited market participants to provide input to help inform its ongoing civil investigation into conduct by Amazon, on its Canadian marketplace (Amazon.ca).79 This investigation under the restrictive trade practices provision of the Competition Act is ongoing. Competition Bureau call-out to market participants for information on potentially anti-competitive conduct in the digital economy - Competition Bureau Canada. Competition Bureau seeks input from market participants to inform an ongoing investigation of Amazon - Canada.ca.

The Bureau also concluded an abuse of dominance investigation into Softvoyage, a firm that provides access to vacation packages.[OBJ]80centred around third party access to data in Softvoyage's software. As part of the consent agreement, Softvoyage will not enforce several types of exclusionary and restrictive contract terms that increase barriers to entry in the industry.

The Bureau's case against the Toronto Real Estate Board (TREB) challenged anticompetitive restrictions that affected the ability of real estate agents and brokers to compete using new internet-based business models. The Supreme Court's decision in August 2018 dismissed TREB's appeal of earlier decisions that required it to remove anti-competitive restrictions that

prevented its members' from accessing and using real estate data in innovative ways. This litigated case provided important jurisprudence on many issues relating to digital markets and data, including non price effects, intellectual property, and privacy considerations.

The Bureau is currently investigating whether Google has engaged in practices that harm competition in the online display advertising industry in Canada. In October 2021, the Bureau obtained a court order for Google to produce records and written information that are relevant to the investigation.

Mergers

In a 2019 merger, the Bureau reached a consent agreement to address competition concerns in the supply of oil and gas reserves valuation and reporting software in Canada following an investigation into the acquisition of Aucerna by Thoma Bravo. The consent agreement required Thoma Bravo to divest certain software from its portfolio.

Advocacy

The Bureau actively advocates for competition in digital markets, including an ongoing market study into Canada's digital health care sector to better understand existing or potential impediments to innovation and choice. The Bureau invited stakeholders to share their views on factors that may prevent access to the sector or limit innovation and choice in the delivery of products and services. This included public consultations as well as an online Digital Health Services Survey to hear from Canadians about their experiences with digital health care services.

Any steps your agency has taken to strengthen its institutional capabilities to better equip it to deal with digital competition issues (for example, by forming a special unit, recruiting more data specialists, building new investigative tools, or gathering new/different evidence).

Chief Digital Enforcement Officer

The Bureau created the new position of Chief Digital Enforcement Officer (CDEO). Our first CDEO helped us implement new intelligence gathering tools, and modernize and establish a strong foundation to enhance our digital enforcement capacity.

Digital Strategy

Our CDEO spearheaded our first agency-wide digital strategy to execute on digital transformation. The strategy is based on five pillars:

(a) Build a culture of innovation and continuous improvement;
(b) Modernize technology and be digital by design;
(c) Be insight driven and shift from reactive to proactive;
(d) Open collaboration and cooperation;
and (e) Evolve digital policy, compliance and governance.

The CDEO launched the Bureau Innovation Garage (BIG)—a platform where employees can experiment with new concepts, pilot new ideas and explore digital technologies. We also established a Digital Evidence Community of Practice, which finds efficiencies by sharing knowledge and best practices.

Intelligence Capabilities

The Bureau is expanding intelligence-gathering efforts to monitor rapidly changing digital markets. The Bureau's Merger Intelligence and Notification Unit invested in new sources and tools to monitor merger activity that may impact competition, but which may not be reported under merger notification thresholds. The Bureau also established a Monopolistic Practices Intelligence Unit to examine and analyze trends in the marketplace and detect and deter anti-competitive behavior.

Exchange of Expertise

The Bureau hosted an in-person Data Forum as well as a Digital Enforcement Summit to convene domestic and international experts and practitioners to identify trends and share expertise, including new tools and strategies for tackling emerging digital enforcement issues.

New Investments

To enable the Bureau to tackle issues in the modern economy, Canada's government announced a significant increase to the Bureau's budget commencing in 2021. The Budget includes one-time funding of CA$96 million over five years and an ongoing yearly increase of CA$27.5 million. Among other initiatives, the increased funding will be used to establish a Digital Enforcement and Intelligence Branch. This will allow the Bureau to use technology and analytic capabilities for enforcement and competition promotion. The Bureau plans to hire staff with specialized expertise, including data scientists and digital intelligence analysts. The Bureau will also invest in modern, sophisticated infrastructure, including cloud-based and artificial intelligence tools.

Whether, in your jurisdiction, (a) there have been any national reforms or new laws or regulations to better address digital competition issues, or (b) there are any significant proposed reforms pending before national legislative or regulatory bodies to better address digital competition issues.

There have not yet been any reforms in Canada to better address digital competition issues and there are currently no proposed reforms pending before national legislative or regulatory bodies.

Any law enforcement, regulatory, or policy work by your agency concerning digital competition issues that has involved interaction with non-competition agencies or other laws or policy areas—such as privacy, consumer protection, or media sustainability—and how it was or is being handled.

Competition Policy in Canada

The responsibility for competition policy in Canada rests with the Strategy and Innovation Policy Sector in the Department of Innovation, Science and Economic Development Canada (ISED). The Bureau continues to work with the policy sector on various issues. For example, the Bureau provided input to policy officials on digital issues following a request by the Minister of Innovation, Science, and Economic Development. The Bureau has advocated through meetings, communications, public statements and appearances before Parliamentary committees for a comprehensive review of the Competition Act to ensure that it is fit for purpose, including a review of current market study powers, statutory tests for anti-competitive conduct and mergers, private enforcement mechanisms, and penalties, among other things.

Interaction with Non-Competition Agencies, Laws, and Policy Areas

The Bureau works regularly with other federal departments and agencies and with all levels of government (municipal, provincial and territorial). It works with regulators and policymakers to assess the competitive impact of new and existing policies and regulations.

(a) Building on our market study on FinTech, we continue to work closely with regulators and policy-makers across Canada to recommend changes to make banking more convenient through FinTech and open banking, including through submissions to the Department of Finance and the Advisory Committee on Open Banking, and appearances before Parliamentary committees studying the issue.
(b) We have made recommendations to municipalities dealing with the disruptive arrival of ride-sharing services such as Uber and Lyft and many have acted on our advice.
(c) We developed and shared the Competition Assessment Toolkit – a step-by step guide to identify policies that may impact competition.
(d) The Bureau sits on a number of interdepartmental working groups on topics like digital trade, international cooperation, and privacy. Bureau employees are also deepening working-level relationships with employees at the Office of the Privacy Commissioner of Canada, the Canadian Radiotelevision and Telecommunications Commission (CRTC), Justice Canada, Global Affairs Canada, Finance Canada, the Privy Council Office, and Treasury Board Secretariat on competition issues in digital markets. The Bureau provides analysis, monitoring and benchmarking, and expertise.

Consumer Protection

The Bureau takes action against deceptive marketing practices in the online environment, including:

(a) a settlement with Facebook that included a CA$9 million penalty regarding falsE or misleading claims about the privacy of Canadians' personal information online;
(b) a settlement with FlightHub Group Inc. that included a CA$5 million penalty following an investigation that concluded the online travel agency misled consumers about prices and services, made millions in revenue from hidden fees, and posted false online reviews; and
(c) a settlement with Ticketmaster that included a CA$4 million penalty following an investigation into the practice of "drip pricing" (offering appealing prices and adding mandatory fees later on in the transaction).

The Bureau reviewed influencer marketing practices. We sent advisory letters to nearly 100 brands and marketing agencies in many sectors. In 2020, the Bureau issued new guidance to advertisers and influencers.

The Bureau also has regional, domestic, and international consumer protection law enforcement partnerships with various police forces and government agencies.

In 2020-2021, the Bureau served as President of the International Consumer Protection and Enforcement Network (ICPEN). The theme of the Presidency was “building consumer trust in a changing marketplace”. The Bureau developed a digitally-focused programme of work, and established working groups on artificial intelligence, digital platforms, enforcement in the digital economy, and privacy. The Bureau also hosted international exchanges of best practices relating to digital issues.

Other Intersections with Privacy

The Bureau worked with partners to tackle consumer protection and privacy issues in digital markets, including the Office of the Privacy Commissioner of Canada and CRTC. We issued letters to 36 companies in the mobile applications industry. These letters advised companies to review their practices and take preventive or corrective measures where necessary to meet their obligations under anti-spam, privacy, and competition legislation.

Data privacy issues were at the forefront of the Bureau’s case against the Toronto Real Estate Board (TREB). The courts affirmed that privacy can be a legitimate business justification for engaging in otherwise anticompetitive conduct but found that TREB's restrictions were not based on privacy concerns. Instead, evidence showed the privacy arguments were a “pretext” and an “afterthought” used to justify anti-competitive restrictions.

Appendix B: Other potential case studies for future discussion

While these nine case studies have illuminated the limited elasticity of Canada's Competition Act to consider digitally-relevant cases that are being actively explored in peer countries, we also suggest a few additional areas worthy of future exploration. These are:

➔ **Subscription cancellation mechanisms**
- The FTC is looking into companies that use deceptive tactics to lock customers into subscriptions.

➔ **Open banking**
- This case exemplifies the intersections between data portability and closed proprietary systems that we are discussing, especially the distinction(s) between volunteered and derived data.

➔ **Data brokers**
- Data portability and competition
- How Do Competition Policy and Data Brokers Shape Product Market Competition?
- FTC has done some work on data brokers, calling for transparency and accountability in 2014
- Selling Strategic Information in Digital Competitive Markets
- Area of further research in terms of any implications for competition
- They are opaque organizations
- Not a lot of writing about data brokers and privacy stuff in a competition context, though Canada's privacy commissioner has previously opened a probe into Canadian data brokers' privacy practices
  - 2014 - Data Brokers: A Look at the Canadian and American landscape
  - 2018 - Back on the Data Trail: The Evolution of Canada's Data Broker Industry
- Usually credit reporting is the context that considers data brokers
- Generally relevant re: value of data mergers, needs to be explored more

➔ **Smart contracts and blockchain**
- The law firm Blake's notes that "Smart contracts," which are agreements built into a blockchain that execute automatically when certain conditions are met, could also help competitors coordinate by creating automated punishments for deviations or rewards for raising prices or cutting output.

➔ **"Dark patterns"**
- The FTC hosted a virtual workshop this past spring and recently "ramped up" enforcement against illegal dark patterns that trick or trap consumers into subscriptions. Neither the Competition Bureau nor Consumer Protection authorities in Canada seem to be considering dark patterns.
- An article on dark patterns was published earlier this year on "Competition Policy International." It is called, "Something's Happening Here but You Don't Know What It Is. Do You, Mrs. Jones?" Dark Patterns as an Antitrust Violation

➔ **Loyalty programs**

- Loyalty programs may be a productive vehicle to consider whether loyalty-rewarding pricing schemes are anti-competitive.

Appendix C: Proposed Areas of Future Research

1. The intersections between privacy and competition law(s) in Canada
2. Data as an essential facility
3. Regulating data brokers in Canada
4. Coercive contracts
5. Artificial intelligence and competition law

Appendix D: Case Study Summary: Conduct, Gap(s) and Solution(s)

CASE	CONDUCT	GAP	SOLUTION
Gatekeeping	Gatekeeping happens in contexts where a platform has the ability to control access to the platform or the behaviour of firms within the economic ecosystem that it oversees. Platform operators can set terms that control behaviour because as arbitrators of the platform they determine whether and how third parties can access the consumers that use their platform. Platforms engage in gatekeeping when they set rules that may arbitrarily dictate whether and how third parties access and operate within a marketplace in ways that disadvantage or exploit third party users of the platform.	The abuse of dominance test only applies to harm inflicted on competitors. Further, the consequentialist test is harder to meet: evidentiary standards; identify anti-competitive conduct directly rather than indirectly through its effects. In-app purchase requirement may be thought of as an exclusionary practice. The Act's abuse of dominance provisions would likely have **limited ability** to address excessive pricing made possible by Apple's in-app purchasing rules. While these rules clearly harm consumers, it is **less clear how these rules harm competitors**, which is a necessary element of abuse of dominance conduct in the law.	To take cases like those initiated by the European Commission and several other authorities that address Apple's commission pricing, **the abuse of dominance provisions under the Act would need to be broadened to include behaviours that do not negatively impact competitors.** Iacobucci outlines a similar proposal. Furthermore, **legislators should consider making changes to the substantive test (a substantial lessening or prevention of competition) used to identify anticompetitive conduct within the abuse of dominance provisions**. Another approach to addressing these issues other than reforming the Act's abuse of dominance provisions could be **to implement digital-specific competition legislation** like the EU's Digital Markets Act (DMA) or Germany's approach.
Self-preferencing	Self-preferencing involves actions by an undertaking which are designed to favour its own products or services over those of its competitors by a platform that is open to other people's products.	The extra step needed to meet a consequentialist substantive test means that more analysis and data is needed to construct a compelling case. There is the possibility that lack of data may prevent enforcement from identifying what may otherwise be anti-competitive conduct.	Changes to the abuse of dominance provisions. Consider self-preferencing a form of advertising, and require that firms disclose when this is occurring. A further step would be to mandate the ability to turn self preferencing "off."

			Regulating or creating rules for algorithms.
Copycatting	We use the placeholder of "copycatting" to refer to the ability of firms to derive insights based on customer data (both directly volunteered and also "exhaust" that may be derived) (e.g. purchase history, wish list, etc.) in order to establish the demand or desirability of a particular item or service that can then lead to its replication.	The Act and associated jurisprudence does not provide the Commissioner or the Tribunal with the conceptual tools to assess and proactively address the likely long-run impacts of using data to copycat competitors or otherwise further dominante markets. It may be difficult, if not impossible, to collect sufficient data to show on a balance of probabilities that the conduct resulted in specific economic harms, given the complex economic analyses that would need to be completed.	If a platform also takes steps to exclude the original product after launching its own - whether by making it obsolete or self-preferencing - that is a classic abuse of dominance. if the platform is simply launching a similar product, probably even if it takes advantage of data that only it has – this might need some additional legislation that goes beyond pure antitrust law if it is a harmful practice. **Reforming the substantive test for anti-competitive conduct** within the abuse of dominance provisions so that cases are less reliant on effects (consequentialist) and are more focused on behaviours (deontological) could be a solution. **Reforming the relevant subsection of section 79 to remove the three-year time limit the Commissioner has** for investigating abuses of dominance could also be beneficial
Labour market monopsony	Despite relatively little attention from competition authorities, anti-competitive conduct in labour markets can impose significant harms on workers. Firms can wield labour-market monopsony power to suppress wages and other compensation (like benefits, time off, etc.), and reduce overall work quality and stability. Firms may exert their	One notable shortcoming of Canada's competition law that prevents the Commissioner from addressing labour market monopsony (both data-driven or otherwise) rests in the Competition Act's provisions related to criminal conspiracies. Section 45 of the Act does not recognize conspiracies to fix wages as a criminal offense. Rather, investigations into collusive agreements to fix wages would need to be taken under civil provisions of the Act, which	• Algorithmic transparency • Auditable algorithms • New legislation that is specific to labour markets. This may have to be provincial in nature, given jurisdiction.

	monopsony power unilaterally, or jointly with others as part of an explicit or tacit collusion scheme.	impose a legal test of anti-competitiveness that is more difficult to meet.	
Personalized pricing	"Personalized" pricing uses automation (increasingly, artificially intelligent systems) to target users with a price that matches their personal buying threshold. It is distinct from "dynamic" pricing, which looks at the broader market rather than the individual customer.	The main harms identified are related to explicit and tacit collusion. Personalized pricing itself may be beneficial to some consumers while making other consumers with a higher willingness to pay worse off. It is not clear whether competition law has a role to play in addressing this issue. The more direct competition problem that personalized pricing and pricing algorithms raise is the facilitation of tacit collusion. But in this case, it is unlikely for there to be a direct solution under competition law. Prevention is better.	● Algorithmic auditability ● Explainability re: personalized pricing (e.g. like the "Why am I seeing this ad?" but "why am I seeing this price?") ● Ability to turn this "off" [?]
IOT, data access, and interoperability	Internet of Things (IoT) devices produce, collect, and analyze a huge amount of data on user biometrics (voice data), behaviour, device use, and the physical environment surrounding the IoT ecosystem.	The competition problem inherent to IoT infrastructure is similar to that raised in copycatting. When firms have exclusive access to large amounts of data, it puts them in a dominant position that constitutes a barrier to entry.	Substantive test may raise issues.
Data-driven mergers and joint ventures	In recent years, there have been several mergers and joint ventures that are ostensibly motivated by the acquisition of data that can then further empower the purchasing firm. It is not possible to identify how many mergers take place or joint ventures are formed with the	A key concern in data-driven mergers is that the aggregation of data by the merging parties will constitute a barrier to market entry for potential competitors. The EU decision highlights that the core harm that can arise from mergers (or joint ventures, since they are evaluated using substantially the same evaluative framework)	- Data walls as a remedy - Consider the role and value of data in merger reviews - The need for a more rules-based substantive test.

	motivation of consolidating data.	that combine firm data is not a direct substantial lessening or prevention of competition with respect to competition in the market today, like the removal of a competitor from the product market. Rather, the issue is that these mergers can fundamentally change the structure of the market by creating, in essence, a "super competitor" will likely not be usurped by a new or current competitor. It is possible for the Commissioner to challenge a merger on the basis that the data holdings of the two firms would create barriers to entry that could undermine competition post-merger. However, we are skeptical that such an argument would be successfully received by the Tribunal. It may also not be likely for the Commissioner to make such an argument given that data is not identified as a potential barrier to entry in the Merger Enforcement Guidelines (which were published in 2011). At core, the same issue as the copycatting case study.	
Killer acquisitions	"Killer acquisitions" refer to when incumbents acquire nascent competitors to neutralize them.	There are aspects of the Act and the Notifiable Transactions Regulations that could prevent the Bureau from effectively identifying and challenging mergers intended to neutralize nascent competitors.	- Reforms to Canada's merger laws - Shifting the burden in merger enforcement to dominant platforms to demonstrate the merger is not anticompetitive.