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By email:

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The Digital Platforms Inquiry
Australian Competition and Consumer Commission
By email: platforminquiry@accc.gov.au

Dear Chairman Sims,

SUBMISSION TO THE DIGITAL PLATFORMS INQUIRY

We appreciate the opportunity to provide a submission to The Digital Platforms Inquiry, which we believe is investigating issues of great importance to the Australian economy.

As part of our coursework at the Harvard Kennedy School, we have conducted a research project into appropriate regulatory responses to the rise of online platforms. In particular, we focussed on the regulatory challenges associated with rating systems and other trust mechanisms employed by online platforms to enable and facilitate transactions.

Our work was conducted for the Office of Policy Planning at the Federal Trade Commission in the United States. We wish to emphasize that this work reflects the views of the authors and should not be viewed as representing the views of the Federal Trade Commission, nor those of Harvard University or any of its faculty.

We believe a number of our findings may be of interest to the Australian Competition and Consumer Commission's Digital Platforms Inquiry. We outline these findings below. The full report is available at bit.do/onlineplatforms.

We would be happy to provide any further information to assist your inquiry.

Yours faithfully,

Mitchell Watt and Hubert Wu

SUMMARY OF RELEVANT FINDINGS

1. **Trust mechanisms enable transactions on online platforms, including in the advertising industry.**

All transactions require a minimum level of trust between participants in order to occur. Online platforms face at least three additional trust challenges that distinguish them from other kinds of firms:

- Parties in online environments are often anonymous to each other and decoupled from their offline identities.
- Physical interactions that traditionally occur in offline environments are often impossible in an online environment.
- Online platforms possess the ability to collect and use a large amount of data about participants and their activities.

In response to challenges like these, online platforms have developed novel and diverse ways to facilitate exchange between their participants.[1,2] These *trust mechanisms* may lower information asymmetries for consumers and advertisers and represent an advantage for online platforms over other forms of online commerce (re: Issues Paper Questions 3.14 and 3.19).

Trust mechanisms include ratings systems, user-generated reviews, profiles, public transaction histories, centralized guarantees, and many other means to overcome to overcome both the information asymmetries that exist between participants on a platform.

In the online advertising industry, the key trust problem facing potential advertisers is to ensure that advertisements are presented to appropriate audiences to drive engagement and generate revenue. Trust mechanisms used by online advertising platforms tend to take the form of real-time reporting to advertisers on key engagement statistics such as click-through-rates, viewer demographics and other measures of advertising success. The reporting of information relating to advertisement effectiveness is often included in the terms and conditions of online platforms (re: Question 3.20).

2. **Trust mechanisms on online platforms differ between firms and industries in ways that may affect consumer outcomes.**

Three broad ways in which platforms' trust mechanisms differ from each other are in regards to their **participants**, **informational content**, and **function**. A detailed version of our proposed classification scheme for trust mechanisms appears in the figure overleaf.
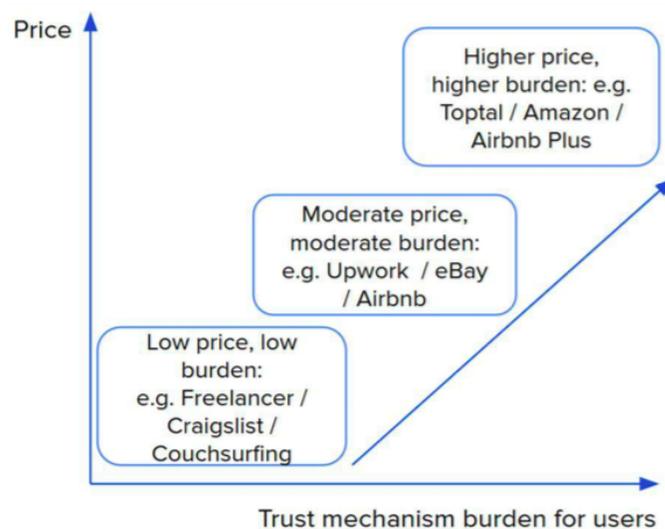
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[1] Martens, Bertin. "An Economic Policy Perspective on Online Platforms." *Institute for Prospective Technological Studies, Digital Economy Working Paper 2016/05*. 2016.

[2] Marina Lao et al. "The 'Sharing' Economy: Issues Facing Platforms, Participants & Regulators" *A Federal Trade Commission Staff Report*. 2016, p. 9, 35.

Trust mechanisms in online platforms			Example: Uber
Participants — Who participates in the platform's trust mechanism?	**Sides** – which sides of the market participate?		One-sided
	Access – who is permitted to participate?		Only transacting parties
	Obligation – who is required to participate?		Optional (was mandatory)
Content — What information do market participants provide to the platform in the trust mechanism?	**Format** – what is the format of the informational content?		Star ratings, comments
	Scale – what is the scale used or space of possible responses?		Five stars / open response
	Subcategories – are there ratings subcategories and how are these structured?		No, although tags may 'modify' ratings
	Frequency – how frequently are participants prompted to use the mechanism?		After every transaction and when app re-opened
Function — How is the content of the trust mechanism used by the online platform?	**Visibility** – who may view the content collected?		Future matches see summary
	Anonymity – is the information collected anonymized?		Yes
	Weighting – are responses weighted in some way, and if so how?		Only recent 500 ratings used
	Influence – how are participant interactions with the platform influenced by the trust mechanism?		Drivers banned below certain level, users may cancel after match but before pickup, some perks for high rated drivers
	Filtering – are there mechanisms for assessing credibility of information provided?		"Ratings protection" – consistent low raters discarded as are low ratings with certain banned reasons (e.g. GPS route)

Appendix A contains several examples of this classification for selected firms within the online advertising industry.

The variety of trust mechanisms used by online platforms suggests that a one-size-fits-all approach would be an inappropriate regulatory response for online platforms. These differences in trust mechanisms may be driven by differences in the trust problems inherent in an industry, or may arise as a result of product segmentation and competitive positioning (as illustrated below) (re: Question 3.10). This suggests that the regulation of trust mechanisms used by online platforms may also have consequences for competition within an industry.

Price (y-axis) vs Trust mechanism burden for users (x-axis):
- Low price, low burden: e.g. Freelancer / Craigslist / Couchsurfing
- Moderate price, moderate burden: e.g. Upwork / eBay / Airbnb
- Higher price, higher burden: e.g. Toptal / Amazon / Airbnb Plus

3. **Trust mechanisms may improve marketplaces by growing markets and enabling superior targeting of spending**

The economic and social benefits arising from trust mechanisms fall into at least three categories:

- **Replacing existing laws and regulations**: for example, effective trust mechanisms on online platforms may weaken the rationale for occupational licensing in certain industries, with the quality assurance role of licenses being substituted by a similar function of rating mechanisms.
- **Growing markets and increasing economic welfare:** there is evidence from several industries that the emergence of online platforms may grow overall market size and improve consumer welfare.[3]
- **Enabling superior targeting of government spending**: for example, review data collected on online platforms have been used by governments to better target spending programs including restaurant health inspections[4] and monitoring of general practitioners.[5]

Within online advertising, there is good reason to believe that online platforms may grow markets and improve welfare. For example, engagement reports provided to advertisers by platforms are often much more targeted (e.g. pertaining to a specific demographic or income level) than is feasible in non-platform environments such as print media or outdoor formats (re: Question 3.8 and 3.10). Consumers of advertising may also benefit from receiving information about products or services that are better matched to their preferences (re: Question 3.19).

4. **Trust mechanisms may be vulnerable to strategic manipulation**

The integrity of the data collected and displayed through trust mechanisms is vital to effective market functioning on online platforms. The strategic incentives of various market participants may pose a threat to the integrity of trust mechanisms. Three key groups that may have an incentive to manipulate trust mechanisms include:

- **Sellers**: vendors in online platforms may wish to present a more positive image of themselves than other users might provide. This may lead to fake reviews or inducements by sellers to provide false reviews (re: Questions 3.18 and 3.19). Where

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[3] See, for example, in the ridesharing industry Cohen, Peter et al. Using big data to estimate consumer surplus: The case of uber. No. w22627. National Bureau of Economic Research, 2016. In peer-to-peer rental markets, see Fraiberger, Samuel P., and Arun Sundararajan. "Peer-to-peer rental markets in the sharing economy." Forthcoming. (2015).

[4] Kang, Jun Seok, Polina Kuznetsova, Michael Luca, and Yejin Choi. "Where not to eat? Improving public policy by predicting hygiene inspections using online reviews." In *Proceedings of the 2013 Conference on Empirical Methods in Natural Language Processing*, pp. 1443-1448. 2013

[5] The Behavioural Insights Team. "Using Data Science in Policy," 14 December, 2017, report available at: behaviouralinsights.co.uk/publications/using-data-science-in-policy/.

identified, vendor manipulation may lead to countervailing responses by users and corrective action by platforms (re Question 3.35).

- **Buyers:** Buyers may have an incentive to misreport information in a trust mechanism. Two examples of these include retaliatory feedback and the upward bias that results from social reciprocity effects.
- **Online platforms:** Platforms themselves may wish to bias trust mechanisms in some circumstances, for example, to favour certain participants or to inflate overall ratings for competitive gain.

Among online advertising platforms, there is reason to believe that trust amongst participants has been adversely affected by instances of strategic manipulation to date. One common problem on online advertising platforms that diminishes perceptions of trust by advertisers is instances of manipulation by other vendors on online platforms. A recent report on by the Association of National Advertisers found that ad bots inflate monetized audiences on online platforms by between 5 and 50% at a cost of around $6.3 billion per annum to advertisers.[6] This has led some advertisers to decrease advertising spending on online platforms (re: Questions 3.6 and 3.7), with the World Federation of Advertisers (whose members include some of the largest advertisers including McDonalds's, Visa and Unilever) warning members

"Until the industry can prove that it has the capability to effectively deal with ad fraud, advertisers should use caution in relation to increasing their digital media investment, to limit their exposure to fraud."[7]

In response, the Media Rating Council developed a third-party accreditation system for measurement of the effectiveness of ads, which is now used by Facebook, Twitter, Google and others (re: Question 3.35).[8]

5. **Online platforms should increase the transparency of their trust mechanisms, to improve informed consumer choice**

We believe one of the key challenges facing consumers in platform marketplaces is a lack of transparency regarding the characteristics and function of trust mechanisms on many online platforms (re: Question 3.11). In many cases, platforms may provide information regarding the 'participants' and 'informational content' characteristics of their trust mechanisms, but are reticent to share publicly or readily full details on the 'function' characteristics of their trust mechanism. This often includes information about qualification requirements for participation on

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[6] White Ops/Association of National Advertisers. "The Bot Baseline 2016-17: Fraud in Digital Advertising," https://www.ana.net/content/show/id/botfraud-2017. (Accessed 16 March, 2018).

[7] Kotila, M., Ruben C. Rumin, and Shailin Dhar. "Compendium of ad fraud knowledge for media investors." *WFA and The Advertising Fraud Council Report,* 2017, https://www.wfanet.org/app/uploads/2017/04/WFA_Compendium_Of_Ad_Fraud_Knowledge.pdf. (Accessed 16 March, 2018).

[8] Bahlavan, Pahlavan. "Building trust and increasing transparency with MRC-accredited measurement." *Google Agency Blog,* 21 February, 2017, https://agency.googleblog.com/2017/02/building-trust-and-increasing.html. (Accessed 16 March, 2018).

the platform; whether certain reviews and ratings are filtered or otherwise hidden from users; the ability for users to pay the platform to display better reviews or ratings; or the use of ratings and reviews to influence search results on platforms. This may prevent users from exercising informed choice while conducting transactions on platforms (re: Questions 3.7, 3.11, 3.18, and 3.21).

Within online advertising, there are several areas where the transparency of platforms' trust mechanisms is lacking (re: Questions 3.11 and 3.21). It is not always clear to users of platforms how their information and interactions are being used in reports provided to advertisers. For example, it not clear whether platforms like Facebook exclude certain types of user engagement from the Advertising Manager report. Similarly, the way in which platforms like Google respond to complaints about advertisements is not readily understood from publicly available information.

There are currently few legal or regulatory requirements for this information to be shared with users (re: Question 3.36). This lack of transparency may particularly be a problem in areas in which the interests of platform businesses and consumer welfare are not aligned - like certain cases of strategic manipulation, as discussed above.

Greater awareness and transparency would help address the potential harms which may not be in the platform's own interest to address. With trust mechanisms playing an increasingly influential role in the economy, a continued lack of transparency regarding the trust mechanisms enabling these transactions may lead to irreversibly negative consequences for the evolution of online marketplaces. We also note that a continued lack of transparency may also hinder competition of platforms on the basis of trust mechanisms (re: Questions 3.3 and 3.4).

APPENDIX A - characteristics of trust mechanisms for several firms in the online advertising industry

		Facebook Advertising	Google Adwords	Bing Ads	Snap Inc	Outbrain
	Description	Targeted and pay-per-click advertising on world's largest social network	Pay-per-click and search advertising on world's largest search engine	Search advertising by Microsoft	Youth-targeted video and integrated advertising on messaging platform	Online advertiser specializing in presenting sponsored website links
Participants	**Sides**	Two-sided: advertiser and ad viewer	Two-sided: advertiser and ad viewer	Two-sided: advertiser and ad viewer	One-sided: to advertiser	One-sided: to advertiser
	Access	Only parties who have created or viewed an ad	Only parties who have created or viewed an ad	Only parties who have created or viewed an ad	Only parties who have created or viewed an ad	Only parties who have created or viewed an ad
	Obligation	Impressions data collected automatically, ad viewer feedback optional	Click data collected automatically, ad viewer feedback optional	Click data collected automatically, ad viewer feedback optional	Viewership data collected automatically	Click data collected automatically
Content	**Format**	For advertiser: report on impressions, engagement broken down by demographic For ad viewer: 'report ad' feature, like, share, comment	For advertiser: report on number of clicks, click-through-rate, conversion rate For ad viewer: report ad feature	For advertiser: report on number of clicks, click-through-rate, conversion rate, relative success rates of ad by website For ad viewer: report ad feature	Report on number of impressions, swipe ups, click through and time spent watching videos	Report on number of clicks, click-through-rate, conversion rate
	Scale	Advertiser: Number of impressions, engagement Viewer; categories of complaint, like / not	Advertiser: number and rate, $/click Viewer: written complaints	Advertiser: number and rate, $/click Viewer: written complaints	Number, rate, seconds	Number, rate, seconds
	Subcategories	Demographic breakdown, detailed data	Very limited geographic information, broken down by key word	Very limited geographic information, broken down by key word	Demographic reporting (age, location, gender)	Geographic reporting
	Frequency	Updated continuously throughout advertising campaigns	Updated continuously throughout advertising campaign	Updated continuously throughout advertising campaign	Updated continuously throughout advertising campaign	Updated continuously throughout advertising campaign
Function	**Visibility**	Private	Private	Private	Private	Private
	Anonymity	Viewer interactions are anonymous by default, unless viewers choose to engage publicly with ad using social tools.	Anonymous	Anonymous	Anonymous	Anonymous
	Weighting	None.	None	None	None	None
	Influence	Placement in Newsfeed algorithm, cost of advertising	Placement in search, cost of advertising	Placement in search, cost of advertising	Cost and placement	Ad placement and cost

	Filtering	Unknown – it is not clear whether Facebook excludes certain types of engagement from advertising manager	Unknown – it seems unlikely clicks are excluded, Google response to complaints unknown.	Unknown – it seems unlikely clicks are excluded, Google response to complaints unknown.	Unknown	Unknown