Supplemental Appendix

When Product Markets Become Collective Traps: The Case of Social Media

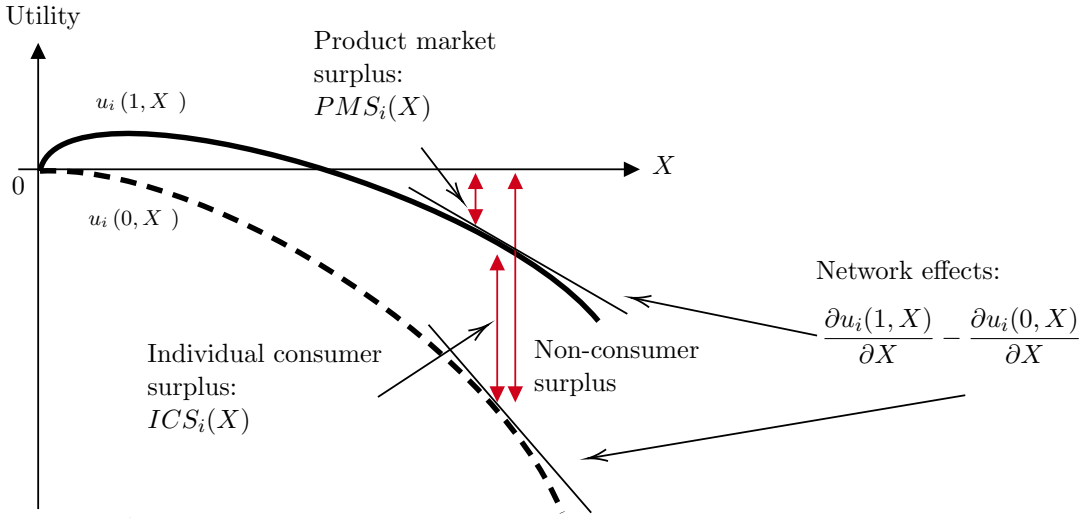
Leonardo Bursztyn **Benjamin Handel** **Rafael Jiménez-Durán** **Christopher Roth**

Our supplementary material is structured as follows. Section A provides additional details related to the conceptual framework. Section B includes additional tables and figures. Section C provides additional evidence on robustness. In Section D, we provide additional details on the open-ended data, including the coding scheme. Section F provides evidence including the pilot data from Instagram. Section E examines non-user utility in luxury good markets. Finally, Appendix G presents the instructions for all experiments described in the paper.

A Additional framework details

Changes in Market Share. Our model specified above allows for comparative statics on how welfare changes for distinct groups (e.g., users who lose out from the product) as the observed market share X^* changes. Figure A1 provides an illustrative example of how an increase in the number of users can, simultaneously, 1) increase the marginal utility from using the product relative to not using it (positive network effects) and 2) decrease the utility of both using and not using the product. Our empirical application to social media elicits portions of these two curves using experimental methods, allowing us to assess key comparative statics related to how welfare changes with total equilibrium use.

Appendix Figure A1: Utility and Negative Consumption Spillovers from Product Use as a Function of Aggregate Use X



Notes: Figure A1 presents an example of individual utilities as a function of aggregate use X, as well as individual consumer surplus, product market surplus, and network effects. In this example there are negative consumption spillovers (to both users and non-users), negative product market surplus, positive individual consumer surplus, and positive network effects.

Incentive Compatibility. Table A1 helps illustrate the incentive compatibility of our empirical procedure. It presents, for each of the three steps in our survey, the payoffs that individual i gets when given an offer y to deactivate their social media account and the conditions under which i chooses to select "deactivate" or "not deactivate" in the decision screen. For simplicity and without loss of generality, we assume that participants face a single decision screen, as opposed to the multiple decision screens that they face in our procedure. Moreover, we assume that participants face some small hassle cost such that they choose to not deactivate if they are indifferent between deactivating and not

deactivating. Note that the table incorporates the option-value that participants have when choosing to deactivate or to not deactivate in the decision screen; they can always change their mind afterward, although doing so implies that they can lose their monetary compensation or cancel the deactivation experiment for everyone else (in the case of step 3 in our experiment). For example, a participant that receives positive offer $\$y$ to individually deactivate their account in step 1 will have a payoff of $\max\{u_i(0,X)+y, u_i(1,X)\}$ if they accept to deactivate. The reason is that they receive $u_i(0,X)+y$ if they follow through with deactivation but a payoff $u_i(1,X)$ if they change their mind and reactivate. Note that the table shows that there is no incentive compatibility for negative offers in the case of steps 1 and 2 (which estimate the valuation keeping and removing network, respectively). The reason is that the individual can always deactivate for free, so, when faced with the option to deactivate vs. not deactivate and receive $\$y$ (how one would implement in practice a negative offer to deactivate), it is a dominant strategy to choose to not deactivate (even if i were willing to pay to deactivate).

Appendix Table A1: Payoffs and Decisions for Different Offers to Deactivate

	Offer $y > 0$	Offer $y \leq 0$
Valuation keeping network		
Payoff of "deactivate"	$\max\{u_i(0,X)+y, u_i(1,X)\}$	$\max\{u_i(0,X), u_i(1,X)\}$
Payoff of "do not deactivate"	$\max\{u_i(0,X), u_i(1,X)\}$	$\max\{u_i(0,X), u_i(1,X)\}+\lvert y\rvert$
i clicks "deactivate" if	$y > u_i(1,X)-u_i(0,X)$	N/A
i clicks "do not deactivate" if	$y \leq u_i(1,X)-u_i(0,X)$	For all $y \leq 0$
Valuation removing network		
Payoff of "deactivate"	$\max\{u_i(0,0)+y, u_i(1,0)\}$	$\max\{u_i(0,0), u_i(1,0)\}$
Payoff of "do not deactivate"	$\max\{u_i(0,0), u_i(1,0)\}$	$\max\{u_i(0,0), u_i(1,0)\}+\lvert y\rvert$
i clicks "deactivate" if	$y > u_i(1,0)-u_i(0,0)$	N/A
i clicks "do not deactivate" if	$y \leq u_i(1,0)-u_i(0,0)$	For all $y \leq 0$
Product market valuation		
Payoff of "deactivate"	$\max\{u_i(0,0)+y, u_i(1,X)\}$	$\max\{u_i(0,0), u_i(1,X)\}$
Payoff of "do not deactivate"	$\max\{u_i(0,0), u_i(1,X)\}$	$\max\{u_i(0,X), u_i(1,X)\}+\lvert y\rvert$
i clicks "deactivate" if	$y > \max\{u_i(1,X), u_i(0,X)\}-u_i(0,0)$	
i clicks "do not deactivate" if	$y \leq \max\{u_i(1,X), u_i(0,X)\}-u_i(0,0)$	

Notes: The table presents the payoffs that individual i gets when given an offer y to deactivate their social media, and the conditions under which i selects "deactivate" or "not deactivate" in the decision screen. "Payoff of 'deactivate"' and "Payoff of 'do not deactivate"' corresponds to the case when i selects the option to deactivate and not deactivate in the survey, respectively. Without loss of generality, we that i faces a single decision. For simplicity, we assume quasilinear preferences, a static framework, and perfect monitoring on our end (that is, that we can perfectly follow through when participants do not comply with deactivation). Moreover, we assume that i faces some small hassle costs such that they choose to not deactivate if they are indifferent between deactivating and not deactivating.

B Additional tables and figures

Appendix Table A2: Correlates of Consumer Surplus

	Valuation Keeping Network (1)	Valuation Removing Network (2)	Product Market Valuation (3)
Panel A: TikTok			
Age	3.13*	2.94*	1.10
	(1.76)	(1.62)	(3.20)
Female	-6.09	-3.63	-5.94
	(6.94)	(6.56)	(12.26)
Daily usage	23.21***	23.28***	13.58
	(5.99)	(5.59)	(10.62)
Dep. var. mean	55.18	39.22	-23.91
Dep. var sd	58.68	53.89	96.02
Observations	371	371	371
Panel B: Instagram			
Age	-0.06	0.47	3.01
	(2.27)	(2.24)	(4.49)
Female	-1.18	-9.60	-8.88
	(8.39)	(8.86)	(17.70)
Daily usage	14.16*	14.91**	-1.82
	(7.41)	(7.55)	(14.96)
Network size	0.09	0.12	0.19
	(0.13)	(0.12)	(0.30)
Dep. var. mean	46.02	36.94	-5.61
Dep. var sd	55.20	53.56	105.63
Observations	196	196	196

Notes: The table presents coefficient estimates from OLS regressions. Panel A displays the results for TikTok and Panel B displays the results for Instagram. Columns 1-3 correspond to the elicitations in steps 1-3 in our survey, respectively. The independent variables are age, dummy variables for identifying as female and self-reported daily platform usage, and self-reported fraction of college students who are mutual friends on Instagram, labeled *Network size* in the table. *Network size* is only available in the Instagram survey and contains missing observations. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Standard errors are given in parentheses. Standard errors are clustered at the individual level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Appendix Table A3: Summary Statistics

	Obs.	Mean	Std. dev.	Median	Min	Max
Panel A: Willingness to accept (WTA) elicitations						
Panel A.1: TikTok						
Valuation Keeping Network	371	55.18	58.68	30	-10	210
Valuation Removing Network	371	39.22	53.89	30	-10	210
Product Market Valuation	371	-23.91	96.02	-10	-210	210
Product Market Valuation (with non-users)	707	-43.44	100.83	-10	-210	210
Panel A.2: Instagram						
Valuation Keeping Network	235	47.02	55.99	30	-10	210
Valuation Removing Network	235	37.06	53.58	10	-10	210
Product Market Valuation	235	-6.34	106.39	10	-210	210
Product Market Valuation (with non-users)	260	-9.46	106.79	10	-210	210
Panel A.3: Navigation/maps apps						
Valuation Keeping Network	272	48.82	50.98	30	-10	210
Valuation Removing Network	272	41.18	52.58	30	-10	210
Product Market Valuation	272	16.62	98.60	30	-210	210
Panel B: Comprehension checks						
Panel B.1: TikTok						
% Regretted elicited preferences	1,174	5.37	22.54	0	0	100
% Passed attention checks	1,174	63.97	48.03	100	0	100
Panel B.2: Instagram						
% Regretted elicited preferences	436	5.50	22.83	0	0	100
% Passed attention checks	436	62.84	48.38	100	0	100
Panel B.3: Navigation/maps apps						
% Regretted elicited preferences	468	4.27	20.25	0	0	100
% Passed attention checks	468	60.68	48.90	100	0	100
Panel C: Sample demographics						
Panel C.1: TikTok						
% Active user	707	52.48	49.97	100	0	100
% Female	707	66.05	47.39	100	0	100
Age	707	20.89	2.03	21	18	30
Panel C.2: Instagram						
% Active user	260	90.38	29.54	100	0	100
% Female	260	68.08	46.71	100	0	100
Age	260	20.84	2.15	20.5	18	30
Panel C.3: Navigation/maps apps						
% Active user	272	100.00	0.00	100	100	100
% Female	272	70.96	45.48	100	0	100
Age	272	20.87	1.98	21	18	30

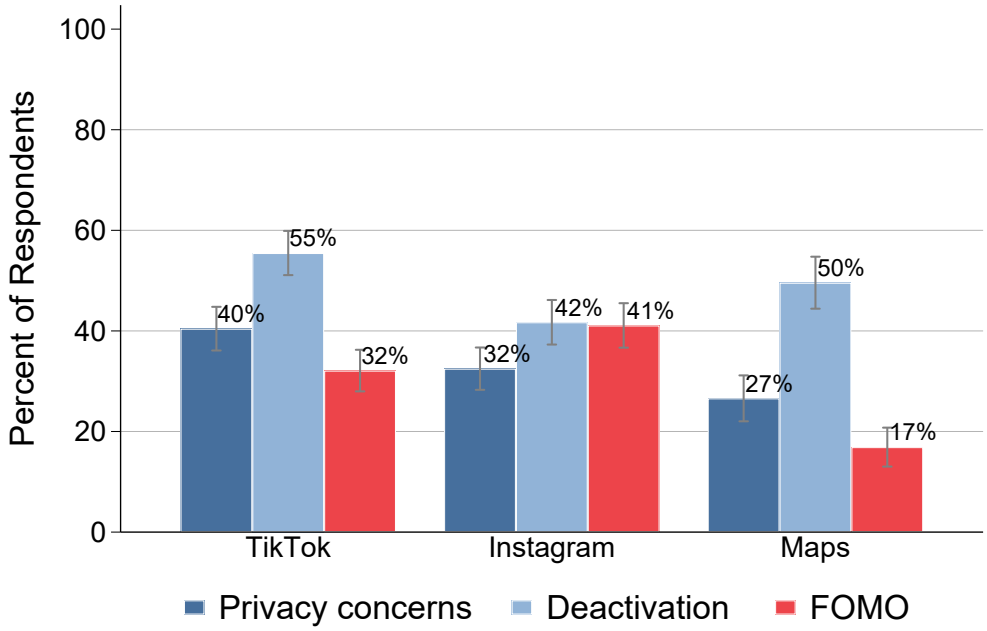
Notes: The table presents summary statistics across all platforms, TikTok, Instagram, and navigation/maps applications. The data collection for TikTok took place in July and the data collection for Instagram and navigation/maps apps took place in August in a cross-randomized survey. The statistics depicting % of respondents are derived from dummy variables multiplied by 100. The % active user represents the fraction of respondents in the final sample who have used the platform at least once in the past month, after filtering those who do not wish to participate in the study and applying regret and attention checks.

Appendix Table A4: Effect of Consumption Spillovers on Welfare Estimates

	Consumer surplus			Negative surplus		
	(1)	(2)	(3)	(4)	(5)	(6)
Instagram	-1.98	-1.87		0.06*	0.06*	
	(4.87)	(3.97)		(0.03)	(0.03)	
Product Market Valuation	-32.21***	-32.21***	-32.21***	0.19***	0.19***	0.19***
	(5.71)	(5.72)	(5.70)	(0.03)	(0.03)	(0.03)
Instagram ×	-21.16**	-21.16**	-21.16***	0.13***	0.13***	0.13***
Product Market Valuation	(8.20)	(8.21)	(8.18)	(0.04)	(0.04)	(0.04)
Uber Valuation		0.70***			-0.00***	
		(0.07)			(0.00)	
Dep. var. mean	26.98	26.98	26.98	0.23	0.23	0.23
Dep. var sd	84.51	84.51	84.51	0.42	0.42	0.42
Observations	1,014	1,014	1,014	1,014	1,014	1,014
Individual controls	Yes	Yes	No	Yes	Yes	No
Individual FEs	No	No	Yes	No	No	Yes

Notes: The table presents Difference-in-Differences (DiD) coefficient estimates, comparing the elicited individual and product market surplus across two platforms: Instagram and navigation/maps applications. The two dependent variables are (i) the quantitative measure of consumer surplus, denoted as *Consumer surplus*, and (ii) the direction of the consumer surplus, denoted as *Negative surplus*, represented by a binary variable coded as 1 if the surplus is negative and 0 otherwise. Columns 1 and 4 include the following individual control variables: age, gender, and the frequency of platform use, which is determined through a set of qualitative questions. Columns 2 and 5 additionally control for the valuation of the practice good, Uber. Columns 3 and 6 include individual fixed effects. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Standard errors are given in parentheses. Standard errors are clustered at the individual level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

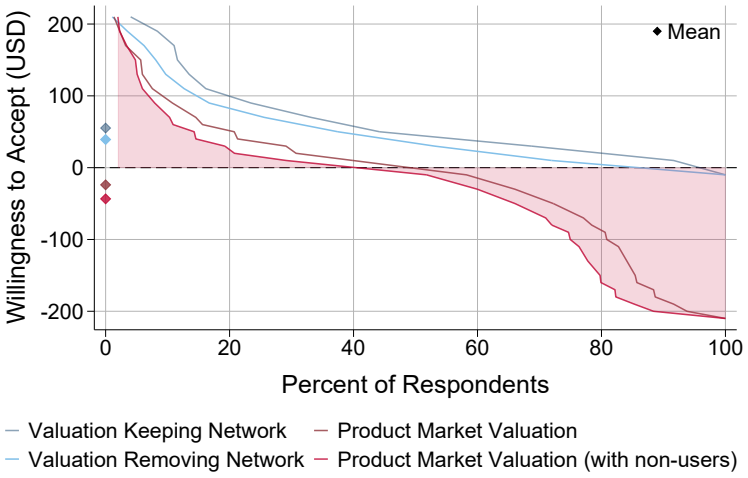
Appendix Figure A2: Reasons for Unwillingness to Participate in Deactivation Study



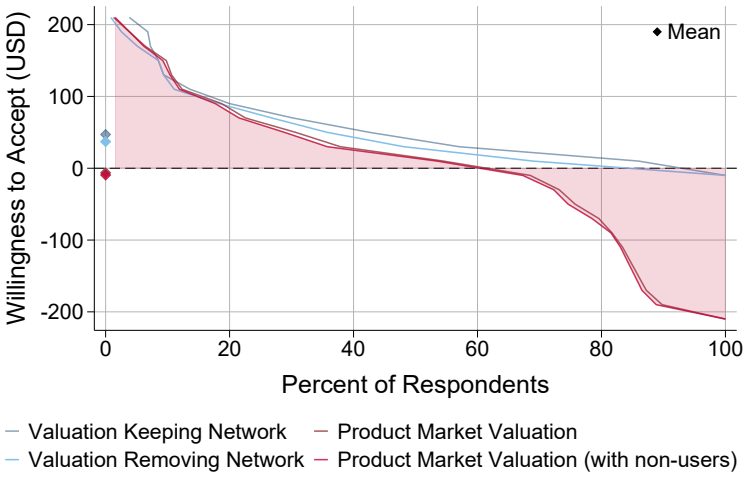
Notes: The figure presents data on the motives behind people's unwillingness to participate in the deactivation study. The respondents who declined participating in the study were asked the following question: "Why were you unwilling to participate in the study? Please select all that apply." The figure displays the fraction of respondents that were unwilling to participate because they (i) had privacy concerns, (ii) were unwilling to deactivate their account, and (iii) had a fear of missing out (FOMO). An additional "Other reason not listed above" option was available to ensure genuine feedback. As multiple selections were allowed, the categories presented above are not mutually exclusive. Error bars represent 95% confidence intervals.

Appendix Figure A3: Inverse Demand Function Across Welfare Measures

(a) TikTok



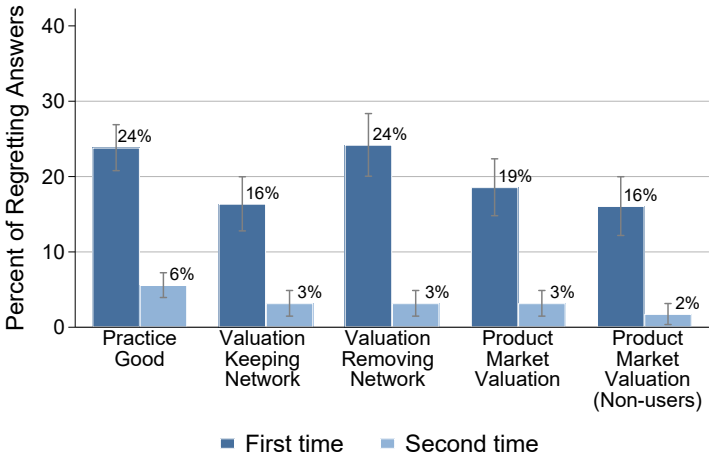
(b) Instagram



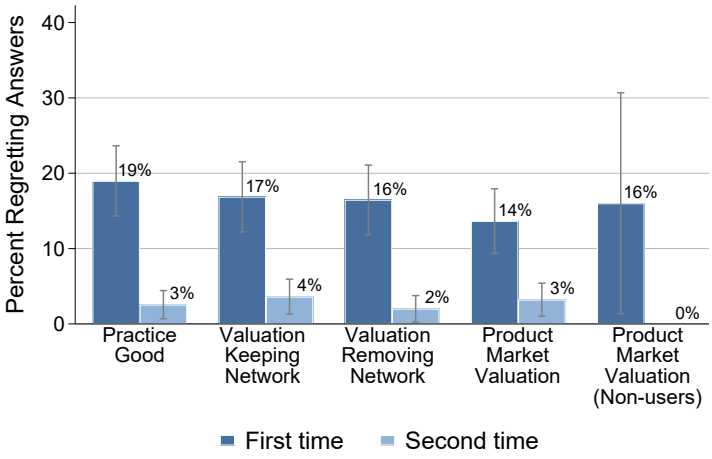
Notes: Figure A3 displays the inverse demand function of respondents' valuation for our different welfare measures. Panel (a) presents the results for TikTok and Panel (b) presents the results for Instagram. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included.

Appendix Figure A4: Regretters Across Steps

(a) TikTok



(b) Instagram

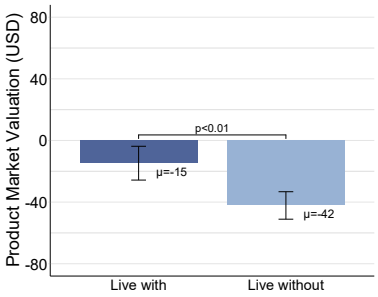


Notes: Figure A4 presents the fraction of respondents that regret their choices across the different measures. Panel (a) presents the results for TikTok and Panel (b) present the results for Instagram. Dark blue bars indicate the fraction of respondents regretting their choices the first time they completed a given valuation. Light blue bars indicate the fraction of respondents regretting their choices the second time they completed a given valuation. Error bars represent 95% confidence intervals.

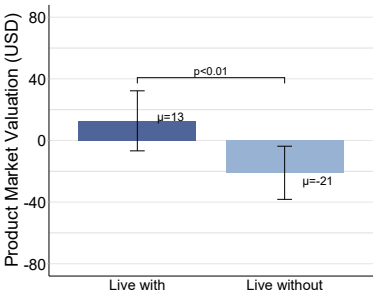
Appendix Figure A5: Validation of Hypothetical Survey Questions

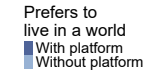
TikTok **Instagram**

(a) World With/Without

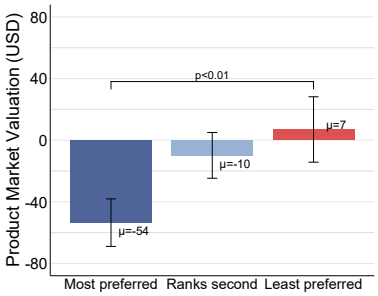


(b) World With/Without

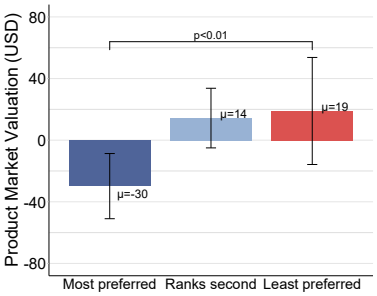


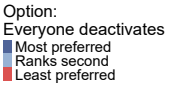


(c) Hypothetical Ranking

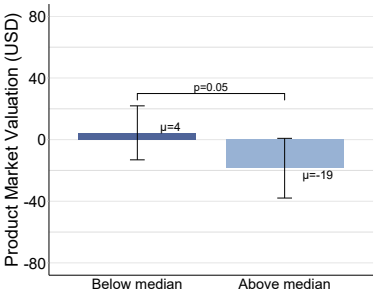


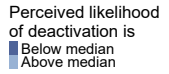
(d) Hypothetical Ranking





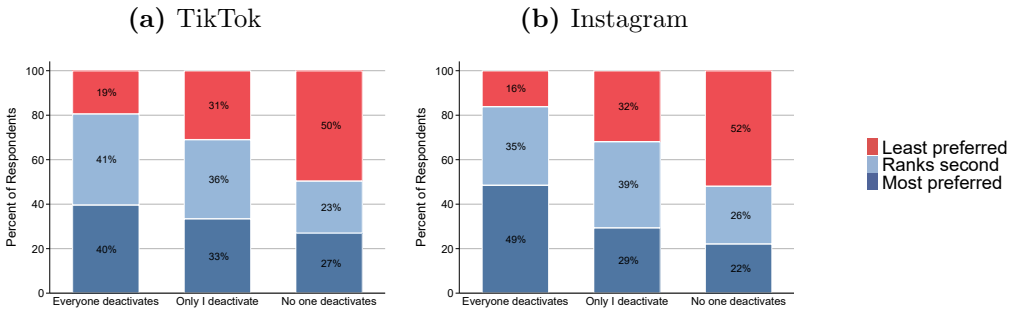
(e) Perceived Likelihood of Large-Scale Deactivation Taking Place





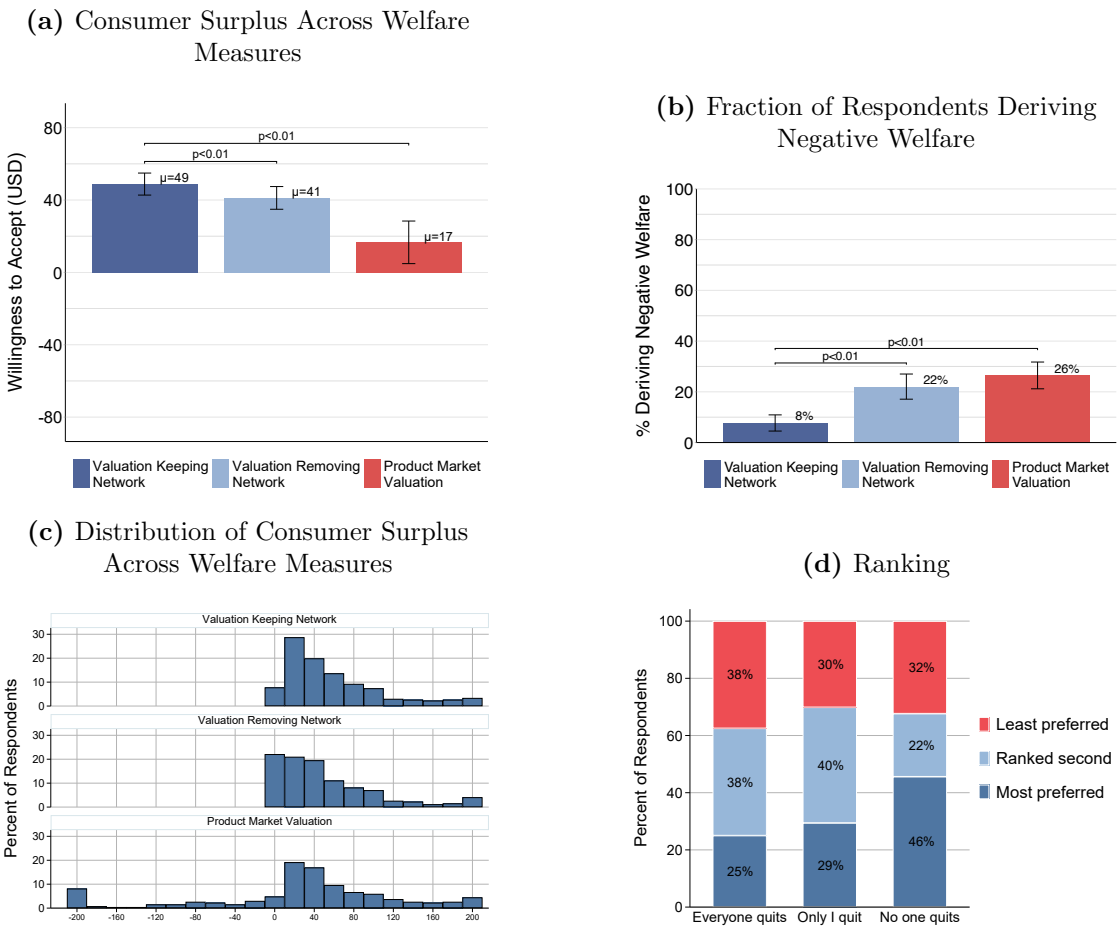
Notes: Figure A5 presents a validation of the hypothetical survey questions. The outcome variable in the figures is the *Product Market Valuation*. Panels (a) and (c) show results for TikTok. Panels (b), (d) and (e) present results for Instagram. Panels (a) and (b) present the *Product Market Valuation* by people's preference to live in a world with or without the platform. Panels (c) and (d) presents the *Product Market Valuation* by people's hypothetical ranking of the deactivation for everyone. Panel (e) presents the *Product Market Valuation* by respondents' perceived likelihood of the large-scale deactivation study taking place. Error bars represent 95% confidence intervals.

Appendix Figure A6: Hypothetical Ranking of Alternatives



Notes: Figure A6 presents participants' ranking of three hypothetical scenarios about the deactivation of the social media platform: (i) Everyone deactivates (ii) Only I deactivate (iii) No one deactivates. Panel (a) displays results for TikTok and Panel (b) shows results for Instagram. The area in dark blue indicates people's most preferred option; the area in light blue indicates the option ranked second; the area in red shows the least preferred option.

Appendix Figure A7: Consumer Welfare: Navigation and Maps Smartphone Apps



Notes: Figure A7 presents the survey results for navigation and maps smartphone apps. Figure A7a average valuations for the different welfare measures. Figure A7b presents the fraction of users with negative welfare across the different welfare measures for navigation and maps smartphone apps. Figure A7c presents the probability density function of valuations for the different welfare measures for navigation and maps smartphone apps. Figure A7d presents participants' responses ranking of three hypothetical scenarios: (i) All participating students quit using navigation apps (ii) Only I quit using navigation apps (iii) No one quits using navigation apps. The area in dark blue indicates people's most preferred option; the area in light blue indicates the option ranked second; the area in red shows the least preferred option. In all figures, respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Error bars represent 95% confidence intervals.

C Additional Robustness Checks

C.1 Measurement Error Correction

In this section, we implement the same measurement error detection and correction as in Luttmer and Samwick (2018). We assume that the measured WTA in Step 1 (Valuation Keeping Network, $WTA^{1,m}$) relates to the true WTA ($WTA^{1,t}$) in the following way:

$$WTA_i^{1,m} = (1 - \beta^1)WTA_i^{1,t} + \beta^1 Offer_i^1,$$

where $Offer_i^1$ is the random initial offer that participants receive in Step 1. Because we randomize the initial offer, we estimate the β^1 coefficient from an OLS regression of Valuation Keeping Network on the initial offer (plus controls).

We follow a similar approach to correct the Valuation Removing Network estimates. We assume that the measured WTA ($WTA^{2,m}$) relates to the true WTA ($WTA^{2,t}$) in the following way:

$$WTA_i^{2,m} = (1 - \beta^2)WTA_i^{2,t} + \beta^2 Offer_i^2,$$

where $Offer_i^2$ is the initial offer that participants receive in Step 2. Note that these initial offers are not fully random; what we randomize is whether participants receive the lower or upper limit of their Step 1 valuation (unless respondents are at the lower or upper ends of the WTA interval, in which case we offer them again this bound). For these individuals, the offer is fully deterministic and follows the equation $Offer_i^2 = -10 + WTA_i^{1,m} + 20Upper_i$, where $Upper_i$ is the indicator for receiving the upper or lower limit of their Step 1 valuation. Therefore, we estimate the β^2 coefficient by regressing $WTA_i^{2,m}$ on $WTA_i^{1,m}$ and $20Upper_i$. By our randomization of the upper vs. lower limit, the coefficient of $20Upper_i$ gives a consistent estimate of β^2.

Table A5 presents our estimates for β^1 and β^2; with and without controls, for both platforms. Regarding Step 1, we find that initial offers are unrelated to the valuation keeping network for both Instagram (p=0.55) and TikTok (p=0.33). The results are not only statistically insignificant; the magnitude of the coefficient is close to zero for both platforms, which eases concerns regarding the presence of measurement error in Step 1.

Regarding Step 2, we find that initial offers are positively and significantly related to final valuations for TikTok (p=0.02), suggesting the presence of measurement error. These estimates suggest that an extra $20 in the initial offer induced by our randomization results in an additional $9 in our participants' valuation removing network. As opposed to TikTok, the estimates for Instagram are not statistically significant (p=0.48). While the magnitude of the coefficient is relatively large (0.17), below we show that our estimates do not change substantially after correcting for noise in the case of Instagram.

We report the results from the measurement error correction exercise in Table A6. As the table shows, both the average WTA and the proportion of individuals with a negative valuation in Step 1 remain stable after correcting for the initial offer that individuals

receive, across both platforms. Importantly, the fraction of people with a negative valuation remains unchanged after the correction. These results reduce concerns that our main results are driven by noise in the elicitation.

The valuation removing network (and the fraction of individuals with a negative valuation) in the case of Instagram also remains virtually unchanged after accounting for noise. In the case of TikTok, the measured values are substantially larger, and the fraction of individuals with negative valuation is substantially smaller, than the adjusted values. In particular, accounting for measurement error reduces the average valuation removing network (in the population in which we randomize the bounds) from \$50 to \$32 and increases the percent of individuals with negative valuation from 9% to 24%. We think that this change is not a concern for our main results; it merely indicates that our measure of network effects is conservative in the case of TikTok.

To summarize, these results suggest that measurement error is an unlikely driver of the difference in WTAs that we observe between Steps 1 and 3. If anything, the presence of measurement error might have resulted in an underestimation of network effects in the case of TikTok, since Valuation Removing Network might be overestimated.

Appendix Table A5: Detecting Measurement Error

	WTA	
	(1)	(2)
Panel A: TikTok		
Valuation Keeping Network		
Initial Offer	0.05	0.05
	(0.05)	(0.05)
	[0.33]	[0.33]
Observations	371	371
R^2	0.003	0.044
Valuation Removing Network		
Initial Offer	0.45*	0.47*
	(0.20)	(0.20)
	[0.02]	[0.02]
Observations	240	240
R^2	0.570	0.574
Panel B: Instagram		
Valuation Keeping Network		
Initial Offer	-0.03	-0.04
	(0.07)	(0.07)
	[0.65]	[0.55]
Observations	235	235
R^2	0.001	0.037
Valuation Removing Network		
Initial Offer	0.20	0.17
	(0.23)	(0.24)
	[0.37]	[0.48]
Observations	125	125
R^2	0.735	0.738
Demographic controls	No	Yes

Notes: The table presents a series of regressions assessing the measurement error introduced by the initial offers on respondents' final valuations. Panel A focuses on TikTok and Panel B focuses on Instagram. *Valuation Keeping Network* denotes OLS regressions of Valuation Keeping Network on the random initial offer (plus demographic controls). *Valuation Removing Network* represents OLS regressions of Valuation Removing Network on the "upper bound" dummy (indicating whether participants were offered their upper or lower bound of their valuation in step 1) multiplied times 20, controlling for Valuation Keeping Network (plus demographic controls). For Valuation Keeping Network, we use the full sample of users. For Valuation Removing Network, we focus on those users for whom we randomly offered the upper or lower bound of their Valuation Keeping Network. Demographic controls are age, gender, and platform usage frequency. Robust standard errors are presented in parentheses and p-values are in presented brackets. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

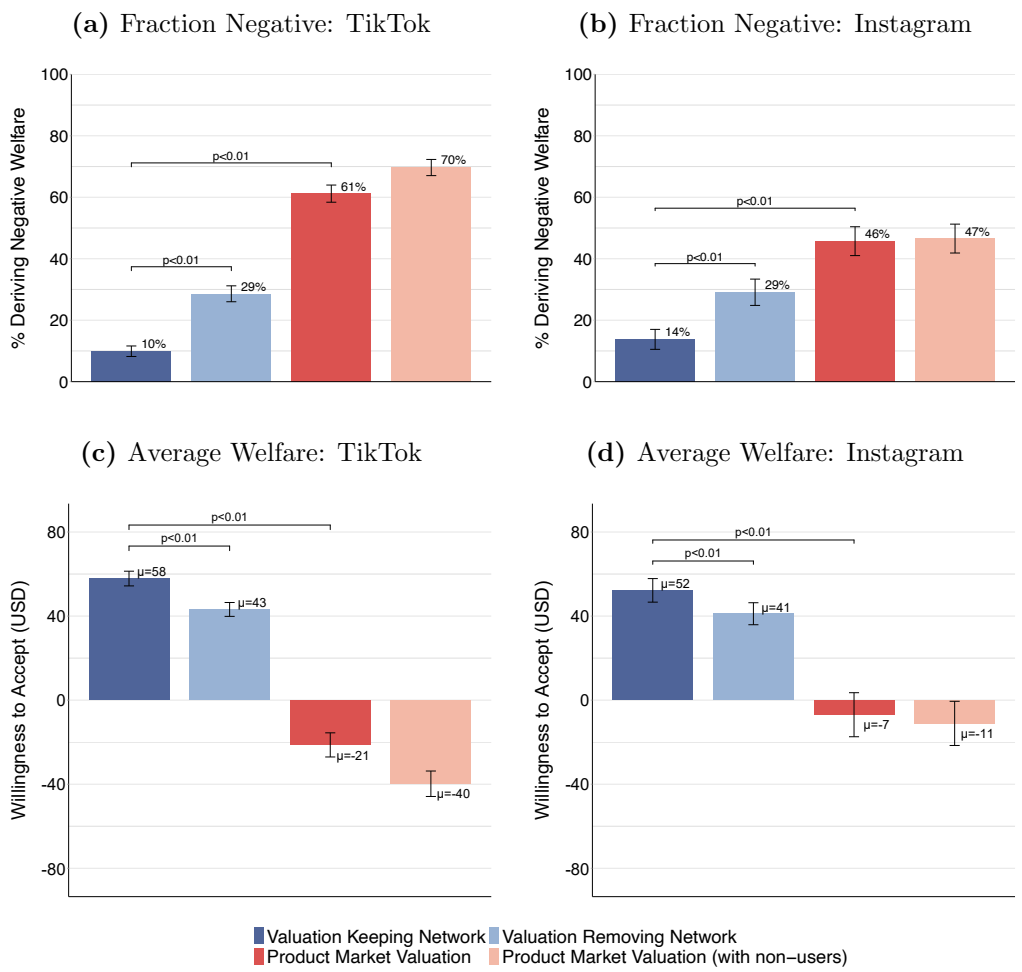
Appendix Table A6: Adjustments for Starting Value

	Valuation Keeping Network		Valuation Removing Network	
	Mean	Proportion < 0	Mean	Proportion < 0
Panel A: TikTok				
Unadjusted	55.18	0.08	50.17	0.09
	(3.05)	(0.01)	(2.95)	(2.95)
Initial offer adjustment	-2.20	0.00	-16.19	0.14
	(2.39)	(0.05)	(24.05)	(0.14)
Initial offer adjustment with controls	-2.18	0.00	-17.89	0.15
	(2.36)	(0.05)	(34.23)	(0.15)
Observations	371	371	240	240
Panel B: Instagram				
Unadjusted	47.02	0.14	60.88	0.06
	(3.65)	(0.02)	(4.38)	(4.38)
Initial offer adjustment	1.70	0.00	-2.40	0.02
	(3.64)	(0.06)	(5.34)	(0.06)
Initial offer adjustment with controls	2.30	0.00	-1.87	0.00
	(3.67)	(0.06)	(4.71)	(0.06)
Observations	235	235	125	125

Notes: The table presents corrected estimations for Valuation Keeping Network and Valuation Removing Network using the formula in Luttmer and Samwick (2018) and the coefficients reported in Table A5. Panel A focuses on TikTok and Panel B focuses on Instagram. Columns 1 and 3 display means and columns 2 and 4 display the % of the sample with negative valuations. For Valuation Keeping Network, we use the full sample of users. For Valuation Removing Network, we focus on those users for whom we randomly offered the upper or lower bound of their Valuation Keeping Network. The Unadjusted row reports statistics before the measurement error correction. The Initial offer adjustment rows report the difference between the adjusted value and the measured value. Initial offer adjustment uses the coefficient reported in Column 1 of Table A5 and Initial offer adjustment with controls uses the coefficient reported in Column 2 of Table A5. Bootstrapped standard errors are presented in parentheses (based on 10,000 replications). When computing the bootstrapped standard errors, we remove those replications that result in β greater than 0.95: 100 and 9 replications (out of 10,000) are removed for TikTok and Instagram, respectively. This only affects Valuation Removing Network. The reason for this is that the adjusted WTA is undefined when β approaches 1 (and hence the standard errors become very large).

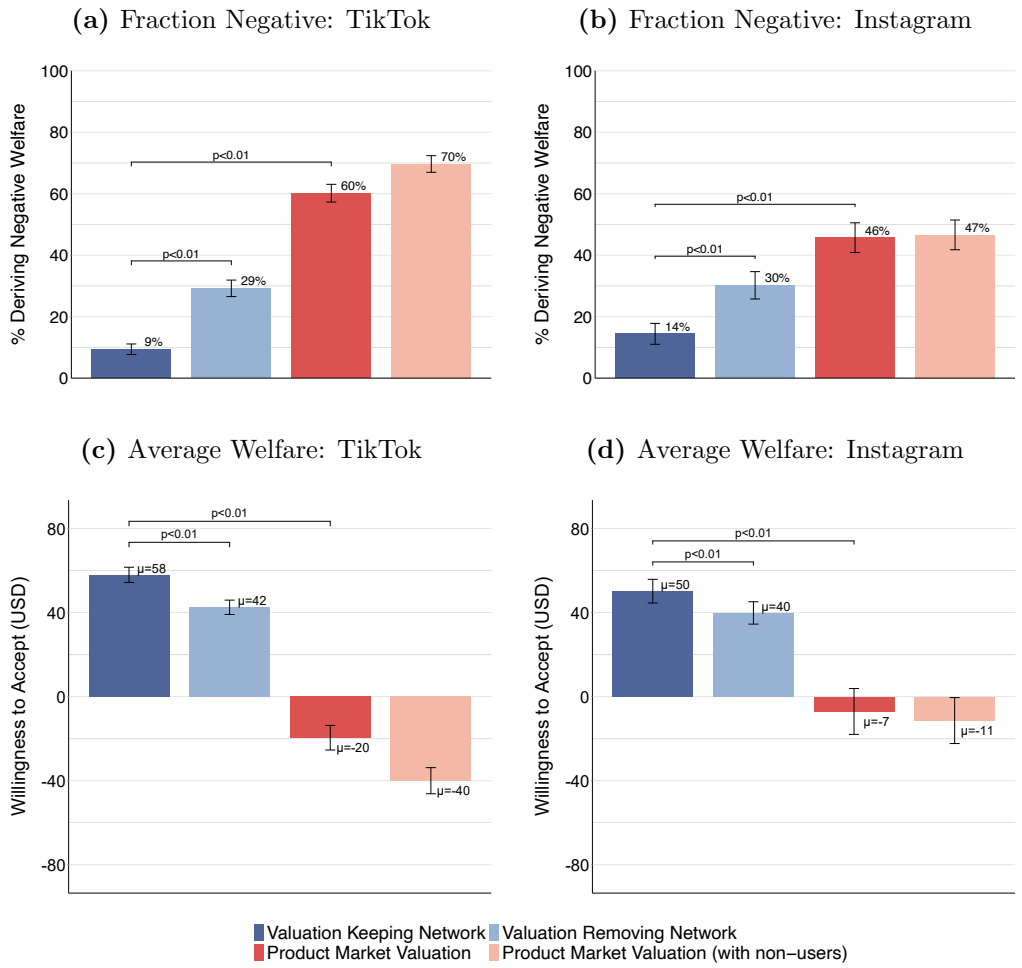
C.2 Sample Selection

Appendix Figure A8: Consumer Surplus across Welfare Measures: Full Sample



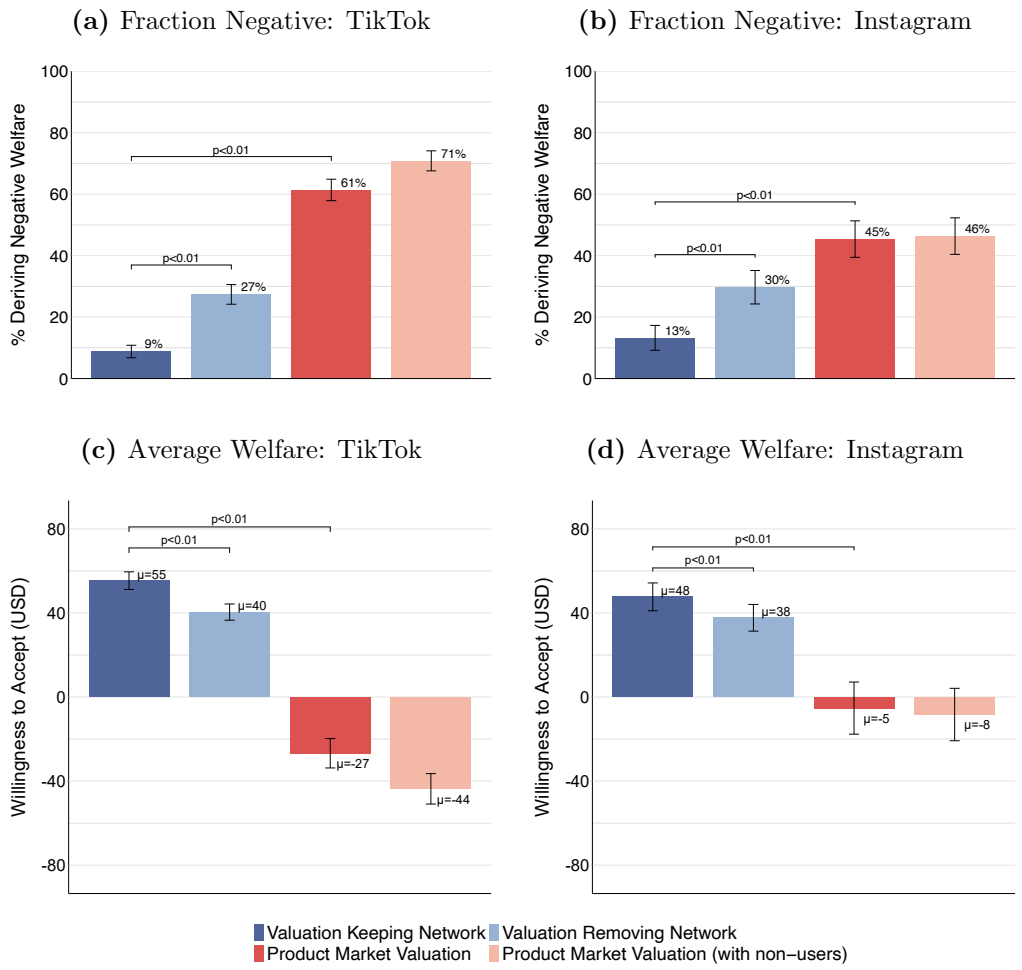
Notes: Panels (a) and (b) of Figure 4 present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Error bars represent 95% confidence intervals.

Appendix Figure A9: Consumer Surplus across Welfare Measures: Excluding Regretters and Including Inattentive Respondents



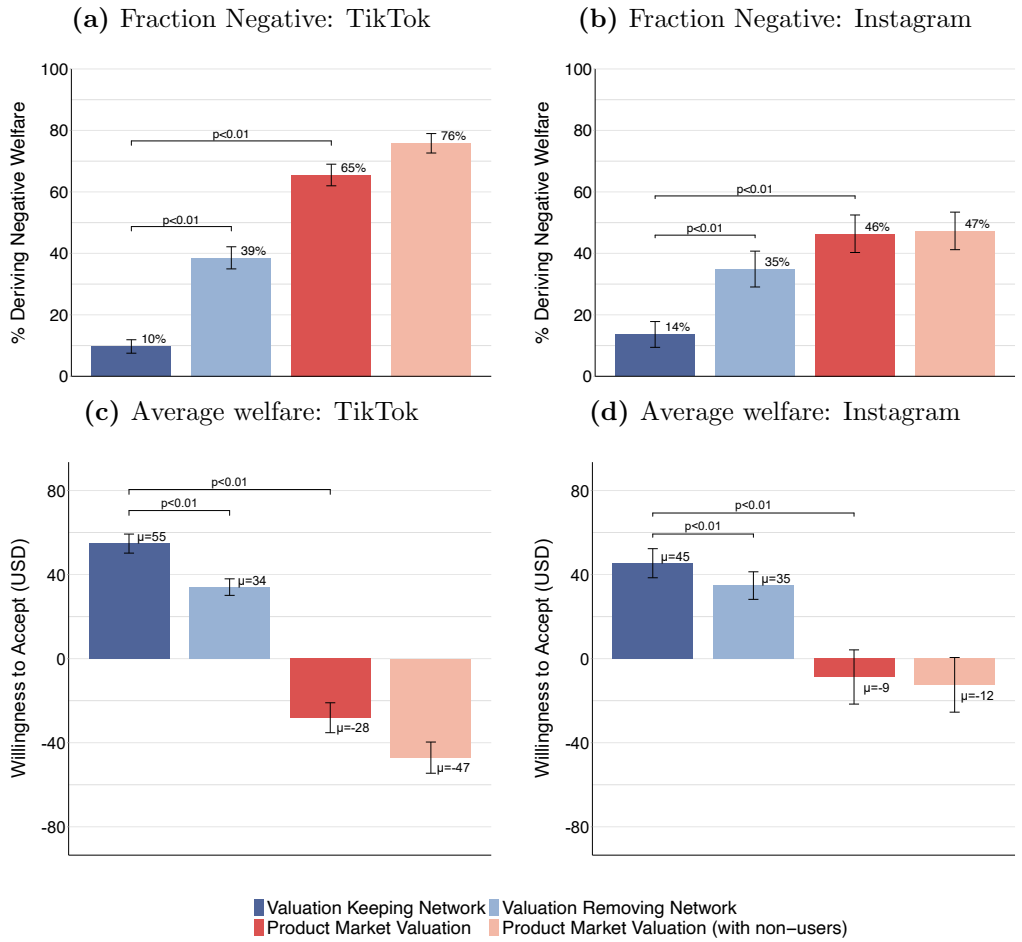
Notes: Panels (a) and (b) of Figure 4 present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Only respondents who regretted any of their choices are excluded, while inattentive respondents are included. Error bars represent 95% confidence intervals.

Appendix Figure A10: Consumer Surplus across Welfare Measures: Excluding Inattentive Respondents and Including Regretters



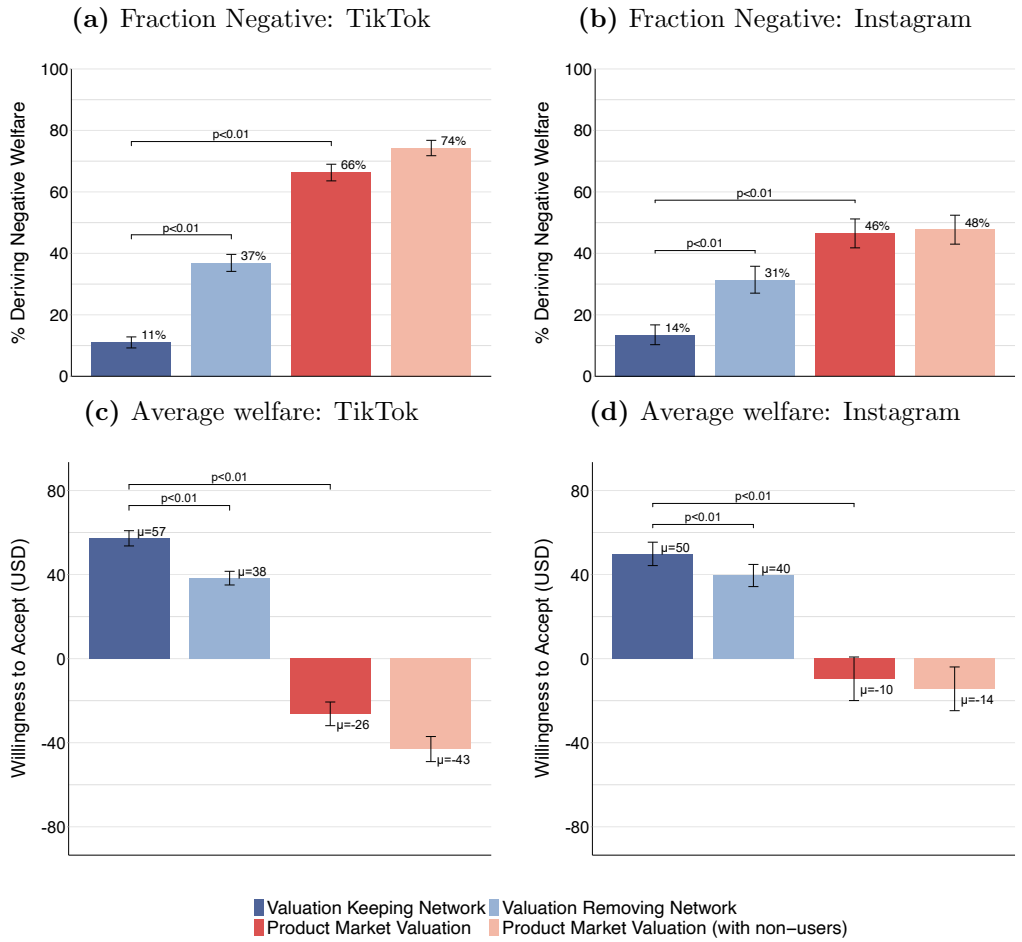
Notes: Panels (a) and (b) of Figure 4 present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Only respondents who failed to pass all attention checks are excluded, while those who regretted their choices are included. Error bars represent 95% confidence intervals.

Appendix Figure A11: Consumer Surplus across Welfare Measures (using initial choice)



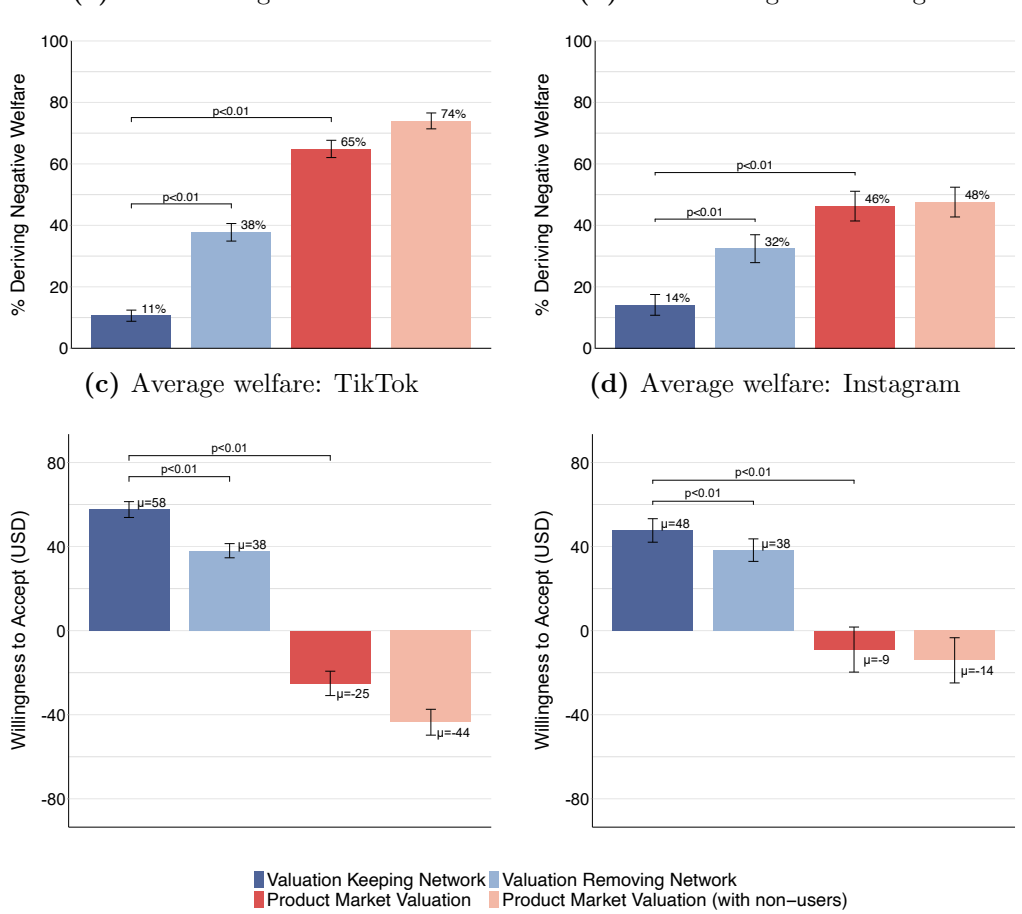
Notes: This figure replicates Figure 4 using respondents' initial choice instead of their final choice. Panels (a) and (b) of this figure present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Those who disagree once with their valuation are included using their initial choice instead of their final choice. Error bars represent 95% confidence intervals.

Appendix Figure A12: Consumer Surplus across Welfare Measures: Full Sample (using initial choice)



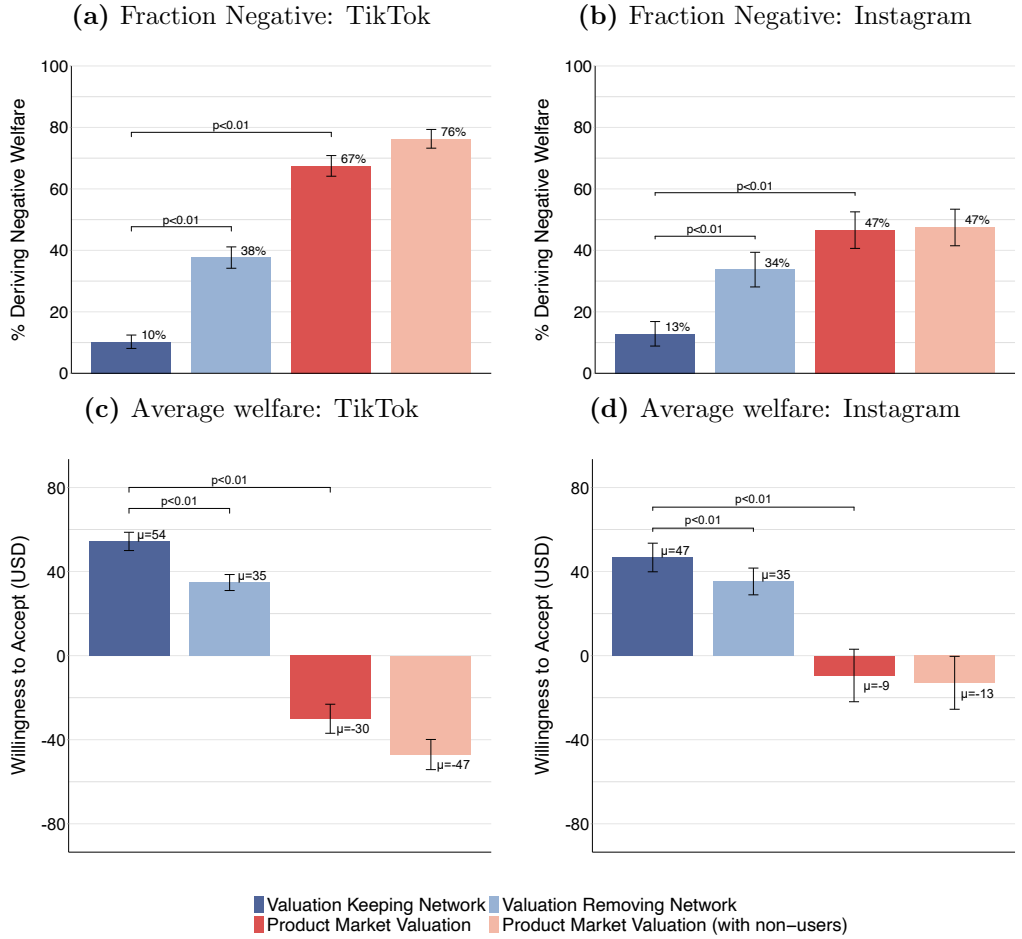
Notes: This figure corresponds to Figure A8 using the initial choice for regretters instead of their final choice. Panels (a) and (b) of this figure present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Those who disagree once with their valuation are included using their initial choice instead of their final choice. Error bars represent 95% confidence intervals.

Appendix Figure A13: Consumer Surplus across Welfare Measures: Excluding Regretters and Including Inattentive Respondents (using initial choice)



Notes: This figure corresponds to Figure A9 using the initial choice for regretters instead of their final choice. Panels (a) and (b) of this figure present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Those who disagree once with their valuation are included using their initial choice instead of their final choice. Error bars represent 95% confidence intervals.

Appendix Figure A14: Consumer Surplus across Welfare Measures: Excluding Inattentive Respondents and Including Regretters (using initial choice)



Notes: This figure corresponds to Figure A10 using the initial choice for regretters instead of their final choice. Panels (a) and (b) of this figure present the percentage of respondents with negative product valuations across our different welfare measures. Panels (c) and (d) present averages. Panels (a) and (c) present the results for TikTok and Panels (b) and (d) present the results for Instagram. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Those who disagree once with their valuation are included using their initial choice instead of their final choice. Error bars represent 95% confidence intervals.

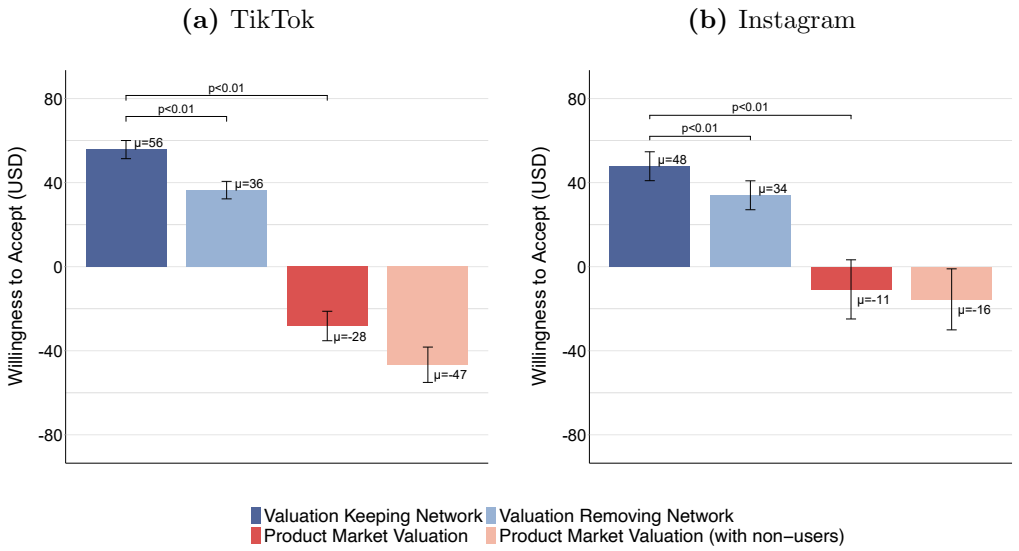
C.3 Triangular Distribution Estimates

In our primary analysis, we employ a multiple price list to narrow down the WTA range of our respondents to $20 and assign the mean of each respondent's lower and upper bounds

to obtain a unique WTA. As a robustness check, we employ an alternative distributional assumption: a triangular distribution to account for potential biases stemming from the unbounded nature of our lowest and highest intervals.

Following Allcott and Kessler (2019) we assume a triangular distribution at the unbounded ranges. To determine a new upper bound, we compute the mass at the upper unbounded interval, [$200, $220], and the density at the preceding interval, [$180, $200]. Then, using the formula for the probability density function (PDF) for a triangular distribution, we determine the alternative upper bound of the distribution. Subsequently, we compute the mean for the upper unbounded range. Analogously, for the lower unbounded interval, using the same principles we determine a new lower bound and substitute it with $-10. Figure A15 shows the willingness to accept means for each category, estimated assuming a triangular distribution.

Appendix Figure A15: Consumer Surplus Across Welfare Measures: Triangular Distribution Estimates



Notes: Figure A15 presents average valuations for the different welfare measures assuming triangular distributions for unbounded intervals. Panel (a) presents the results for TikTok and Panel (b) present the results for Instagram. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. The first three bars in each panel represent valuations exclusively for active users. The fourth bar represents the average valuation of active users and non-users. Reported p-values correspond to one-sided t-tests testing the null hypothesis that individual welfare estimates are lower than the aggregate welfare estimate. Error bars represent 95% confidence intervals.

D Open ended responses

Our surveys included two open-ended questions to provide direct evidence on the mechanisms and motives driving consumption. Open-ended questions are increasingly used to better understand the hidden motives behind people's choices, see, e.g., Bursztyn et al. (2022, 2023b). These questions avoid priming respondents and better capture what naturally comes to mind compared to more structured questions (Haaland et al., 2023).

The purpose of this section is two-fold; first, we present an overview of the hand-coding schemes we employed for the categorization of open-ended responses. Second, we summarize the validation of our manual hand-coding with artificial intelligence methods, presenting results from both techniques.

Hand-coding schemes. Table A7 presents the hand-coding scheme applied to open-ended responses for the question: "You mentioned you would prefer to live in a world without [platform]. Why do you still use it?". As implied by the phrasing, this question targeted only those respondents who previously expressed a desire to live without the platform. Table A7 presents the hand-coding scheme used for the question: "How would you feel if you were the only one who quit using [platform] and everyone else kept using it?". Note that the categories "Negative", "Beneficial", and "Other", encompass several subcategories. Specifically, "Negative" includes responses mentioning unfairness, impracticality, feeling inferior, dependent, bad, stressed, or lost; whereas "Beneficial" includes responses mentioning self-improvement and feeling positively challenged, unpressured, or good.

Certain respondents expressed a conditional indifference based on compensation or the deactivation's duration. Given that this does not truly signify 'indifference', such responses were categorized under "Other".[28] The category also includes relatively infrequent subcategories such as a stated preference to deactivate themselves in order to prevent inconvenience to others, and deriving satisfaction from going against the norm. For both open-ended questions, responses that were non-sensical were excluded from the analysis (N=8, 1.27%).

Validation with Artificial Intelligence.

To corroborate our manual categorization, we employed recent artificial intelligence methods, in particular a powerful large language model (GPT-4). We structured a validation exercise with the prompt: "You will be supplied with a list of responses. The responses refer to the usage of different platforms, the platform will be indicated in parentheses at the end of the response. Please classify responses based on the coding scheme below. Please note that each open-ended response can fall into multiple categories or even none." Subsequent to this, we supplied GPT-4 with the hand-coding scheme, complete with category names, definitions, and illustrative examples. To maintain methodological consistency between our manual coding and GPT-4's process, we provided GPT-4 with

[28]These open-ended questions followed the willingness-to-accept elicitation questions, potentially leading some respondents (9%, N=57) to mistakenly believe that the "deactivation" pertained to the study's deactivation, which was in exchange for monetary payment and had a four-week duration.

definitions and examples for each subcategory in the subsequent question. These subcategories were subsequently grouped under the primary categories.

Figure A16 displays the category distributions by platform and coding methods. Panel A presents the results for the open-ended question aimed at eliciting the motives for social media consumption despite a preference to live in a world without it; while Panel B presents the results for second question aimed at unraveling the mechanisms behind non-user consumption spillovers. The juxtaposition of the results of the two coding methods demonstrates that both methods yield remarkably similar results.

To further validate our hand-coding, we conduct a correlational exercise for each category. Once again, the results are presented per question. Each column represents the categories employed for the coding schemes. As displayed in Table A9, all categories have large and statistically significant correlation coefficients across the two methods.

Appendix Table A7: Overview of hand-coding scheme for reasons to use TikTok/Instagram/Maps despite preferring a world without it

Category	**Definition**	**Example(s)**
FOMO	Respondent mentions fear of missing out, feeling out of the loop, their wish to stay connected, or justifies usage through others' usage	"I feel compelled to keep 'in touch' with what I perceive as being the culturally relevant 'thing' at the moment. It breeds a sense of FOMO when you don't use it." (*TikTok*); "Everyone else uses it so I feel that I will be missing out if I don't." (*Instagram*); "I still use navigation maps because it is what everyone uses [...]" (*Maps*)
Entertainment	Respondent mentions they use it to be entertained	"It's a very good source of entertainment and it's always something to do when bored." (*TikTok*); "It's a default way to pass time when I'm bored." (*Instagram*);
Addiction	Respondent mentions inability to let go or directly mentions addiction	"I use TikTok as a habit. I hate TikTok and know that I have other things I need to do, but I subconsciously click on it, then scroll for hours. It's very hard to control it." (*TikTok*); "Because I am addicted to the scrolling and tired of wasting valuable time on the app." (*Instagram*)
Information	Respondent mentions informational purposes such as following the news, keeping abreast of college events, or getting directions.	"for information on current events because i do not watch the news" (*TikTok*); "I use it to keep inform about my university events and news" (*Instagram*); "I don't know where to go" (*Maps*)
Productivity/ Convenience	Respondent mentions convenience of use or states to use platform for productive/business purposes.	"It's easy to see stuff I like (art, new art news, movie reviews, etc)." (*TikTok*); "I still use instagram for business purposes." (*Instagram*); "It's more convenient than pulling out a map and I have a terrible sense of direction" (*Maps*)

Notes: The table displays an overview of the hand-coding scheme used for categorizing the open-ended answers given to the question: "You mentioned you would prefer to live in a world without TikTok/Instagram/navigation apps. Why do you still use it/them?". The question was only asked to participants that are are active users of the respective platforms and stated they would prefer to live in a world without said platform. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included.

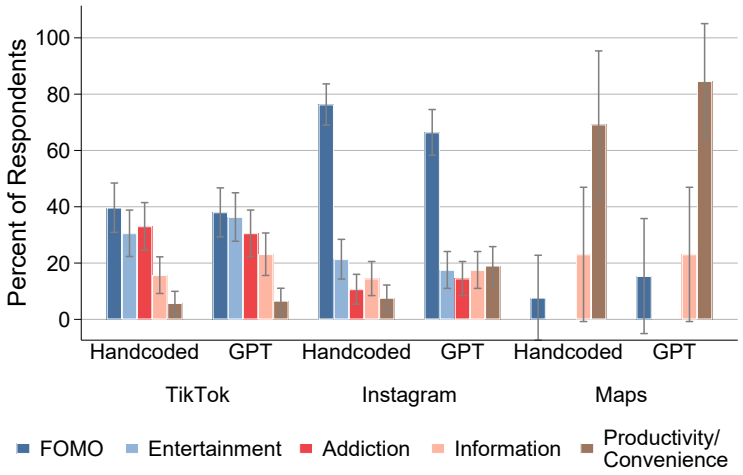
Appendix Table A8: Overview of hand-coding scheme for how respondent would feel if only they were to quit using platform

Category	**Definition**	**Example**
FOMO	Respondent mentions fear of feeling missing out, left out, or being out of the loop	"I would probably feel somewhat out of the loop when it comes to trends, with a consistent feeling of FOMO." (*TikTok*); "I would feel really left out since a lot of people use it to communicate about events and parties and with one another" (*Instagram*); "I would feel a bit isolated, maybe excluded from certain conversations involving travel plans, etc" (*Maps*)
Negative	Respondent expresses negative emotions; that it would be unfair, impractical, etc.	"it would be a little unfair" (*TikTok*); "[...] feel discouraged and jealous of everyone else." (*Instagram*); "I would feel lost and not confident in my ability to navigate" (*Maps*)
Indifferent	Respondent states that they would not be particularly affected	"No different, because I don't use tiktok often anyway"; (*TikTok*); "I would be fine. I don't really post on Instagram. It wouldn't be much of a change." (*Instagram*); "Wouldn't mind as long as knew my way around" (*Maps*)
Beneficial	Respondent mentions deriving a benefit	"relieved, probably." (*TikTok*); "I would feel free"; (*Instagram*); "It will be an awesome experiment and experience, asking everyone for directions" (*Maps*)
Other	Diverse set of motives; including substituting platform, indifference conditional on getting paid, or fondness to spare others the struggle	"I would just use other social media" (*TikTok*); "It's okay as long as I have some monetary benefit in it."; (*Instagram*); "... I don't want everyone else to struggle especially since people have different like circumstances" (*Maps*)

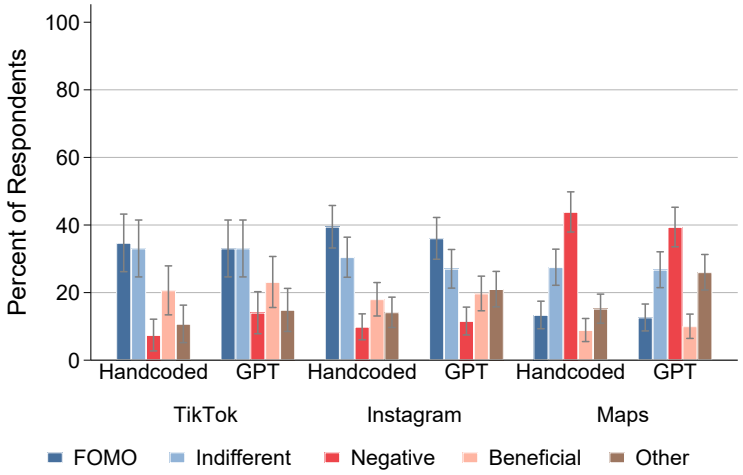
Notes: The table displays an overview of the hand-coding scheme used for categorizing the open-ended answers given to the question: "How would you feel if you were the only one who deactivated (quit using) TikTok/Instagram (navigation/maps apps) and everyone else kept using it (them)?". The question was only asked to participants that are active users of the respective platform. In the TikTok survey, the question was further restricted to respondents who stated they would prefer to live in a world without TikTok. We did not apply this restriction for the Instagram/maps survey. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included.

Appendix Figure A16: Validation based on Large Language Model

(a) Motives for social media consumption despite a preference to live in a world without it



(b) Mechanisms behind non-user consumption spillovers



Notes: Figure A16 presents the distribution of categories based on open-ended responses separately for the hand-coded data and the data coded by a large language model (GPT4). Panel (a) details the results for the question, "You mentioned you would prefer to live in a world without TikTok/Instagram/navigation apps. Why do you still use them?" Meanwhile, Panel (b) showcases the results for the question, "How would you feel if you were the only one who stopped using TikTok/Instagram/navigation apps, while everyone else continued their use?

Appendix Table A9: Validation of hand-coded data from Large Language Model

Panel A: Motives for social media consumption despite a preference to live in a world without it					
	FOMO	Entertainment	Addiction	Information	Productivity/ Convenience
Correlation coefficient	0.762	0.698	0.863	0.664	0.535
	(0.040)	(0.044)	(0.031)	(0.046)	(0.052)
Hand-coded responses:					
Mean	0.562	0.245	0.204	0.155	0.098
Std. dev.	0.497	0.431	0.404	0.362	0.298
GPT-4 coded responses:					
Mean	0.509	0.253	0.211	0.204	0.166
Std. dev.	0.501	0.435	0.409	0.404	0.373
Observations	265	265	265	265	265
Panel B: Evidence on mechanisms behind non-user consumption spillovers					
	FOMO	Indifferent	Negative	Beneficial	Other
Correlation coefficient	0.885	0.860	0.693	0.718	0.613
	(0.019)	(0.020)	(0.029)	(0.028)	(0.032)
Hand-coded responses:					
Mean	0.273	0.297	0.241	0.146	0.140
Std. dev.	0.446	0.457	0.428	0.353	0.347
GPT-4 coded responses:					
Mean	0.254	0.281	0.241	0.162	0.220
Std. dev.	0.435	0.450	0.428	0.369	0.415
Observations	623	623	623	623	623

Notes: The table presents the correlation coefficients between our manual categorization and the GPT-4 categorization of open-ended responses. Each column corresponds to a specific category used in the classification process. Correlation coefficients were calculated using dummy variables: for every coding technique, a dummy variable is set to 1 if the open-ended response fits within a particular category. These coefficients then show the correlation between these dummy variables. Panel A details the results for the question, "You mentioned you would prefer to live in a world without TikTok/Instagram/navigation apps. Why do you still use them?" Meanwhile, Panel B showcases the results for the question, "How would you feel if you were the only one who stopped using TikTok/Instagram/navigation apps, while everyone else continued their use?" Standard errors are given in parentheses and are computed based on the Pearson correlation coefficient formula.

E Other Applications

E.1 Luxury Goods

We start with evidence on luxury goods, where positional externalities are a plausible driver of negative non-user utility.

Sample. We fielded pre-registered surveys with 500 US participants from Prolific, a widely used online labor market used for social science experiments (Eyal et al., 2021), in September 2023.[29]

Survey. Our survey consists of two randomly ordered blocks: one block on luxury goods discussed in this section and another block on vintage goods presented in Section E.2. In the luxury block, we ask respondents to indicate whether they owned products from luxury brands they personally purchased.[30] We then ask respondents whether they prefer to live in a world with or without any of these luxury brands. The full set of instructions can be found in Appendix G.3.

Results. In our survey, 31% of respondents own luxury brands. Conditional on owning any luxury brand, they owned 2.04 luxury brands on average. Figure A17 shows that among respondents who owned any goods of luxury brands, 44% preferred to live in a world without those brands. Among respondents not owning any of these brands, the fraction preferring to live in a world without them is higher, at 69%. While the literature on luxury goods has emphasized the negative externalities these goods impose on non-consumers (Frank, 1985, 2000, 2012), our evidence highlights that large shares of consumers of these products would prefer them not to exist.[31] Given that these results are in line with our social media estimates, it is plausible that status concerns might be an important mechanism driving negative non-consumer surplus.

E.2 Frequency of Product Variations

Product market traps lead to a situation where the existence of a product is harmful to consumers. This can manifest as excessive consumption by users or the production of an excessive number of product variations or vintages (Pesendorfer, 1995).

[29] The pre-registration can be found on AsPredicted #144630.

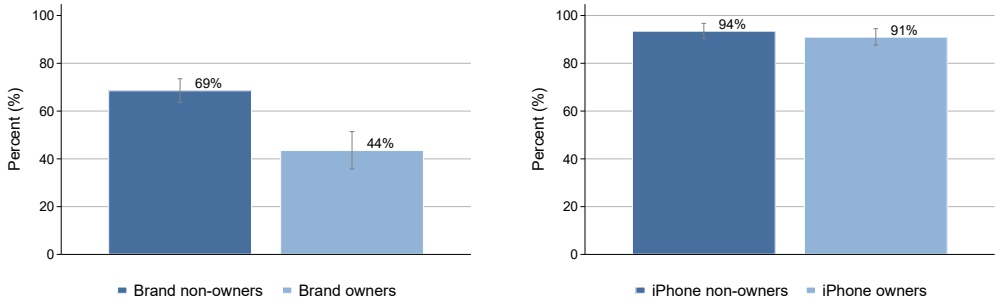
[30] The brands we used are: Louis Vuitton, Gucci, Chanel, Yves Saint Laurent (YSL), Balenciaga, Versace, Rolex, Tiffany & Co., Burberry, Givenchy, and Swarovski. Respondents could also fill in any other luxury brand not part of this list.

[31] An alternative interpretation of our findings is that a participant has a positive product-market valuation for brand X, but valuations for the remaining brands are so negative that the overall preference would still be to live in a world without any of the brands.

Appendix Figure A17: Luxury and Vintage Goods

(a) Percentage of Respondents that Prefer to Live in a World Without Any Luxury Brands

(b) Percentage of Respondents that Prefer to Live in a World Where iPhone is Released Every Other Year



Notes: Panel (a) of Figure A17 displays the fraction of respondents preferring to live in a world without any luxury brands separately for brand owners and brand non-owners. Panel (b) displays the fraction of respondents that prefer to live in a world where Apple releases the new iPhone every other year rather than every year, separately for Phone owners and iPhone non-owners. Error bars represent 95% confidence intervals.

To examine people's preferences regarding the frequency of product variations, we asked respondents whether they would prefer to live in a world where Apple releases the iPhone every year or every other year in the survey presented in the previous section. We document that, among iPhone owners, a striking 91% of respondents would prefer Apple to release the iPhone every other year rather than every year.[32] Among respondents not owning the iPhone, 94% prefer Apple to release the iPhone every other year rather than every year. This finding provides suggestive evidence that consumers consider the number of product variations or vintages of the iPhone as excessive and thus harmful to consumer welfare. Overall, the findings from this survey suggest that negative non-consumer surplus is not specific to the case of social media, but also extends to luxury consumption and particular high-end technology products.[33]

[32] It is worth highlighting that among iPhone owners only 8% prefer to live in a world without iPhones, while among respondents not owning the iPhone this fraction is 49%.

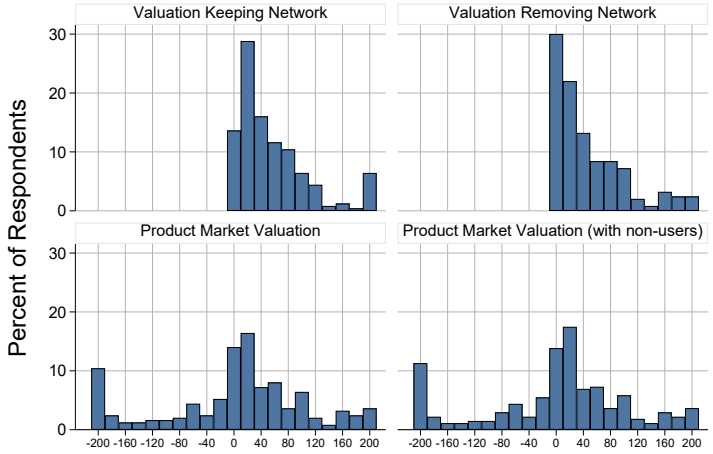
[33] An alternative explanation for these consumer preferences could be environmental motives (along with the belief that others will tend to purchase the newest version).

F Main Exhibits Including Pilot Data

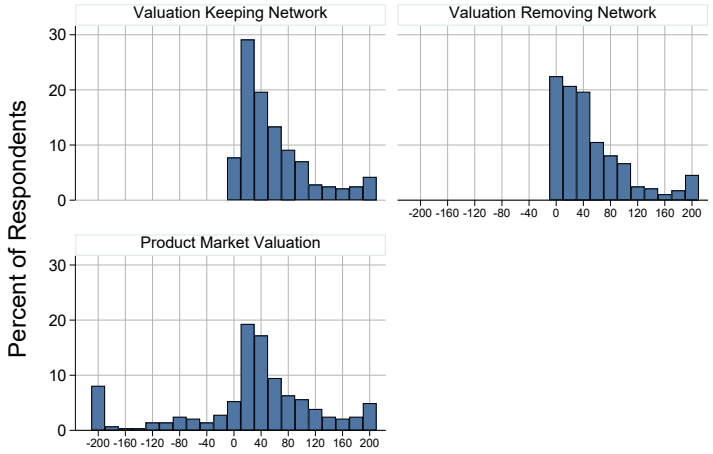
For the Instagram and Maps experiment, we pre-registered that we would pool the final data with 28 pilot responses. While we deviated from this plan and instead only report the pre-registered data in our main exhibits, we present the main results pooling the final data with the pilot responses in this section. As there are no changes in the TikTok sample, this section solely focuses on Instagram and Maps.

Appendix Figure A18: Distribution of Consumer Surplus Across Welfare Measures

(a) Instagram

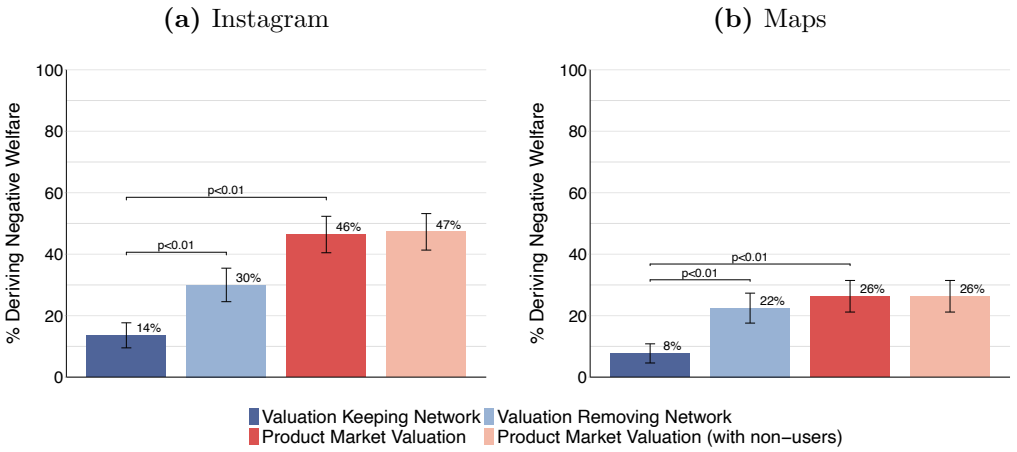


(b) Maps



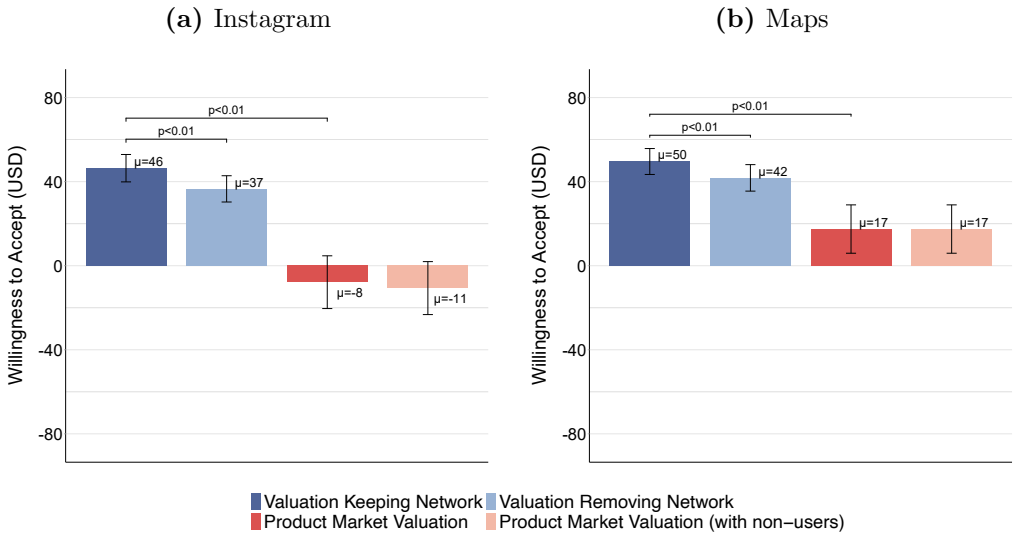
Notes: Figure A18 presents the probability density function of valuations for the different welfare measures. Panel (a) presents the results for Instagram and Panel (b) present the results for Maps. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included.

Appendix Figure A19: Fraction with Negative Welfare across Welfare Measures



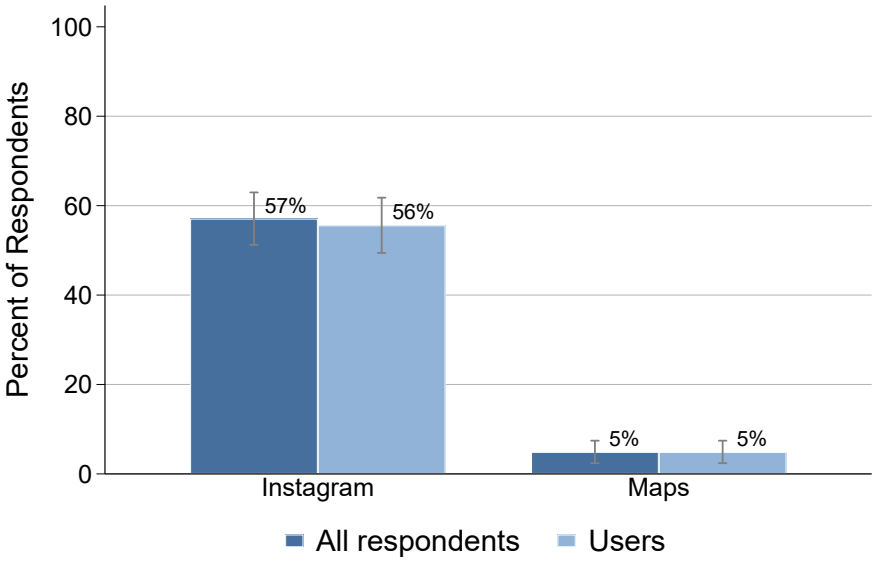
Notes: Figure A19 presents the percent of respondents with negative product valuations across our different welfare measures. Panel (a) presents the results for Instagram and Panel (b) presents the results for Maps. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. For Maps, the red and pink bars are identical as there are no non-users in our sample. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Error bars represent 95% confidence intervals.

Appendix Figure A20: Consumer Surplus across Welfare Measures



Notes: Figure A20 presents average valuations for the different welfare measures. Panel (a) presents the results for Instagram and Panel (b) presents the results for Maps. The first three bars in each panel represent valuations exclusively for active users. The dark blue bar denotes *Valuation Keeping Network*; the light blue bar denotes *Valuation Removing Network*; the red bar denotes *Product Market Valuation* for users. The pink bar represents the average *Product Market Valuation* of active users and non-users. For Maps, the red and pink bars are identical as there are no non-users in our sample. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Reported p-values correspond to one-sided t-tests testing the null hypothesis that individual welfare estimates are lower than the aggregate welfare estimate. Error bars represent 95% confidence intervals.

Appendix Figure A21: Percentage of Respondents that Prefer to Live in a World without the Platform

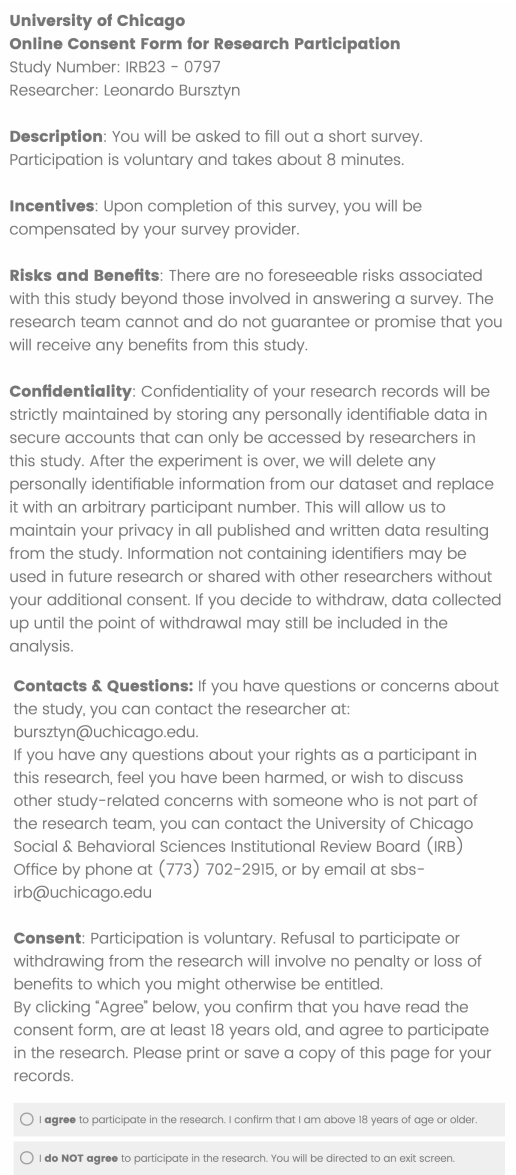


Notes: Figure 5 displays the percent of the respondents that stated they would prefer to live in a world without the platform for Instagram and Maps separately. The dark blue bar represents the fraction among all respondents and the light blue bar represents the fraction among active users of the respective platform. For Maps, the dark and light blue bars are identical as there are no non-users in our sample. Respondents who agree with their elicited valuations and those who pass all of the attention checks are included. Error bars represent 95% confidence intervals.

G Experimental Instructions

G.1 TikTok: July 2023

G.1.1 Introduction to Survey and Deactivation Study Instructions



University of Chicago
Online Consent Form for Research Participation
Study Number: IRB23 - 0797
Researcher: Leonardo Bursztyn

Description: You will be asked to fill out a short survey. Participation is voluntary and takes about 8 minutes.

Incentives: Upon completion of this survey, you will be compensated by your survey provider.

Risks and Benefits: There are no foreseeable risks associated with this study beyond those involved in answering a survey. The research team cannot and do not guarantee or promise that you will receive any benefits from this study.

Confidentiality: Confidentiality of your research records will be strictly maintained by storing any personally identifiable data in secure accounts that can only be accessed by researchers in this study. After the experiment is over, we will delete any personally identifiable information from our dataset and replace it with an arbitrary participant number. This will allow us to maintain your privacy in all published and written data resulting from the study. Information not containing identifiers may be used in future research or shared with other researchers without your additional consent. If you decide to withdraw, data collected up until the point of withdrawal may still be included in the analysis.

Contacts & Questions: If you have questions or concerns about the study, you can contact the researcher at: bursztyn@uchicago.edu.
If you have any questions about your rights as a participant in this research, feel you have been harmed, or wish to discuss other study-related concerns with someone who is not part of the research team, you can contact the University of Chicago Social & Behavioral Sciences Institutional Review Board (IRB) Office by phone at (773) 702-2915, or by email at sbs-irb@uchicago.edu

Consent: Participation is voluntary. Refusal to participate or withdrawing from the research will involve no penalty or loss of benefits to which you might otherwise be entitled.
By clicking "Agree" below, you confirm that you have read the consent form, are at least 18 years old, and agree to participate in the research. Please print or save a copy of this page for your records.

◯ I **agree** to participate in the research. I confirm that I am above 18 years of age or older.

◯ I **do NOT agree** to participate in the research. You will be directed to an exit screen.

This survey is directed at university students' social media preferences. It is designed by our research team at the University of Chicago and is administered via partnership with College Pulse.*

Thank you for participating!

*College Pulse is a research and analytics company that specifically aims to understand the attitudes, preferences, and behaviors of today's college students.

How frequently did you use each of the following **social media platforms** in the past month?

	Not at all	Once	Once a week	Twice a week	Every day
Instagram	○	○	○	○	○
Facebook	○	○	○	○	○
TikTok	○	○	○	○	○
Twitter	○	○	○	○	○

Please read the instructions of this survey carefully. We will ask you some questions to ensure your understanding of its content and give you a **bonus payment** if you answer correctly!

As mentioned, this survey is directed at university students' social media preferences.

After this survey, we will conduct a study in which we will ask **students at your university to deactivate their TikTok accounts** for **four weeks** in exchange for a **monetary payment.**

"Deactivation" studies like this have been conducted in the past (e.g., by Mosquera et al., 2018 and Allcott et al., 2020) with close to 90% compliance.

Should students deactivate their TikTok, they can go back to using it whenever they want, with their content and network unchanged, but they will then forgo any monetary payment.

To verify that students deactivate their TikTok accounts, we will **periodically visit their profiles** and **require them to upload screenshots of their app usage.**

The next part of the study involves asking you if you want to deactivate your TikTok account for four weeks in exchange for monetary payment.

For that we will need to collect your TikTok handle and we would ask you to submit periodic screenshots of your phone's time use statistics if you are selected.

Would you be willing to participate?

- ◯ Yes
- ◯ No

How will we verify that selected users deactivate their TikTok accounts?

- ◯ By periodically visiting their profiles
- ◯ By requiring them to upload screenshots
- ◯ By asking them to install an app
- ◯ By periodically visiting their profiles and requiring them to upload screenshots

For how long will we ask selected users to deactivate their TikTok accounts?

- ◯ Eight weeks
- ◯ Four weeks
- ◯ One week
- ◯ Ten weeks

G.1.2 Step 0: Practice Good

Before we begin, we will ask you a series of hypothetical practice questions for you to get accustomed to our survey.

Uber

To understand how much people value their Uber account, **we ask university students, including you,** to decide whether to **deactivate their Uber account** for four weeks, in exchange for different monetary payments.

A computer will **randomly select one student from your university** to be eligible for the deactivation study.

Uber

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

- If you accept any price scenario lower than the computer's offer, we will invite you to the deactivation study and give you the computer's offer.
- If you do not accept any price scenario lower than the computer's offer, we will not invite you to the deactivation study even if you are selected.

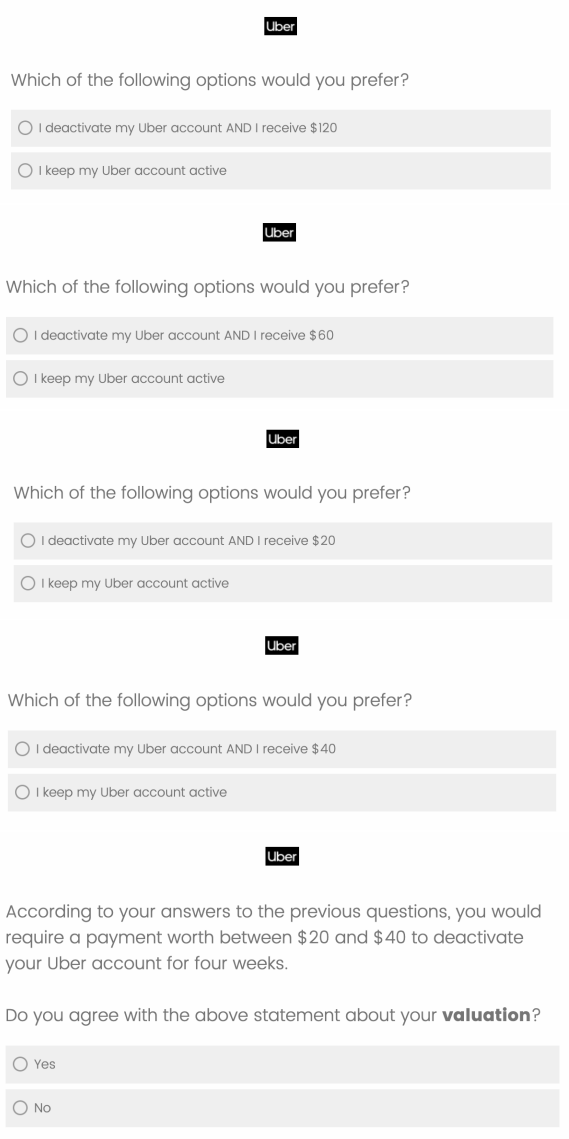
This rule means that the higher the amount you require the lower the chance that you will receive the computer's offer.

Therefore, while answering the following questions, **please choose carefully as each answer could be "the one that counts."**

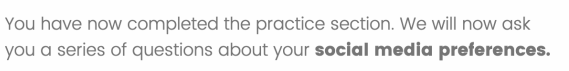
We will now ask you a comprehension question based on the text above:

Which of the following statements is true?

- ○ The amount I require does not affect the chance that I receive the computer's offer
- ○ The higher the amount I require the lower the chance that I receive the computer's offer
- ○ The higher the amount I require the higher the chance that I receive the computer's offer



G.1.3 Step 1: Valuation Keeping Network



To establish appropriate payment amounts for the deactivation study, **we ask university students, including you**, to decide whether to deactivate their TikTok accounts for different monetary amounts.

A computer will **randomly select one student from your university** to be eligible for the deactivation study.

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

Therefore, while answering the following questions, **please choose carefully as each answer could be "the one that counts."**

Which of the following options would you prefer?

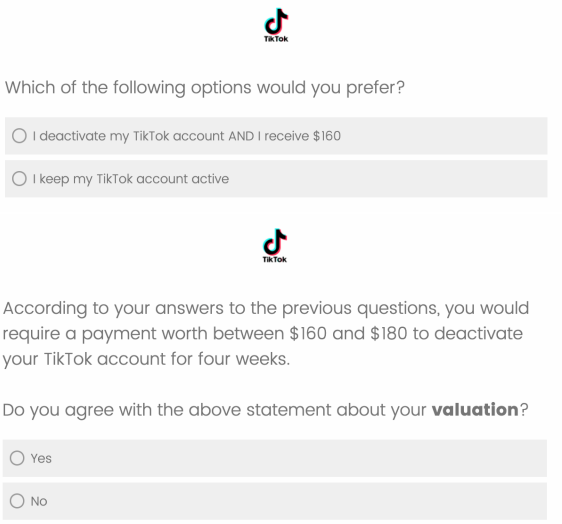
- ◯ I deactivate my TikTok account AND I receive $60
- ◯ I keep my TikTok account active

Which of the following options would you prefer?

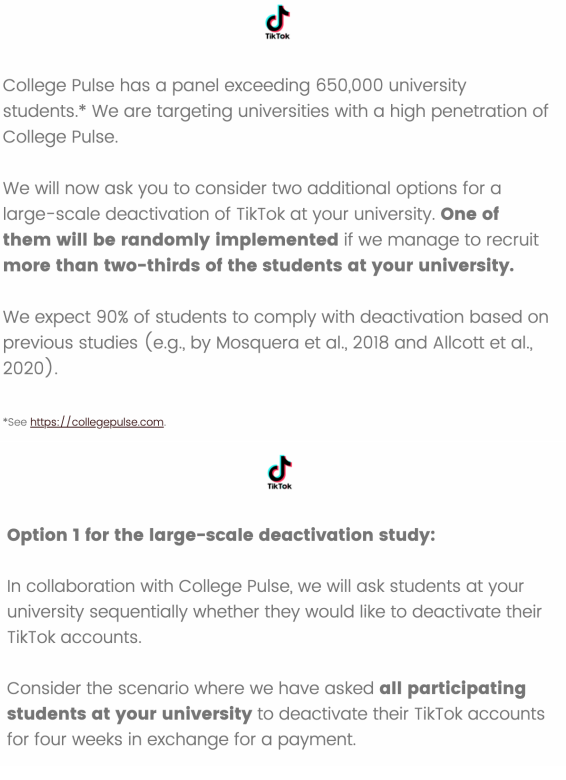
- ◯ I deactivate my TikTok account AND I receive $140
- ◯ I keep my TikTok account active

Which of the following options would you prefer?

- ◯ I deactivate my TikTok account AND I receive $180
- ◯ I keep my TikTok account active



G.1.4 Step 2: Valuation Removing Network



The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

Therefore, while answering the following questions, **please choose carefully as each answer could be "the one that counts."**

Consider the scenario where we have asked **all participating students at your university** to **deactivate their TikTok accounts** for four weeks in exchange for monetary payment.

If you had the choice to **also** deactivate your TikTok account for the next four weeks, which of the following options would you prefer?

- ○ I deactivate my TikTok account if the other students deactivate their TikTok accounts AND I receive $180
- ○ I keep my TikTok account active if the other students deactivate their TikTok accounts

Consider the scenario where we have asked **all participating students at your university** to **deactivate their TikTok accounts** for four weeks in exchange for monetary payment.

If you had the choice to **also** deactivate your TikTok account for the next four weeks, which of the following options would you prefer?

- ○ I deactivate my TikTok account if the other students deactivate their TikTok accounts AND I receive $80
- ○ I keep my TikTok account active if the other students deactivate their TikTok accounts

Consider the scenario where we have asked **all participating students at your university** to **deactivate their TikTok accounts** for four weeks in exchange for monetary payment.

If you had the choice to **also** deactivate your TikTok account for the next four weeks, which of the following options would you prefer?

- ○ I deactivate my TikTok account if the other students deactivate their TikTok accounts AND I receive $40
- ○ I keep my TikTok account active if the other students deactivate their TikTok accounts

Consider the scenario where we have asked **all participating students at your university** to **deactivate their TikTok accounts** for four weeks in exchange for monetary payment.

If you had the choice to **also** deactivate your TikTok account for the next four weeks, which of the following options would you prefer?

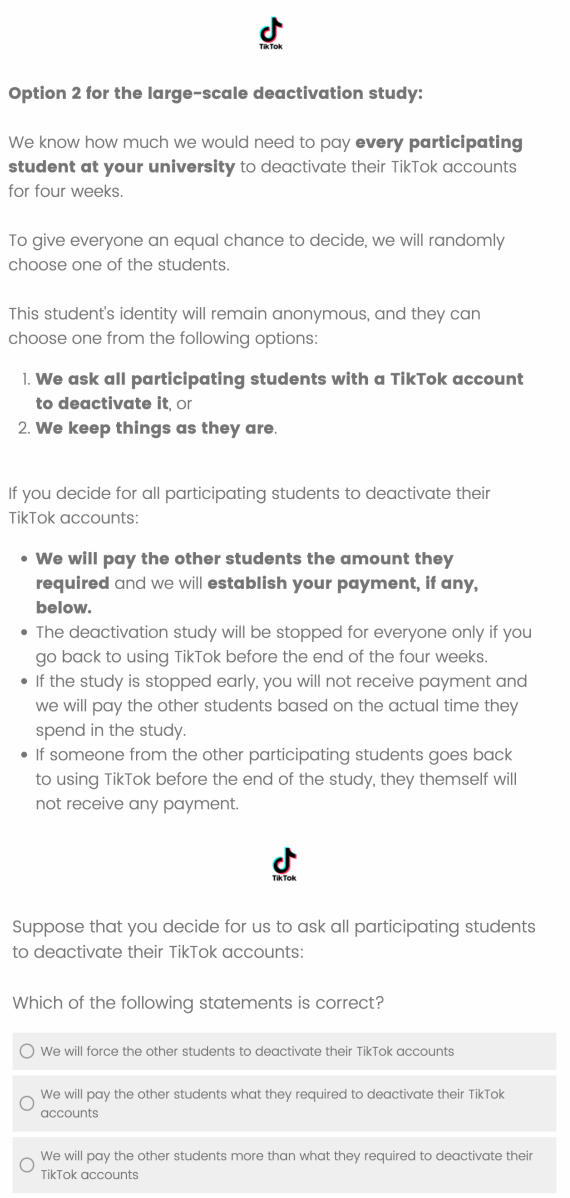
- ○ I deactivate my TikTok account if the other students deactivate their TikTok accounts AND I receive $60
- ○ I keep my TikTok account active if the other students deactivate their TikTok accounts

According to your answers to the previous questions, you would require a payment worth between $40 and $60 to deactivate your TikTok account for four weeks, if we ask all participating students at your university to deactivate their TikTok accounts.

Do you agree with the above statement about your **valuation**?

- ○ Yes
- ○ No

G.1.5 Step 3: Product Market Valuation



Option 2 for the large-scale deactivation study:

We know how much we would need to pay **every participating student at your university** to deactivate their TikTok accounts for four weeks.

To give everyone an equal chance to decide, we will randomly choose one of the students.

This student's identity will remain anonymous, and they can choose one from the following options:

1. **We ask all participating students with a TikTok account to deactivate it**, or
2. **We keep things as they are**.

If you decide for all participating students to deactivate their TikTok accounts:

- **We will pay the other students the amount they required** and we will **establish your payment, if any, below.**
- The deactivation study will be stopped for everyone only if you go back to using TikTok before the end of the four weeks.
- If the study is stopped early, you will not receive payment and we will pay the other students based on the actual time they spend in the study.
- If someone from the other participating students goes back to using TikTok before the end of the study, they themself will not receive any payment.

Suppose that you decide for us to ask all participating students to deactivate their TikTok accounts:

Which of the following statements is correct?

- ○ We will force the other students to deactivate their TikTok accounts
- ○ We will pay the other students what they required to deactivate their TikTok accounts
- ○ We will pay the other students more than what they required to deactivate their TikTok accounts

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions with different payment scenarios in case you are selected.

Therefore, while answering the following questions, **please choose carefully as each answer could be "the one that counts."**

Which of the following options would you prefer?

- ◯ All participating students at my university deactivate their TikTok accounts
- ◯ All participating students at my university keep their TikTok accounts active

Which of the following options would you prefer?

- ◯ All participating students at my university deactivate their TikTok accounts
- ◯ All participating students at my university keep their TikTok accounts active AND I receive $160

Which of the following options would you prefer?

- ◯ All participating students at my university deactivate their TikTok accounts
- ◯ All participating students at my university keep their TikTok accounts active AND I receive $180

Which of the following options would you prefer?

- ◯ All participating students at my university deactivate their TikTok accounts
- ◯ All participating students at my university keep their TikTok accounts active AND I receive $200

According to your answers to the previous questions, you would forgo a payment above $200 to have all participating students at your university, including you, deactivate their TikTok accounts for four weeks.

Do you agree with the above statement about your **valuation**?

- ◯ Yes
- ◯ No

As you have disagreed with the payment amount, you will be redirected to the beginning of the previous section.

This is the last chance to modify your answers.

Which of the following options would you prefer?

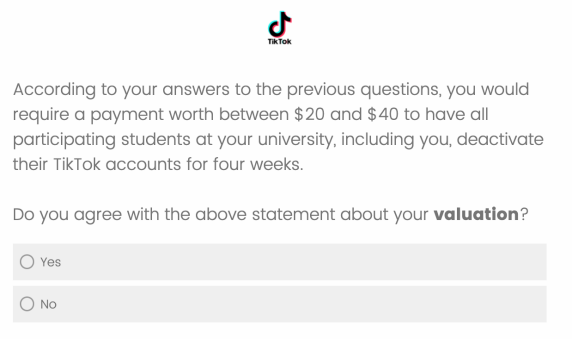
- ◯ All participating students at my university deactivate their TikTok accounts
- ◯ All participating students at my university keep their TikTok accounts active

Which of the following options would you prefer?

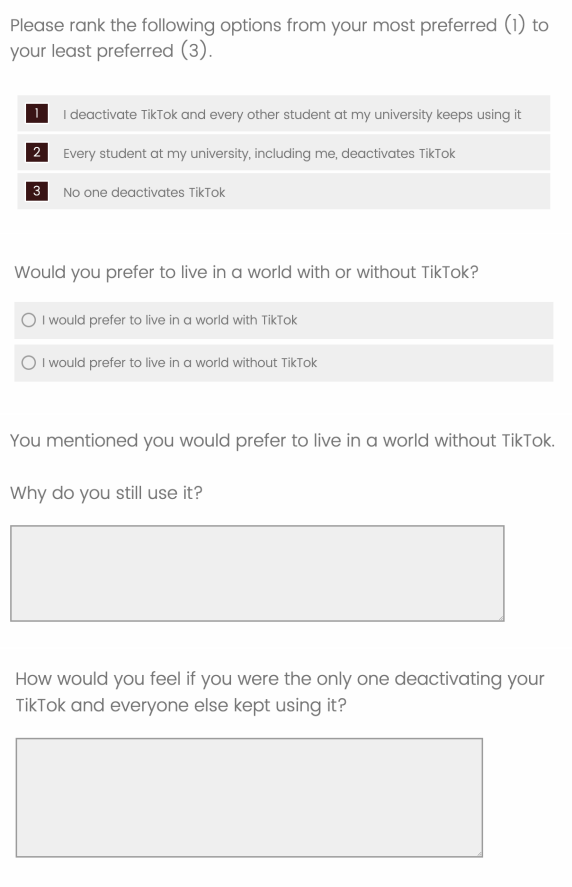
- ◯ All participating students at my university deactivate their TikTok accounts AND I receive $40
- ◯ All participating students at my university keep their TikTok accounts active

Which of the following options would you prefer?

- ◯ All participating students at my university deactivate their TikTok accounts AND I receive $20
- ◯ All participating students at my university keep their TikTok accounts active



G.1.6 Qualitative Questions



Now some **demographic** questions.

Which of the following describes you more accurately?

- ◯ Male
- ◯ Female
- ◯ Other / Prefer not to say

What is your age?

G.2 Instagram and Maps: August and September 2023

G.2.1 Introduction to Survey and Deactivation Study Instructions

University of Chicago
Online Consent Form for Research Participation
Study Number: IRB23 - 0797
Researcher: Leonardo Bursztyn

Description: You will be asked to fill out a short survey. Participation is voluntary and takes around 10 minutes.

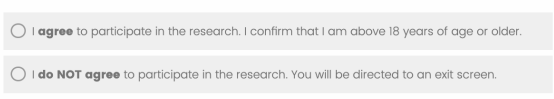
Incentives: Upon completion of this survey, you will be compensated by your survey provider.

Risks and Benefits: There are no foreseeable risks associated with this study beyond those involved in answering a survey. The research team cannot and does not guarantee or promise that you will receive any benefits from this study.

Confidentiality: Confidentiality of your research records will be strictly maintained by storing any personally identifiable data in secure accounts that can only be accessed by researchers in this study. After the experiment is over, we will delete any personally identifiable information from our dataset and replace it with an arbitrary participant number. This will allow us to maintain your privacy in all published and written data resulting from the study. Information not containing identifiers may be used in future research or shared with other researchers without your additional consent. If you decide to withdraw, data collected up until the point of withdrawal may still be included in the analysis.

Contacts & Questions: If you have questions or concerns about the study, you can contact the researcher at: bursztyn@uchicago.edu.
If you have any questions about your rights as a participant in this research, feel you have been harmed, or wish to discuss other study-related concerns with someone who is not part of the research team, you can contact the University of Chicago Social & Behavioral Sciences Institutional Review Board (IRB) Office by phone at (773) 702-2915, or by email at sbs-irb@uchicago.edu

Consent: Participation is voluntary. Refusal to participate or withdrawing from the research will involve no penalty or loss of benefits to which you might otherwise be entitled.
By clicking "Agree" below, you confirm that you have read the consent form, are at least 18 years old, and agree to participate in the research. Please print or save a copy of this page for your records.



This survey is directed at university students' social media preferences. It is designed by our research team at the University of Chicago and is administered via partnership with College Pulse.*

Thank you for participating!

*College Pulse is a research and analytics company that specifically aims to understand the attitudes, preferences, and behaviors of today's college students.

How frequently did you use each of the following social media platforms in the past month?

	Not at all	Once	Once a week	Twice a week	Every day
Instagram	○	○	○	○	○
Facebook	○	○	○	○	○
TikTok	○	○	○	○	○
Twitter	○	○	○	○	○

Please read the instructions of this survey carefully. We will ask you some questions to ensure your understanding of its content and give you a **bonus payment** if you answer correctly!

As mentioned, this survey is directed at university students' social media preferences. **We are studying how much students like you value Instagram.**

After this survey, we will conduct a study in which we will ask **students at your university to deactivate their Instagram accounts** for **four weeks** in exchange for a **monetary payment.**

"Deactivation" studies like this have been conducted in the past (e.g., by Mosquera et al., 2018 and Allcott et al., 2020) with close to 90% compliance.

Should students deactivate their Instagram accounts, they can go back to using it whenever they want, with their content and network unchanged, but they will then forgo any monetary payment.

To verify that students deactivate their Instagram accounts, we will **periodically visit their profiles and require them to upload screenshots of their app usage.**

The next part of the study involves asking you if you want to deactivate your Instagram account for four weeks in exchange for monetary payment.

For that we will need to collect your Instagram handle so that we can check whether you are active. We would also ask you to upload periodic screenshots of your phone's time use statistics if you are selected.

Would you be willing to

1. **deactivate your Instagram account for four weeks in exchange for monetary payment,**
2. provide your Instagram handle, and
3. provide screenshots of your phone's time use statistics?

- ◯ Yes
- ◯ No

How will we verify that selected users deactivate their Instagram accounts?

- ◯ By periodically visiting their profiles and requiring them to upload screenshots
- ◯ By requiring them to upload screenshots
- ◯ By asking them to install an app and requiring them to upload screenshots
- ◯ By periodically visiting their profiles

For how long will we ask selected users to deactivate their Instagram accounts?

- ◯ One week
- ◯ Four weeks
- ◯ Eight weeks
- ◯ Ten weeks

G.2.2 Step 0: Practice Good

Before we begin, we will ask you a series of hypothetical practice questions for you to get accustomed to our survey.

Uber

To understand how much people value their Uber account, **we ask university students, including you,** to decide whether to **deactivate their Uber account** for four weeks, in exchange for different monetary payments.

A computer will **randomly select one student from your university** to be eligible for the deactivation study.

Uber

Suppose the next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

- If you accept any price scenario lower than the computer's offer, we will invite you to the deactivation study and give you the computer's offer.
- If you do not accept any price scenario lower than the computer's offer, we will not invite you to the deactivation study even if you are selected.

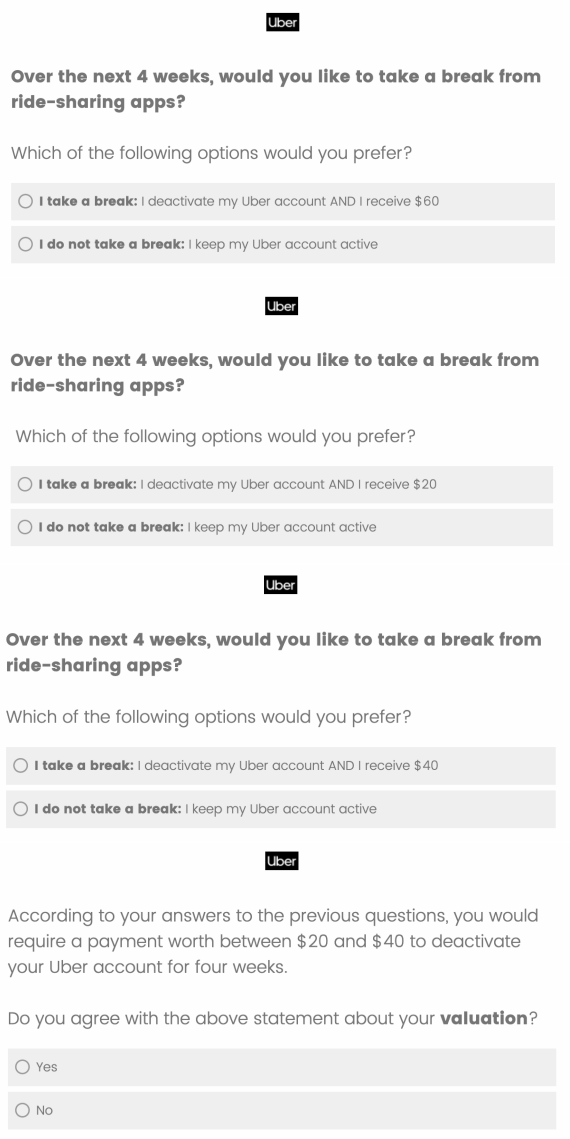
This rule means that the higher the amount you require the lower the chance that you will receive the computer's offer.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

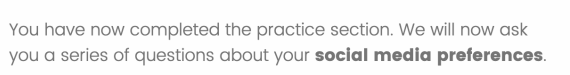
We will now ask you a comprehension question based on the text above:

Which of the following statements is true?

- ○ The higher the amount I require the higher the chance that I receive the computer's offer
- ○ The higher the amount I require the lower the chance that I receive the computer's offer
- ○ The amount I require does not affect the chance that I receive the computer's offer



G.2.3 Step 1: Valuation Keeping Network



To establish appropriate payment amounts for the deactivation study, **we ask university students, including you**, to decide whether to deactivate their Instagram accounts for different monetary amounts.

A computer will **randomly select one student from your university** to be eligible for the deactivation study.

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

Over the next 4 weeks, would you like to take a break from social media?

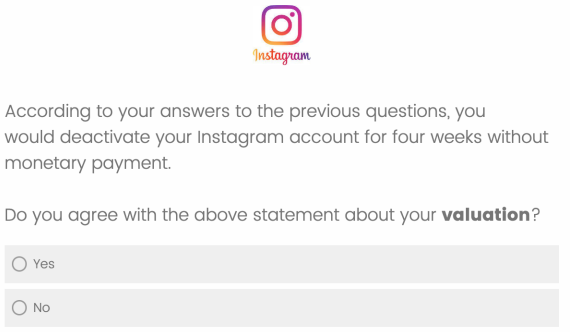
Which of the following options would you prefer?

- ◯ **I take a break:** I deactivate my Instagram account AND I receive $20
- ◯ **I do not take a break:** I keep my Instagram account active

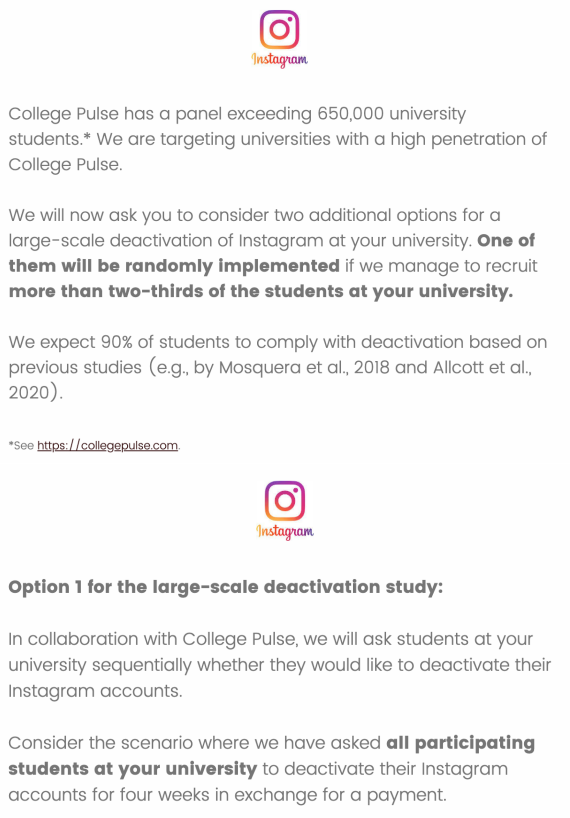
Over the next 4 weeks, would you like to take a break from social media?

If you were not receiving payment, which of the following options would you prefer?

- ◯ **I take a break:** I deactivate my Instagram account
- ◯ **I do not take a break:** I keep my Instagram account active



G.2.4 Step 1: Valuation Removing Network



The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions offering you different payment scenarios in case you are selected for the deactivation study.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

Over the next 4 weeks, would you like to take a break from social media if we ask all participating students at your university to take a break from social media in exchange for monetary payment?

If you had the choice to **also** deactivate your Instagram account without payment, which of the following options would you prefer?

- ○ **I take a break:** I deactivate my Instagram account if the other students deactivate their Instagram accounts
- ○ **I do not take a break**: I keep my Instagram account active if the other students deactivate their Instagram accounts

Over the next 4 weeks, would you like to take a break from social media if we ask all participating students at your university to take a break from social media in exchange for monetary payment?

If you had the choice to **also** deactivate your Instagram account, which of the following options would you prefer?

- ○ **I take a break:** I deactivate my Instagram account if the other students deactivate their Instagram accounts AND I receive $120
- ○ **I do not take a break**: I keep my Instagram account active if the other students deactivate their Instagram accounts

Over the next 4 weeks, would you like to take a break from social media if we ask all participating students at your university to take a break from social media in exchange for monetary payment?

If you had the choice to **also** deactivate your Instagram account, which of the following options would you prefer?

- ○ **I take a break:** I deactivate my Instagram account if the other students deactivate their Instagram accounts AND I receive $60
- ○ **I do not take a break**: I keep my Instagram account active if the other students deactivate their Instagram accounts

Over the next 4 weeks, would you like to take a break from social media if we ask all participating students at your university to take a break from social media in exchange for monetary payment?

If you had the choice to **also** deactivate your Instagram account, which of the following options would you prefer?

- ○ **I take a break:** I deactivate my Instagram account if the other students deactivate their Instagram accounts AND I receive $40
- ○ **I do not take a break**: I keep my Instagram account active if the other students deactivate their Instagram accounts

According to your answers to the previous questions, you would require a payment worth between $40 and $60 to deactivate your Instagram account for four weeks, if we ask all participating students at your university to deactivate their Instagram accounts.

Do you agree with the above statement about your **valuation**?

- ○ Yes
- ○ No

G.2.5 Step 3: Product Market Valuation

Option 2 for the large-scale deactivation study:

We know how much we would need to pay **every participating student at your university** to deactivate their Instagram accounts for four weeks.

To give everyone an equal chance to decide, we will randomly choose one of the students.

This student's identity will remain anonymous, and they can choose one from the following options:

1. **We ask all participating students with an Instagram account to deactivate it**, or
2. **We keep things as they are**.

If you decide for all participating students to deactivate their Instagram accounts:

- **We will pay the other students the amount they required** and we will **establish your payment, if any, below.**
- The deactivation study will be stopped for everyone only if you go back to using Instagram before the end of the four weeks.
- If the study is stopped early, you will not receive payment and we will pay the other students based on the actual time they spent in the study.
- If someone from the other participating students goes back to using Instagram before the end of the study, they themself will not receive any payment.

Suppose that you decide for us to ask all participating students to deactivate their Instagram accounts:

Which of the following statements is correct?

- ○ We will force the other students to deactivate their Instagram accounts
- ○ We will pay the other students what they required to deactivate their Instagram accounts
- ○ We will pay the other students more than what they required to deactivate their Instagram accounts

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions with different payment scenarios in case you are selected.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

Over the next 4 weeks, would you like students at your university to take a break from social media?

If you were not receiving payment, which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active

Over the next 4 weeks, would you like students at your university to take a break from social media?

Which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active AND I receive $160

Over the next 4 weeks, would you like students at your university to take a break from social media?

Which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active AND I receive $180

Over the next 4 weeks, would you like students at your university to take a break from social media?

Which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active AND I receive $200

According to your answers to the previous questions, you would forgo a payment above $200 to have all participating students at your university, including you, deactivate their Instagram accounts for four weeks.

Do you agree with the above statement about your **valuation**?

- ○ Yes
- ○ No

As you have disagreed with the payment amount, you will be redirected to the beginning of the previous section.

This is the last chance to modify your answers.

The **computer** will randomly generate an amount of money to offer you.

We will now ask you a series of questions offering you different payment scenarios in case you are selected.

- If you accept any price scenario lower than the computer's offer, we will give you the computer's offer
- If you do not accept any price scenario lower than the computer's offer, we will not give you the computer's offer even if you are selected.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

The next questions involve real money. The computer will randomly generate an amount of money to offer you to participate in the deactivation study.

We will now ask you a series of questions with different payment scenarios in case you are selected.

Therefore, while answering the following questions, **please choose carefully as each answer counts.**

Over the next 4 weeks, would you like students at your university to take a break from social media?

If you were not receiving payment, which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active

Over the next 4 weeks, would you like students at your university to take a break from social media?

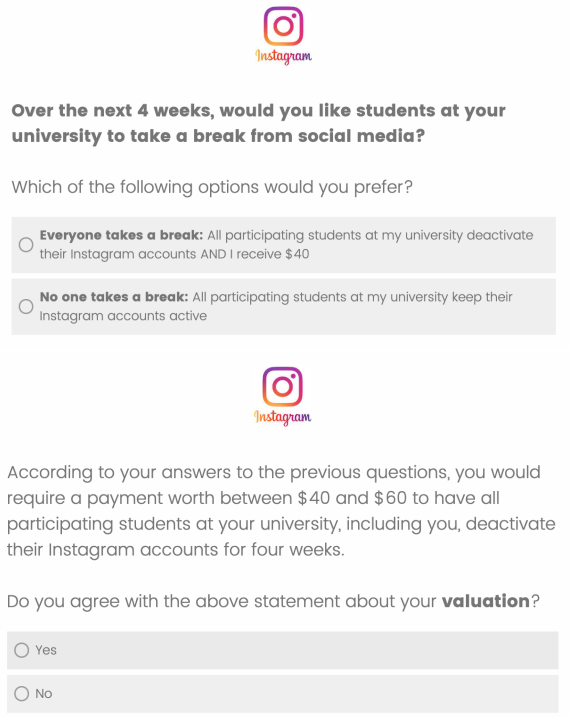
Which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts AND I receive $100
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active

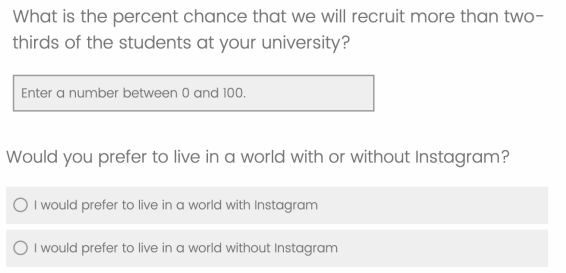
Over the next 4 weeks, would you like students at your university to take a break from social media?

Which of the following options would you prefer?

- ○ **Everyone takes a break:** All participating students at my university deactivate their Instagram accounts AND I receive $60
- ○ **No one takes a break:** All participating students at my university keep their Instagram accounts active



G.2.6 Qualitative Questions



You mentioned you would prefer to live in a world without Instagram.

Why do you still use it?

Please rank the following options from your most preferred (1) to your least preferred (3).

1 Every student at my university, including me, deactivates Instagram

2 I deactivate Instagram and every other student at my university keeps using it

3 No one deactivates Instagram

How would you feel if you were the only one who deactivated Instagram and everyone else kept using it?

What fraction of your mutual friends on Instagram are fellow college students? Please enter your response in percent.

Enter a number between 0 and 100.

To what extent do you agree with the following statements?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I use social media immediately upon waking up in the morning.	○	○	○	○	○
I would worry that I would be socially isolated if I quit social media.	○	○	○	○	○
I would worry about missing out on new trends or memes on social media if I were to quit it.	○	○	○	○	○
I feel left out when I see posts or videos about gatherings or events on social media that I wasn't part of.	○	○	○	○	○
I feel anxious if I haven't checked social media for a while.	○	○	○	○	○
I feel pressure to share or post interesting content on social media.	○	○	○	○	○

How frequently did you share content from social media with your friends in the past month?

	Not at all	Once	Once a week	Twice a week	Every day
Instagram	○	○	○	○	○
Facebook	○	○	○	○	○
TikTok	○	○	○	○	○
Twitter	○	○	○	○	○

Now some **demographic** questions.

Which of the following describes you more accurately?

- ○ Male
- ○ Female
- ○ Other / Prefer not to say

What is your age?

G.3 Luxury and Vintage Good Survey

University of Chicago
Online Consent Form for Research Participation
Study Number: IRB23 - 1227
Researcher: Leonardo Bursztyn

Description: You will be asked to fill out a short survey. Participation is voluntary and takes around 5 minutes.

Incentives: Upon completion of this survey, you will be compensated by your survey provider.

Risks and Benefits: There are no foreseeable risks associated with this study beyond those involved in answering a survey. The research team cannot and does not guarantee or promise that you will receive any benefits from this study.

Confidentiality: Confidentiality of your research records will be strictly maintained by storing any personally identifiable data in secure accounts that can only be accessed by researchers in this study. After the experiment is over, we will delete any personally identifiable information from our dataset and replace it with an arbitrary participant number. This will allow us to maintain your privacy in all published and written data resulting from the study. Information not containing identifiers may be used in future research or shared with other researchers without your additional consent. If you decide to withdraw, data collected up until the point of withdrawal may still be included in the analysis.

Contacts & Questions: If you have questions or concerns about the study, you can contact the researcher at: bursztyn@uchicago.edu. If you have any questions about your rights as a participant in this research, feel you have been harmed, or wish to discuss other study-related concerns with someone who is not part of the research team, you can contact the University of Chicago Social & Behavioral Sciences Institutional Review Board (IRB) Office by phone at (773) 702-2915, or by email at sbs-irb@uchicago.edu

Consent: Participation is voluntary. Refusal to participate or withdrawing from the research will involve no penalty or loss of benefits to which you might otherwise be entitled.
By clicking "Agree" below, you confirm that you have read the consent form and agree to participate in the research. Please print or save a copy of this page for your records.

◯ I **agree** to participate in the research.

◯ I **do NOT agree** to participate in the research. You will be directed to an exit screen.

Do you currently own products from luxury brands that you purchased **yourself**? Please tick all that apply.

- ☐ Tiffany & Co.
- ☐ Versace
- ☐ Gucci
- ☐ Louis Vuitton
- ☐ Rolex
- ☐ Chanel
- ☐ Givenchy
- ☐ Balenciaga
- ☐ Swarovski
- ☐ I do not own products from any luxury brands
- ☐ Burberry
- ☐ Other:
- ☐ Yves Saint Laurent (YSL)

Do you prefer to live in a world with or without any luxury fashion brands (such as Louis Vuitton, Gucci, Chanel, Yves Saint Laurent (YSL), Balenciaga, Versace, Rolex, Tiffany & Co., Burberry, Givenchy, and Swarovski)?

- ◯ I prefer to live in a world with luxury fashion brands
- ◯ I prefer to live in a world without any luxury fashion brands

Do you currently own an IPhone that you purchased yourself?

- ◯ Yes
- ◯ No

Which IPhone model do you own?

Do you prefer to live in a world where Apple releases the IPhone every year or every other year?

- ◯ I prefer to live in a world where Apple releases the iPhone **every year**
- ◯ I prefer to live in a world where Apple releases the iPhone **every other year**

Are you planning to buy or have you already bought the new IPhone 15 this year?

- ◯ Yes
- ◯ No

Do you prefer to live in a world with or without any IPhones?

- ◯ I prefer to live in a world with IPhones
- ◯ I prefer to live in a world without any IPhones

Which of the following describes you more accurately?

- ◯ Male
- ◯ Female
- ◯ Other / Prefer not to say

What is your age?

What was your TOTAL household income, before taxes, last year?

- ◯ $0 - $20 000
- ◯ $20 000 - $50 000
- ◯ $50 000 - $90 000
- ◯ $90 000 - $150 000
- ◯ $150 000 - $200 000
- ◯ $200 000+

Which category best describes your highest level of education?

- ◯ Some High School
- ◯ High School Degree
- ◯ Some College
- ◯ College Degree
- ◯ Master's Degree
- ◯ Doctoral Degree

What racial or ethnic group best describes you?

- ◯ White
- ◯ Black or African-American
- ◯ Hispanic or Latino
- ◯ Asian or Asian-American
- ◯ Middle Eastern
- ◯ Other