

Crowd Workers

Crowdsourcing and Human Computation

Instructor: Chris Callison-Burch

Website: crowdsourcing-class.org

Ethical questions about Mechanical Turk

- Who are the workers?
- Why would they work for pennies?
- Is it a digital sweatshop?

Ethical questions about Mechanical Turk

Amazon Mechanical Turk: Gold Mine or Coal Mine?

Karën Fort*
INIST-CNRS/LIPN

K. Bretonnel Cohen†
U. Colorado School of Medicine/U.
Colorado at Boulder

Gilles Adda**
LIMSI/CNRS



Recently heard at a tutorial in our field: “It cost me less than one hundred bucks to annotate this using Amazon Mechanical Turk!” Assertions like this are increasingly common, but we believe they should not be stated so proudly; they ignore the ethical consequences of using MTurk (Amazon Mechanical Turk) as a source of labour.

Manually annotating corpora or manually developing any other linguistic resource, however small, is a laborious task that requires a high level of attention and care.

Here's an excerpt from an IRB application Chris Callison-Burch posted - "We will pay participants small sums of money to complete our tasks, ranging from \$0.01 to \$1. All participants can choose for themselves whether the compensation is fair, and opt not to do it if they deem the compensation to be too low. Amazon's Mechanical Turk has many other researchers and companies offering tasks, so we will offer compensation that is similar to what others offer."

He first refers to Amazon's Mechanical Turk as "an online labor market." And that, I agree with. It is an online labor market.

Requesters like him, and CrowdFlower, **collude**, explicitly or implicitly, **to keep wages at a substandard level** that is compatible with existence standard.

Unlike Jewels, I don't blame workers for taking low paying jobs. I can't blame a person for being needy enough to take what amounts to a crust of bread. **I blame Chris Callison-Burch, and others like him, for keeping the standard wage at crust of bread level.**

I feel like Maria in "Metropolis."

I tried one of those to see, I gave it up at 4 minutes in and about 2/3 of the way through. For the whole hit, I'd have taken about 6 minutes. 10 hits an hour - **\$1.70 an hour**. Restricted to U.S. residents.

This is far too low to be considered a fair wage for a U.S. resident. My performance may be very far off from what others can do. Perhaps I took 4 times or more as long as an average worker would.

My complaint is that any U.S. requester knows what wage rate is required for a U.S. resident to survive. We may not agree on an exact number. But as they say, I know a fair wage when I see it, and this is not it.

Mturk is actually much smaller than what it can appear to be. Something close to requester monopoly has the power to keep wages low. Requester co-operation, explicit or implicit, reinforces this.

Chris Callison-Burch is not unaware, I think, of the mechanics of the wage structure of Mturk.

**WORKERS
OF THE WORLD
UNITE!**



Web Workers Unite! Addressing Challenges of Online Laborers

Bederson and Quinn (ALT CHI 2011)

The ongoing rise of human computation has created an environment where human workers are often regarded as nameless, faceless computational resources. Some people have begun to think of online tasks as a “remote person call”.

Unfortunately, as with any labor market, once humans and money are involved, a host of problems surface. From privacy breaches to unpaid or underpaid labor, there are real social risks that arise with the use of these technologies

It is our responsibility to address them since it is designers, not ethicists or policy makers, who have the power to influence what is built and to mitigate risks before any harm is done.

MTurk for Workers

All HITs | HITs Available To You | HITs Assigned To You

Find HIT

- HIT Creation Date (oldest first)
- HIT Creation Date (newest first)
- HITs Available (fewest first)
- HITs Available (most first)
- Reward Amount (least first)
- Reward Amount (most first)**
- Expiration Date (soonest first)
- Expiration Date (latest first)
- Title (A-Z)
- Title (Z-A)
- Time Allotted (least first)
- Time Allotted (most first)

GO!

Show all details | Hide all details

I understand, would be useful to know how to clean up aud

HIT Expiration Date: Sep 4, 2013 (1 day 21 hours) **Reward:**

Time Allotted: 24 hours **HITs Available:**

Transcription of approximately 15 minutes of audio

Requester: [Amelia Jones](#)

HIT Expiration Date: Sep 5, 2013 (2 days 23 hours) **Reward:**

Time Allotted: 8 hours **HITs Available:**

BY INVITATION ONLY: Answer a few questions in a brief survey

Requester: [Qualtrics Survey](#)

HIT Expiration Date: Sep 5, 2013 (2 days 21 hours) **Reward:**

Time Allotted: 30 minutes **HITs Available:**

Take a geo-tagged photo of a landmark in North Dakota

Requester: [Crowdsourcing at Thomson Reuters](#)

HIT Expiration Date: Sep 5, 2013 (2 days 16 hours) **Reward:**

Time Allotted: 3 days **HITs Available:**

HITs

containing []

that pay at least \$ **Dashboard - Chris Callison-Burch** (If you're not Chris Callison-Burch, [click here.](#))

Your Worker ID: A23KO2TP7I4KK2

Total Earnings ([What's this?](#))

Rewards You Have Earned	Value
Approved HITs	\$44.29
Bonuses	\$0.00
Total Earnings Show earnings details ▾	\$44.29

Your HIT Status ([What's this?](#))

Date	Submitted	Approved	Rejected	Pending	Earnings
Today	2	1	0	1	\$0.05
Sep 2, 2013	8	8	0	0	\$0.24
View more...					

HIT Totals ([What's this?](#))

HITs You Have Accepted	Value	Rate	HITs You Have Submitted	Value	Rate
HITs Accepted	1303	—	HITs Submitted	1095	—
... Submitted	1095	84.0%	... Approved	1081	98.8%
... Returned	119	9.1%	... Rejected	13	1.2%
... Abandoned	89	6.8%	... Pending	1	—

HITs

containing

that pay at least \$ 0.00

► require Master Qualificat

Status Detail - Chris Callison-Burch (If you're not Chris Callison-Burch, click here.)

Show: All HITs ▾

HITs You Worked On For September 02, 2013 ([What's this?](#))

What sucks about the MTurk worker interface?

- No way to search by expected hourly rate
- No way to estimate the difficulty or length of time that it will take to do a task
- No way to know how reputable a requester is in advance
- No way to know how long until they will pay
- information asymmetry, imbalance of power

[Home](#)[Create](#)[Manage](#)[Developer](#)[Help](#)[Results](#)[Workers](#)[Qualification Types](#)[Manage HITs](#)

Manage Batches

Click on the name of the batch to see more details

▼ Batches in progress (1)

Compression HIT - grammar/meaning 10		Results	Cancel th...
Created:	July 04, 2013	Assignments Completed:	2,468 / 2,468
Time Elapsed:	1 day	Estimated Completion Time:	COMPLETE
Average Time per Assignment:	3 minutes 40 seconds	Effective Hourly Rate:	\$4.091
Batch Progress:	<div style="width: 100%;"><div style="width: 100%;">100% submitted</div></div>	<div style="width: 100%;"><div style="width: 100%;">100% published</div></div>	

▼ Batches ready for review (143)

[« Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) ...

Word Alignment - Trusted Workers - Dev 0.7		Results	Delete
Created:	July 02, 2013	Assignments Completed:	1,995 / 2,000
Time Elapsed:	15 days	Estimated Completion Time:	September 03, 2013 4:41 PM (TODAY)
Average Time per Assignment:	1 minute 58 seconds	Effective Hourly Rate:	\$4.576

HIT - grammar/meaning 10

this batch, make changes, or get results.

ces and decide how grammatical they are

[Cancel this batch](#)

100% submitted

100% published

2,468 / 2,468

July 04, 2013 1:03 PM PDT

Average Time per Assignment: 3 minutes 40 seconds

Estimated Completion Time: COMPLETE

Average Hourly Rate: \$4.091

HIT - grammar/meaning

Read a group of sentences and decide how grammatical they are
English, writing, editing, language, research, language, paraphrasing,
paraphrases, summarization, summaries, text, comprehension, reading
HIT Approval Rate (%) for all Requesters' HITs greater than or equal to 85
(Required for preview)

Number of HITs Approved greater than 100 (Required for preview)

Location is UNITED STATES (Required for preview)

er HIT: 2

\$0.250

compression-evaluation.dev.csv

Results

Assignments pending review: 0

Assignments approved: 2,070

Assignments rejected: 398

Resu

Cost Summary

Estimated Total Reward: \$500.000

Estimated Fees to Mechanical Turk: \$50.000 (fee details)

Estimated Total Cost: \$550.000

These costs are only an estimate until all of the assignments have been submitted and reviewed.

[Approve](#)[Reject](#)

<u>Worker ID</u>	<u>Work Time In Seconds</u>	<u>Lifetime Approval Rate</u>	<u>Input.System Names 0</u>	<u>City</u>	<u>Region</u>
A1H11P4QSM08Y1	145	100% (59/59)	pos_control neg_control /export/common/SCALE13/...		
A3O7D2TTK99UK5	3	12% (119/1007)	pos_control neg_control /export/common/SCALE13/...		
ASB13NJKTGCYB	122	100% (44/44)	pos_control neg_control /export/common/SCALE13/...		
A1BM57TUNAQIXM	478	100% (3/3)	pos_control neg_control /export/common/SCALE13/...	Los Angeles	California
A3445FT062DGIX	231	100% (78/78)	pos_control neg_control /export/common/SCALE13/...		
AYSX5GNO640MZ	141	13% (5/39)	pos_control neg_control /export/common/SCALE13/...		
A21U64TBRENETA	158	100% (17/17)	pos_control neg_control /export/common/SCALE13/...	Orlando	Florida
A23AFAXSEYH61S	241	100% (177/177)	pos_control neg_control /export/common/SCALE13/...	Los Angeles	California
A1GYXHW4YCOJ0H	154	100% (77/77)	pos_control neg_control /export/common/SCALE13/...		
A3O7D2TTK99UK5	21	12% (119/1007)	pos_control neg_control /export/common/SCALE13/...		
AUGRDUEDEUXUS	184	100% (12/12)	pos_control neg_control /export/common/SCALE13/...		
AYSX5GNO640MZ	182	13% (5/39)	pos_control neg_control /export/common/SCALE13/...		

TurkOpticon plugin

Workers rate Requesters based on a Requester's:

- **communicativity**: How responsive has this requester been to communications or concerns you have raised?
- **generosity**: How well has this requester paid for the amount of time their HITs take?
- **fairness**: How fair has this requester been in approving or rejecting your work?
- **promptness**: How promptly has this requester approved your work and paid?

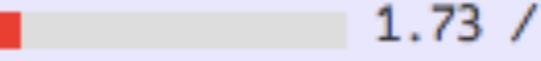
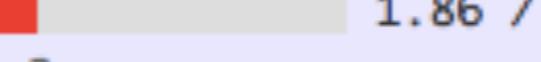
Choose the best category for this government project (good english important)

Requester:

 [The Public Group](#)

HIT Expiration Date:

Sep 10, 2013 (6 days)

communicativity:			1.17 / 5
generosity :			1.73 / 5
fairness :			1.39 / 5
promptness :			1.86 / 5

Time Allotted:

60 minutes

[What do these scores mean?](#)

Scores based on [81 reviews](#)

Terms of Service violation flags: 0

[Report your experience with this requester »](#)

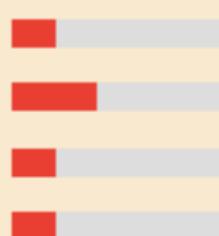
[Contact Us](#) | [Careers at Amazon](#) | [Developers](#) |

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Took a leap of faith on this requester and was rewarded with a %50 reject rate and a broken search feature and no feedback. Would not recommend, even if you have thousands of HITs under your belt to cushion the inevitable rejections.

Aug 29 2013 | [KBH19](#) | flag | comment



Arbitrarily rejected over half of the hits I submitted, and then banned me from submitting any more hits for them. I suppose that's a blessing in disguise though, as I had no intention of doing any for them again after the first batch of rejections.

Aug 21 2013 | [bour...@g...](#) | flag | comment



Their HIT is very unclear. There is an option to browse for the result, but it does not work.

Aug 20 2013 | [jeff...@g...](#) | flag | comment

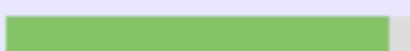
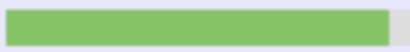
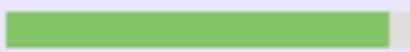
Word Alignment

Requester:

 [Chris Callison-Burch](#)

HIT Expiration Date:

Nov 12, 2013 (9 weeks)

communicativity:	 4.05 / 5
generosity :	 4.01 / 5
fairness :	 4.25 / 5
promptness :	 4.01 / 5

[What do these scores mean?](#)

Scores based on [95 reviews](#)

Terms of Service violation flags: 1

[Report your experience with this requester »](#)

Time Allotted:

60 minutes

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For those of you who know Arabic, this is a very solid requester with a very fair pay. Highly recommended for those who want to make some real money. Payment usually take one week depending on the HITs you are doing

don't waste your time trying to submit machine translated crap, or random answers to multiple choice questions, you will get blocked instantly

Jul 27 2013 | [hala...@h...](#) | [flag](#) | [comment](#)

 Chris is one of the better requesters on MTurk, if you meet his qualifications and actually do the work as he requires. Glad to see that someone out there can finally work on those Arabic translation HITs that we've all seen for months now.

Jul 27 2013 [baudelai...@m...](#)

Good requester. Everything approved in a couple of days. I had no problems. This is a safe requester to work for.

Requester:

▼ [Chris Callison-Burch](#)

HIT Expiration D

[Tag article](#)

Requester:

[What do these scores mean?](#)

HIT Expiration D

Scores based on [190 reviews](#)

Time Allotted:

Terms of Service violation flags: 2

HIT Expiration D

[Report your experience with this requester »](#)

FAIR: NO DATA

FAST: NO DATA

PAY: 1 / 5 

COMM: NO DATA

Did about 50 of these earlier and was a little weary based on reviews. They all approved which was good for me, but I hope the requester doesn't do the majority rule thing anymore. It seems that's why many got rejected and he doesn't seem to respond to others so do at your own risk.

Jan 19 2016 | [dancab...@y...](#) |

FAIR: 5 / 5 

FAST: 5 / 5 

PAY: 5 / 5 

COMM: NO DATA

HIT(s):

Determine whether or not sentences are true; Translation from Russian to English

I've done a few of the "Determine whether or not sentences are true" HITs for this requester, which were great, paid fairly, in my opinion and took just a couple hours to approve and pay.

I also did many translations from Russian to English and all of them got approved. Pay on these varies because it's 4 sentences per HIT for 30c but sometimes sentences are very long, sometimes very short.

Turker Nation discussion boards

- A watering hole for Turkers to discuss MTurk and Requesters
- Has a Requester Hall of Fame / Shame
- Lots of engaging conversation
- Sometime people vent their frustration

crowd-workers.com

- I am developing a browser plug-in that will improve the MTurk UX for Workers
- The idea is to track and aggregate statistics across many workers, so that they have better information
- Academically, I am interested in these questions
 - a) How much time does the average Turker spend working?
 - b) What is their hourly rate?
 - c) How reputable are requesters (what fraction of the HITs do they approve v. reject)?
 - d) How much time to workers spend searching v working?

qualitative v quantitative

TurkOpticon's qualitative attributes	CrowdWorker's quantitative equivalents
promptness: How promptly has this requester approved your work and paid?	Expected time to payment: On average, how much time elapses between submitting work to this Requester and receiving payment?
generosity: How well has this requester paid for the amount of time their HITs take?	Average hourly rate: What is the average hourly rate that other Turker make when they do this requester's HITs?
fairness: How fair has this requester been in approving or rejecting your work?	Approval/rejection rates: What percent of assignments does this Requester approve? What percent of first-time Workers get any work rejected?
communicativity: How responsive has this requester been to communications or concerns you have raised?	Reasons for rejection: Archive of all of the reasons for Workers being rejected or blocked by this Requester.

CrowdWorkers Amazon Mechanical Turk

crowd-workers.com/discover?size=36

 Crowd Workers

Discover Track Your Stats

Chris Callison
ID: A23KO27

Search for HIT Minimum hourly rate Rate Search

Discover

Here are HITs that other Crowd Workers completed. You can sort by the hourly rate averaged across all workers, and other features.

Hitgroup name, description and keywords	Requester	HITs available	Hourly rate	RewardS
Parents of 11- to 18-month-olds: Complete an online study with your child about intuitive probability! go to MTurk page For parents/guardians to complete with child aged 11 to 18 months ONLY: participate in a web-based experiment about how your child makes predictions. baby,babies,infant,children,child,parenting,kids,parents,causal,reasoning,probability,cognitive,development,learning,psychology,experiment	Lookit	1	\$590.55 \$2.50	
Website Content Review 6 go to MTurk page Search "warburg pincus healthcare". List the 1st option in the top navigation bar, of the 1st search result for payment. warburg,pincus,healthcare	Cam Elizabeth Harvey	1	\$29.03 \$0.03	
App Usage Study go to MTurk page Testing new apps for mobile devices over a 12-day period survey,apps,mobile	Gracy P.	1	\$25.18 \$8.00	
Website Content Review 43 go to MTurk page Search 'gramercy emerging markets high yield fund'. List the title of the 2nd option in the website navigation menu of the 1st search result for	Cam Elizabeth	1	\$23.79 \$0.03	

Workers' concerns

- Wage issues: unfairly rejected work, slow payment, and payments that do not fairly reflect the work that they performed
- No appeals process for unfairly rejected work. Requestors can unresponsive.
- Grass roots tools, user-maintained ratings/blacklist of requestors

Requesters' concerns

- Quality: Workers may do substandard work or more blatantly cheat
- Cheating by randomly clicking or typing, using scripts to enter useless input, or giving answers that are not useful, but just relevant enough to get payment
- No ability to judge workers' skills or qualifications in advance
- Often difficult to automatically judge the quality of work

System Design Guidelines

Bederson and Quinn (ALT CHI 2011)

- Provide **hourly pay** and **disclose the expected wage**
- **Value workers' time** and optimize tasks to use worker's time effectively
- Use **Objective quality metrics** to approve or reject
- **Give immediate feedback** to workers on their quality, and warnings to problematic workers

System Design Guidelines

Bederson and Quinn (ALT CHI 2011)

- Define **payment terms** including how quickly payments will be paid, and follow them.
- **Provide a grievance process** for workers who were treated unfairly. Removes the imbalance of power.
- **Provide task context:** Makes work more satisfying to workers, and lets them make informed ethical choices about what work to do
- **Limit anonymity:** Anonymity of requestors enables them to reject work with impunity. Anonymity for workers enables them to cheat with nearly no risk

Who are the Turkers?

Worker ID

A1H11P4QSM08Y1

A3O7D2TTK99UK5

ASB13NJKTGCYB

A1BM57TUNAQIXM

A3445FT062DGIX

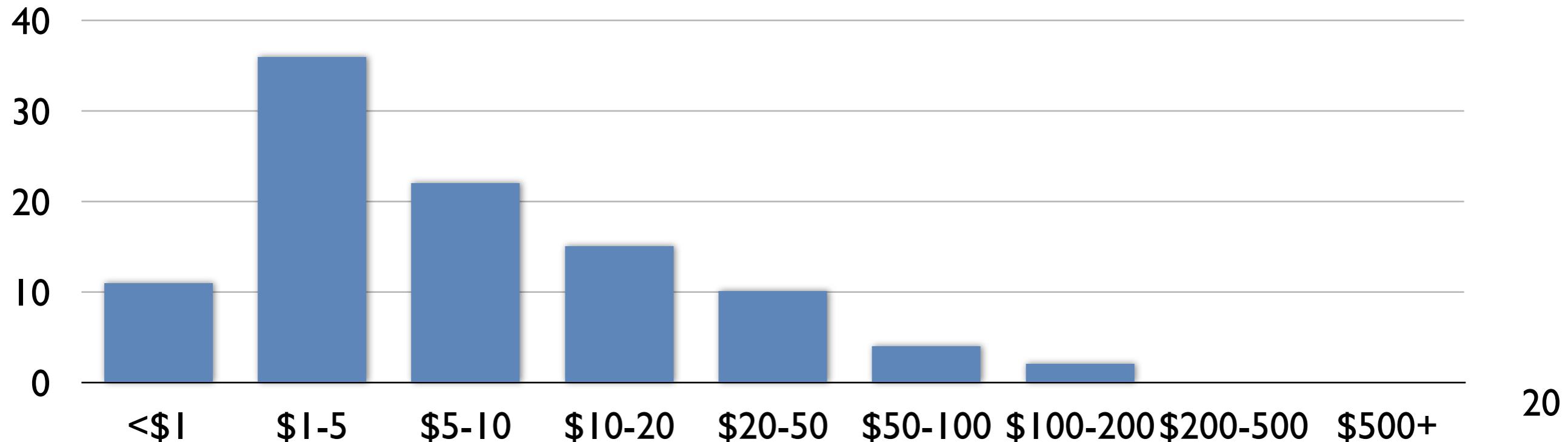
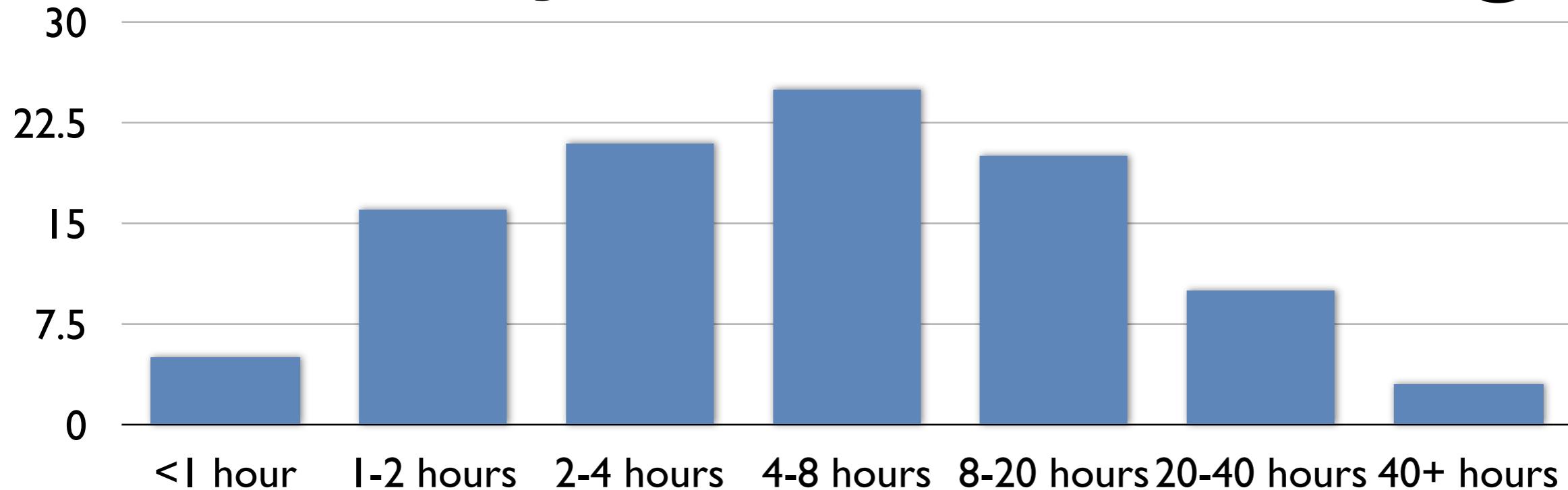
AYSX5GNO640MZ

- Requesters are given very little information about Turkers - basically just a serial number
- No names, no demographic information (like what languages they speak)
- Who are these people who work for us?

Who are the Turkers?

- Post a HIT to interview them!
- Panos Ipeirotis has a nice demographic survey on his blog “A Computer Scientist In Business School”
- Age, Gender, Education Levels, Marital Status, Household Income, Weekly earnings. **Why do you it?**
- India versus USA

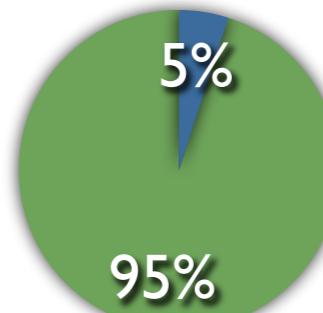
Weekly hours, earnings



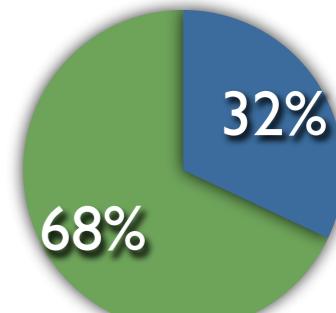
Why do you do it?

I use MTurk to kill time

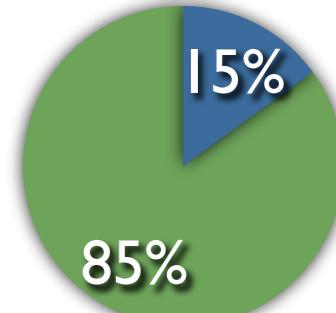
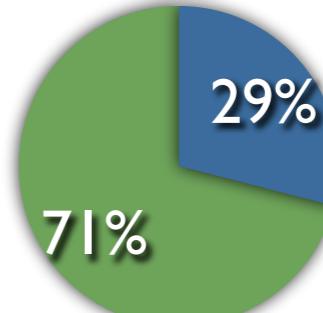
India



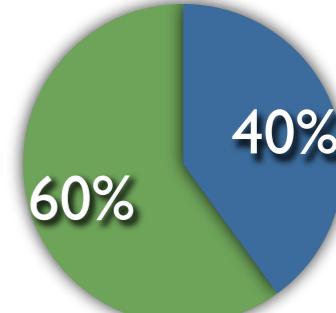
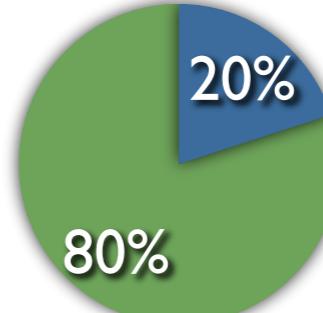
USA



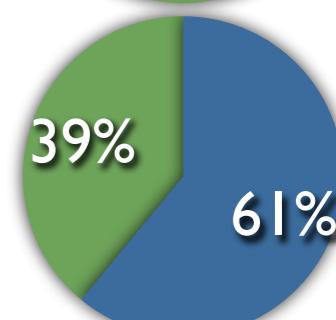
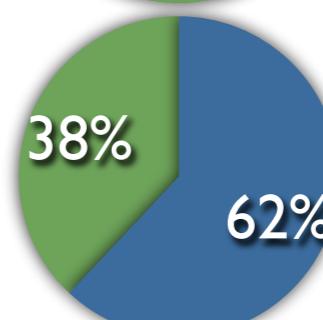
I participate on MTurk for fun



Secondary source of income
or for pocket change



Fruitful way to spend free time
and get cash (instead of TV)



● Yes

● No

● No

Ethnographic Study of Turker Nation

Being a Turker, Martin et al (CSCW 2014)

Observation: 40% of US-based Turkers said they did it for fun.(Ipeirotis study)

Conclusion: Turkers do HITs because they like them, regardless of what the pay is

Turking for Fun?

danturker

This attitude would be requesters dream come true. The workers come here to have fun and play and the lousy pay for work is not an issue. This attitude helps create low pay for the AMT work force that does care about fair pay.

larak56

I agree with most everyone here. While I do find some of the HITS fun and actually learn an incredible amount by doing HITS, I do it for the cash.

Ethnographic Study of Turker Nation

Being a Turker, Martin et al (CSCW 2014)

Assumption: MTurk is a pure form of market that falls into a fair equilibrium. Bad employers and workers are rooted out as their poor actions become visible. Wages or pricing settles to a 'natural' level.

Conclusion: "apparently half a million people find work at pay rates they're entirely happy with but pay rates that are below minimum wage"

–Tim Worstall, Forbes blogger

Pay Expectations

jimtexan79

I was hoping to make at least \$3,650.00 (you know, 10 bucks a day) but, alas, I fell short. I blame all those summer months that I slacked off. :[

So, how much didja make? Was it what you hoped?

mwanza57

I made \$1,179. Would love to double that for next year.

bubbles

\$14,476.93 Hoping to do better this year.

defectturk

It is a full part time job for me. I can turk during slow periods at my day job and from 4-10 during the week I turk. Because of pay cuts at my day job I would have to be working a part time job outside the home if I did not turk. And yes, my boss is aware of my activities and when they cut our pay the last time, he openly told us that if we can find other work that he would be flexible in allowing it. Just trying to hold on until the housing market rebounds and keep the company in business. It is cool of him to allow it, but I would much rather have my salary back and drop turking.

jane

I am having a hard time. Mentally, spiritually, physically, and especially financially. My roommate has been out of work for almost 2 months, and ran out of money a few weeks ago... I have to come up with \$\$ if he can't keep this roof over my own head. And he does now have a job that he is in training for--tho he will not see any money from it for a few MORE weeks. In the meantime, rent is due today, and I don't have all of it. I am going to have to beg the office to take what I do have, and let me pay the rest next paycheck. I could stand that, if that were all there was, but the power and internet need to stay on, or NEITHER ONE OF US will have any income. I paid the power right before cut off last time--that means it can't be long before cut-off notice comes a-knockin again. I know the internet bill is like that too now... I have been beating my head in trying to do more turking, more anything online [... rest of post omitted...]

Jobs in the sharing economy



In Search of Uber's Unicorn

The ride-sharing service says its median driver makes close to six figures. But the math just doesn't add up.

By Alison Griswold



An Uber driver waits for customers in his car in Beverly Hills, California.



New York Uber Driver Refuses to Take Woman in Labor to Hospital, Charges Her \$13



Taxis Are Doomed and They Know It. Here's Why There's Nothing They Can Do.



Can a Field in Which Physicists Think Like Economists Help Us Achieve Universal Knowledge?

FROM THE WEEK



Report: Most of America's largest police departments allow officers to choke, strangle, and hog-tie people



The Economy Kind of Sucks for People Who Don't Drive

U B E R D R I V E R S

Read here about an important lawsuit brought by Uber drivers to recover the tips they should have received and reimbursement for expenses

Uber drivers have filed a class action lawsuit claiming they have been misclassified as independent contractors and are entitled to be reimbursed for their expenses that Uber should have to pay, like for gas and vehicle maintenance. The lawsuit also challenges Uber's practice of telling passengers that the gratuity is included and not to tip the drivers, even though you are not getting a tip!!

THIS CASE HAS NOW BEEN SET FOR TRIAL IN JUNE 2016!

We won a major victory on March 11, 2015, when the judge overseeing the case, Judge Edward M. Chen, of the federal district court in San Francisco, denied Uber's motion for summary judgment! In his decision, the judge agreed with many of our arguments about why Uber drivers may be properly classified as employees. Under the court's order, the case will go to trial before a jury. See the news stories below for reports on the ruling.

We won another important victory on December 9, 2015, when the court issued its final order certifying the case as a class action. Under this decision, the case will now include all drivers who have contracted with Uber directly and in their own name (not through intermediate companies) in California since 2009.



In order to join our list of drivers interested in the case, and to sign up for us to represent you individually in the event that we need to pursue individual cases (such as in arbitration) to collect any wages that may be owed to you based on Uber's misclassification of drivers, **PLEASE CONTACT US** to obtain a form to return to us.

Shannon Liss-Riordan
Adelaide Pagano

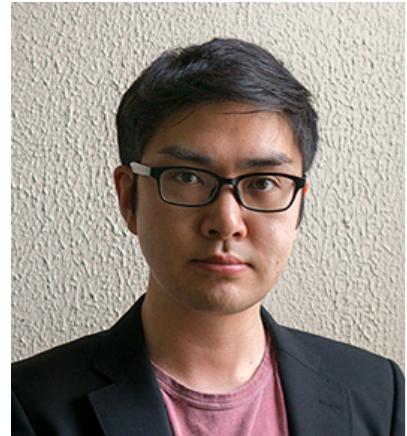
U.S. Department of Labor
Wage and Hour Division
Washington, D.C. 20210

Misclassification of employees as independent contractors is found in an increasing number of workplaces in the United States, in part reflecting larger restructuring of business organizations. When employers improperly classify employees as independent contractors, the employees may not receive important workplace protections such as the minimum wage, overtime compensation, unemployment insurance, and workers' compensation. Misclassification also results in lower tax revenues for government and an uneven playing field for employers who properly classify their workers. Although independent contracting relationships can be advantageous for workers and businesses, some employees may be intentionally misclassified as a means to cut costs and avoid compliance with labor laws.

The Department of Labor's Wage and Hour Division (WHD) continues to receive numerous complaints from workers alleging misclassification, and the Department continues to bring successful enforcement actions against

A Data-Driven Analysis of Workers' Earnings on Amazon Mechanical Turk

CHI-2018



Kotaro Hara



Abigail Adams



Kristy Milland



Saiph Savage



Chris Callison-Burch



Jeffrey P. Bigham



SINGAPORE
MANAGEMENT
UNIVERSITY



McMaster
University



Carnegie
Mellon
University

ABSTRACT

A growing number of people are working as part of on-line crowd work. Crowd work is often thought to be low wage work. However, we know little about the wage distribution in practice and what causes low/high earnings in this setting. We recorded 2,676 workers performing 3.8 million tasks on Amazon Mechanical Turk. Our task-level analysis revealed that workers earned a median hourly wage of only ~\$2/h, and only 4% earned more than \$7.25/h. While the average requester pays more than \$11/h, lower-paying requesters post much more work. Our wage calculations are influenced by how unpaid work is accounted for, *e.g.*, time spent searching for tasks, working on tasks that are rejected, and working on tasks that are ultimately not submitted. We further explore the characteristics of tasks and working patterns that yield higher hourly wages. Our analysis informs platform design and worker tools to create a more positive future for crowd work.

Jobs in the platform economy



In Search of Uber's Unicorn

The ride-sharing service says its median driver makes close to six figures. But the math just doesn't add up.

By Alison Griswold



An Uber driver waits for customers in his car in Beverly Hills, California.



New York Uber Driver Refuses to Take Woman in Labor to Hospital, Charges Her \$13



Taxis Are Doomed and They Know It. Here's Why There's Nothing They Can Do.



Can a Field in Which Physicists Think Like Economists Help Us Achieve Universal Knowledge?

FROM THE WEEK



Report: Most of America's largest police departments allow officers to choke, strangle, and hog-tie people



The Economy Kind of Sucks for People Who Don't Drive

Paychecks, Paydays, and the Online Platform Economy

February 2016

Big Data on Income Volatility



Source: JPMorgan Chase Institute

From a Universe of 28 Million People



A checking account in every month between October 2012 and September 2015

At least five outflows in every month between October 2012 and September 2015



6 Million People

Random Sample

1 Million People

Income received at least once over the 36 months from one of 30 distinct platforms

260,000 People

Online Platform Economy Participants

Identifying income and jobs:

1.9 Billion Inflow Transactions

Amount, date and time, transaction description, and channel

Categorize income components

Income Categories



Labor income

Payroll, other direct deposits



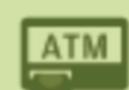
Capital income

Annuities, dividends, interest income



Government income

Tax refunds, unemployment, Social Security



Other

ATM deposits, unclassified income

Identify jobs

Jobs

Job Transitions

Job Pay Attributes
Paycheck amounts
Pay frequency

Income Volatility Among U.S. Individuals

The percentage of people who experienced more than a 30 percent month-to-month change in total income:



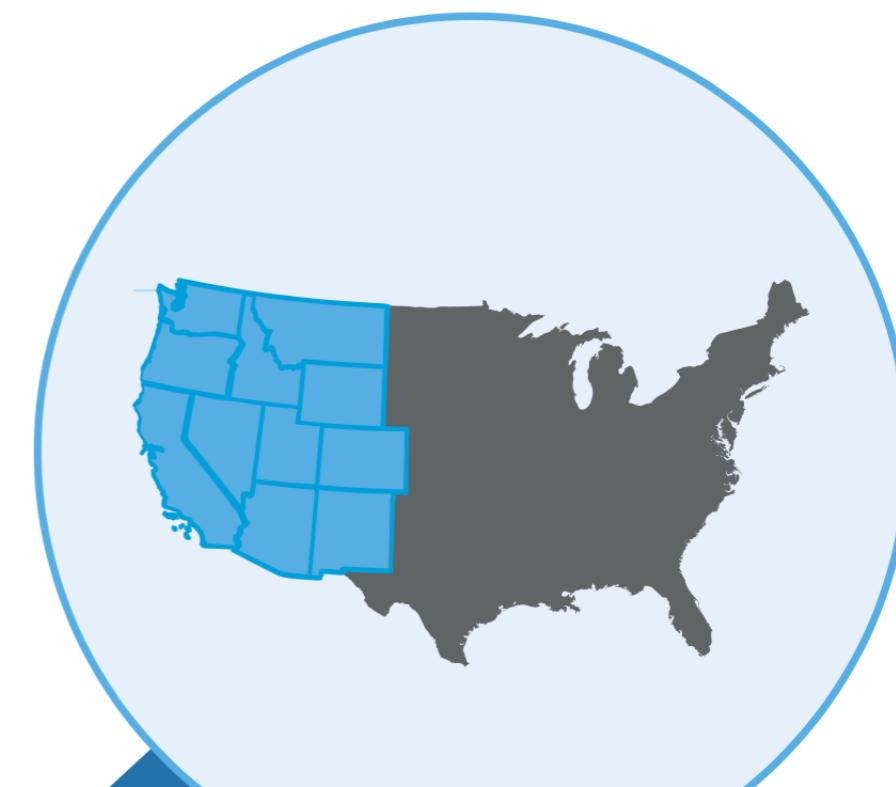
70%

Aged 18-24



74%

Bottom Income Quintile



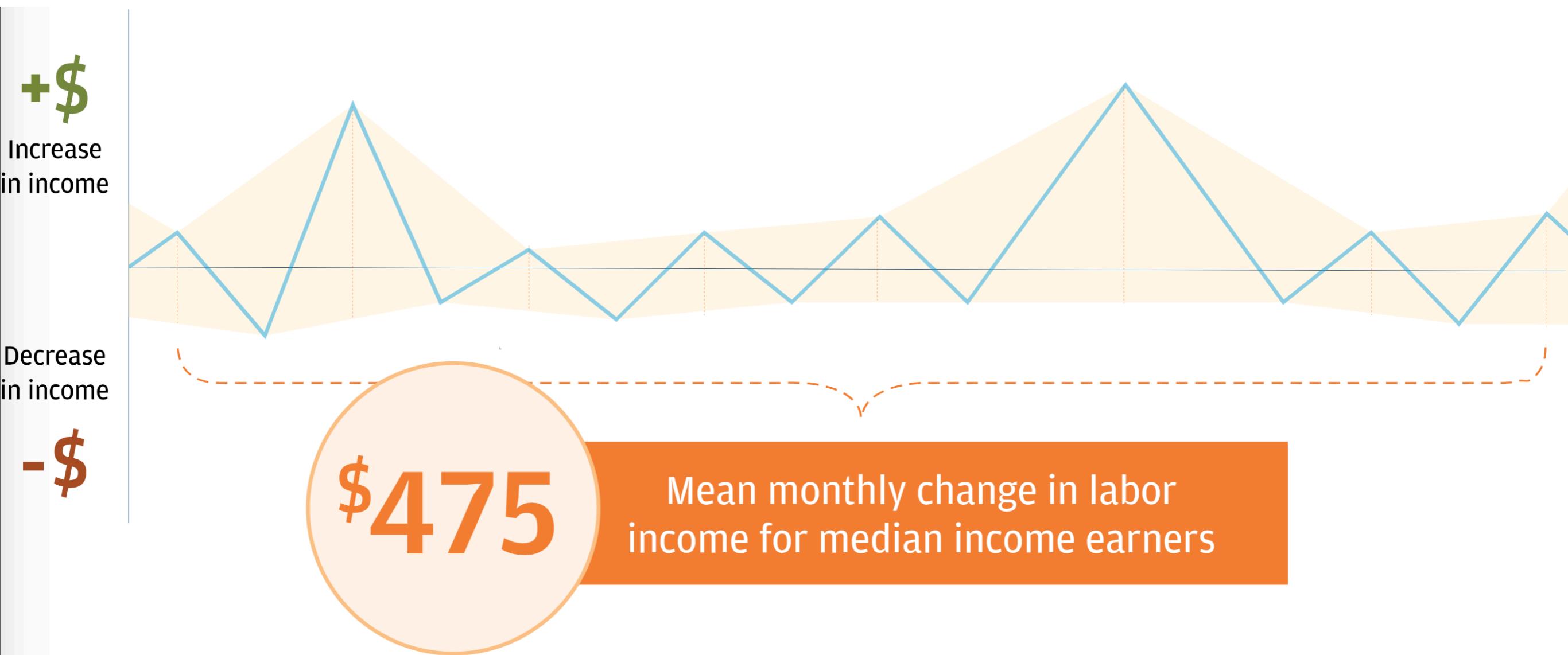
60%

People in the West

National Average 55%

Income Volatility Among U.S. Individuals

Median income individuals experienced nearly \$500 in labor income fluctuations across months, with spikes in earnings larger but less frequent than dips.



Income Volatility Among U.S. Individuals

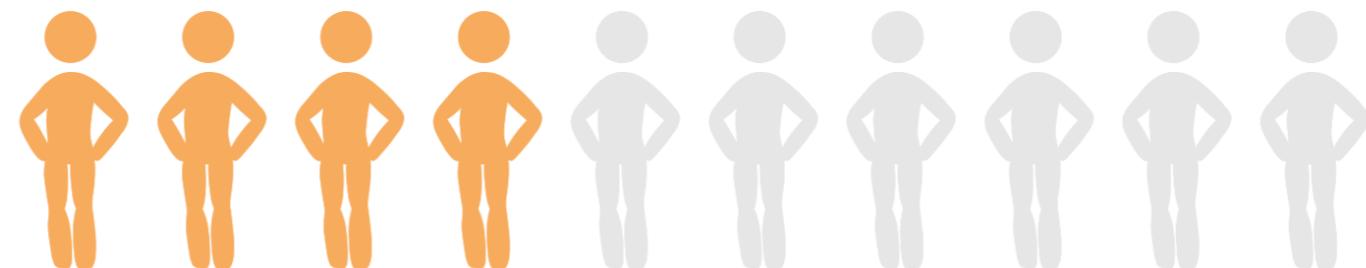
Sources of Monthly Changes in Labor Income

86% Variation in pay within distinct jobs

72% Variation in paycheck amount
(bonus, hours, etc.)

28%
Paycheck frequency
(five-Friday month)

14%
Job transitions



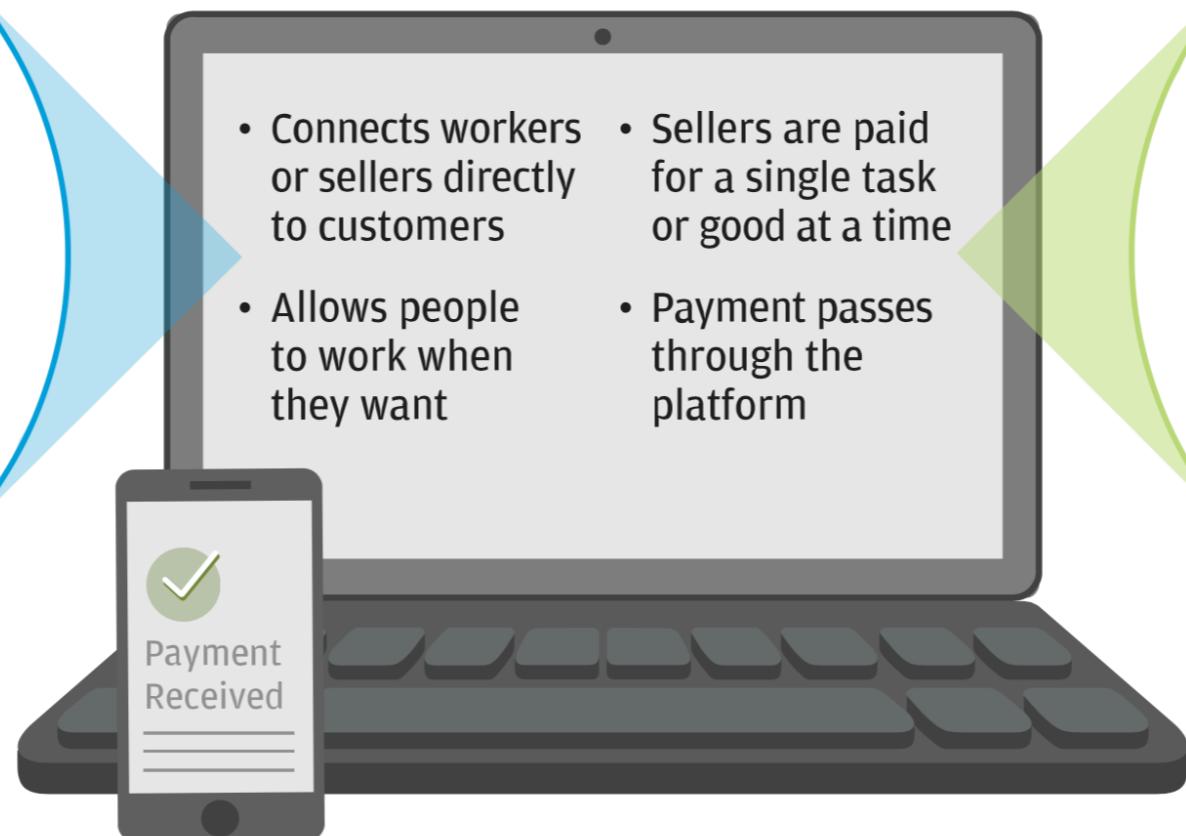
Median individuals experienced a \$1,108 change in monthly income when they gained or lost a job and \$830 when they switched jobs.

Almost four in 10 individuals experienced a job transition over the course of a year.

The Online Platform Economy



Online Platform Economy Attributes

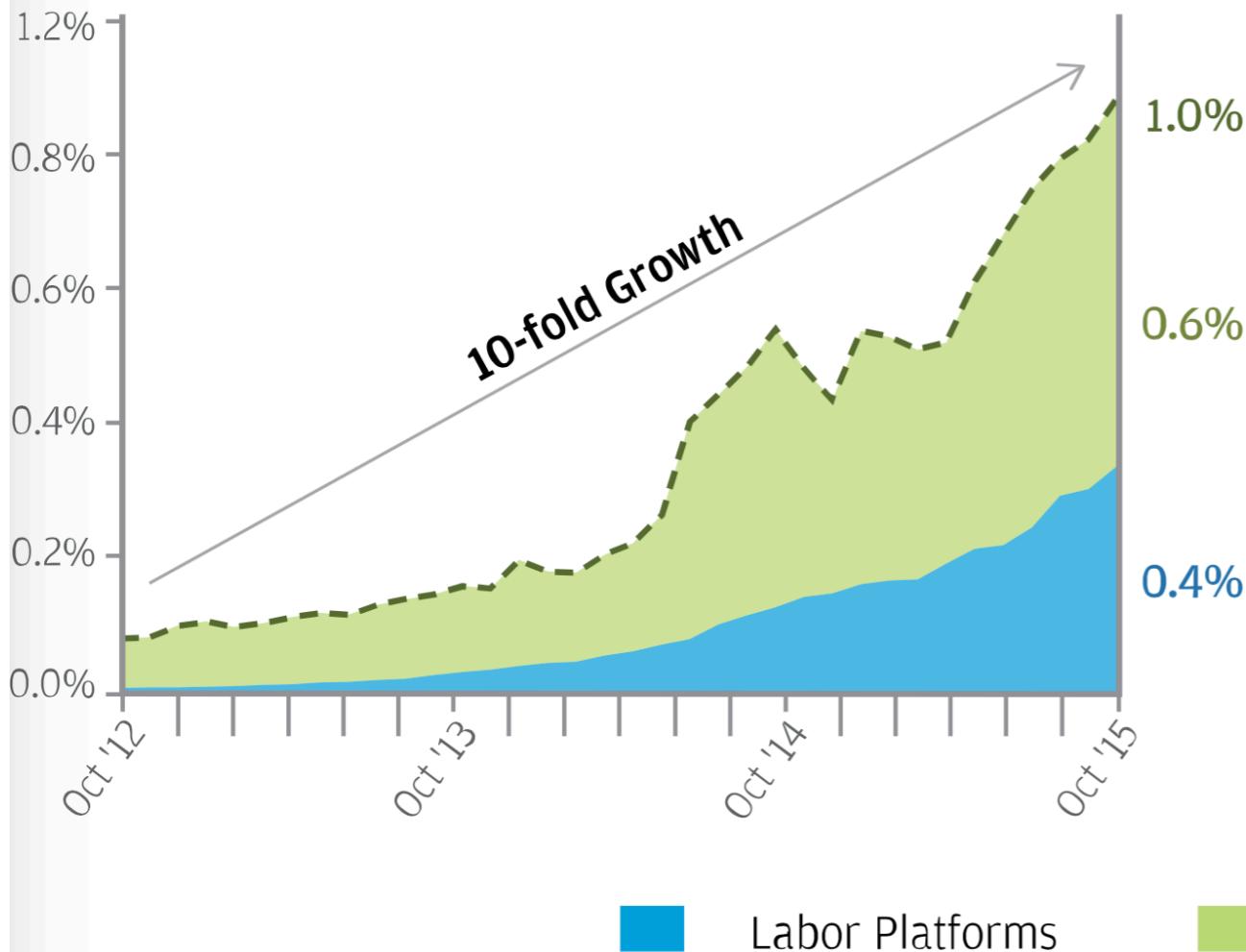


ebay
airbnb

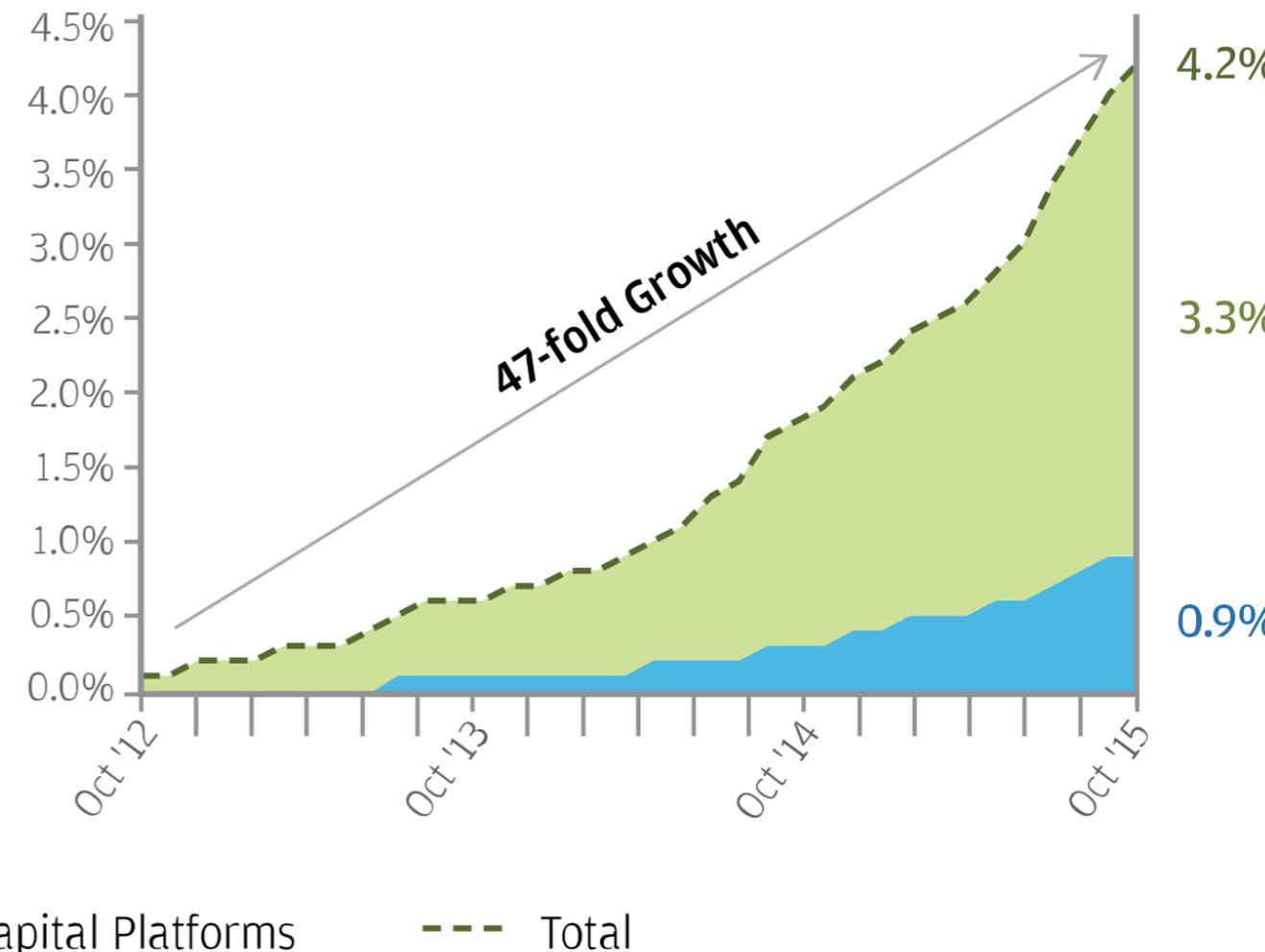
The Online Platform Economy

Although 1 percent of adults earned income from the Online Platform Economy in a given month, more than 4 percent participated over the three-year period.

Percentage of adults participating in the Online Platform Economy in each month

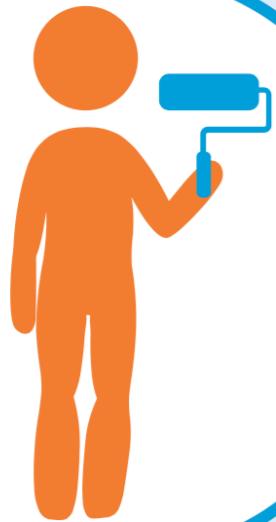


Cumulative percentage of adults who have ever participated in the Online Platform Economy



The Online Platform Economy

The Online Platform Economy was a secondary source of income, and participants did not increase their reliance on platform earnings over time.



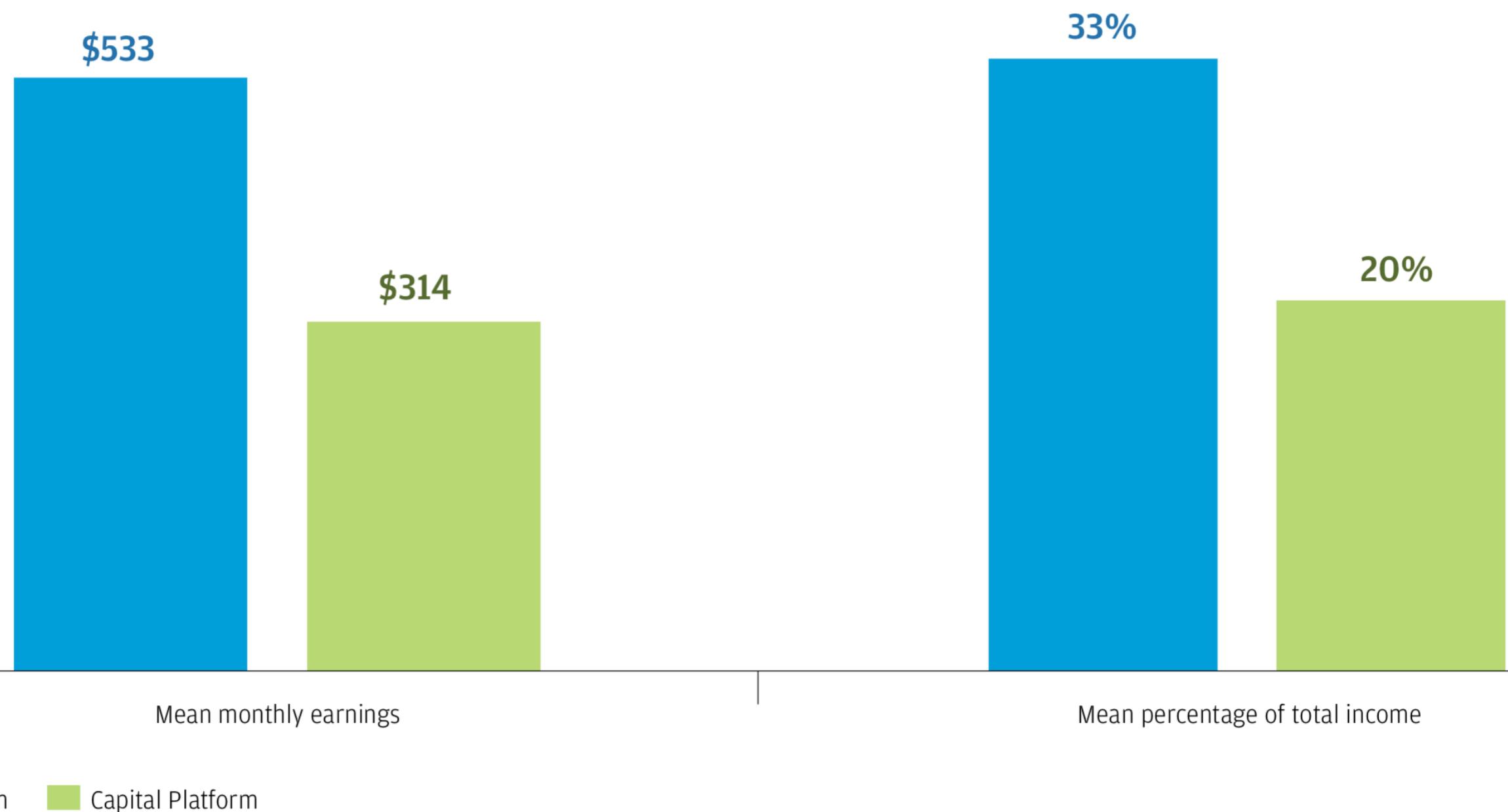
Labor platform participants were active 56% of the time. While active, platform earnings equated to 33% of total income.

Capital platform participants were active 32% of the time. While active, platform earnings equated to 20% of total income.



The Online Platform Economy

Monthly platform earnings in active months, in dollars and as a percentage of total income



The Online Platform Economy

Almost half of active labor participants (46%) relied on labor platforms for more than 25% of their income. In any given month, 40% of all individuals who participated in labor platforms were actively earning on them.

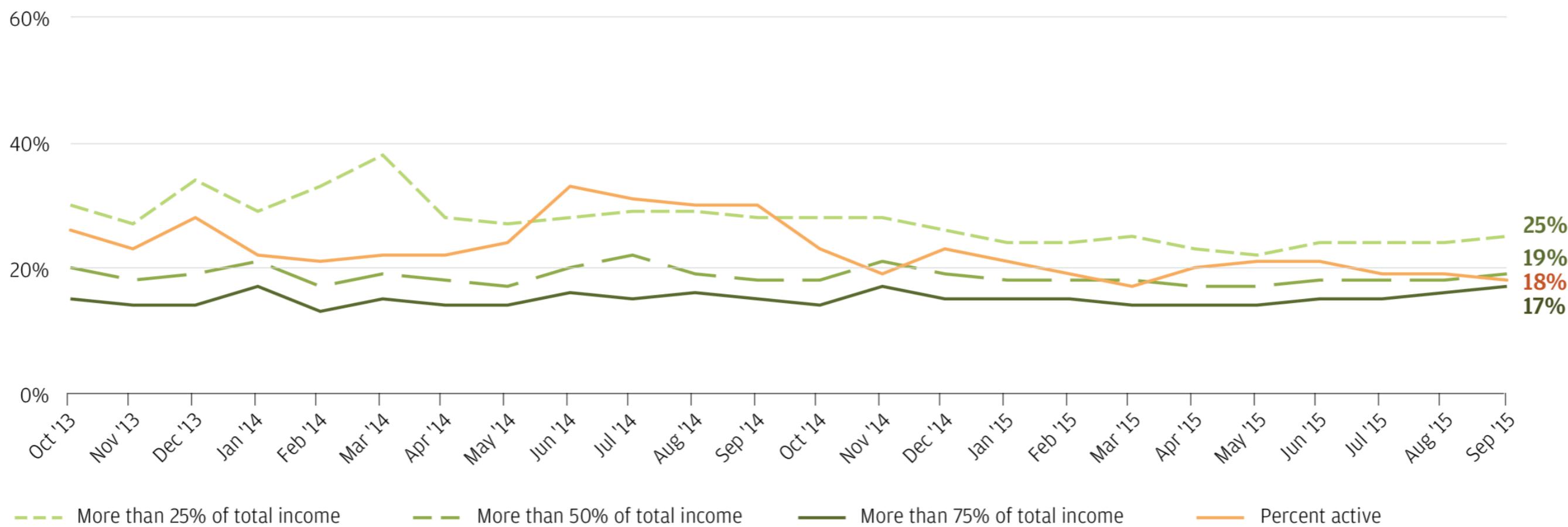
Reliance on, and active participation in, labor platforms



The Online Platform Economy

Reliance on capital platforms was significantly lower than on labor platforms. 25% of active participants relied on capital platforms for more than 25% of their income, including 17% of active participants who earned 75% or more of their total income from capital platforms.

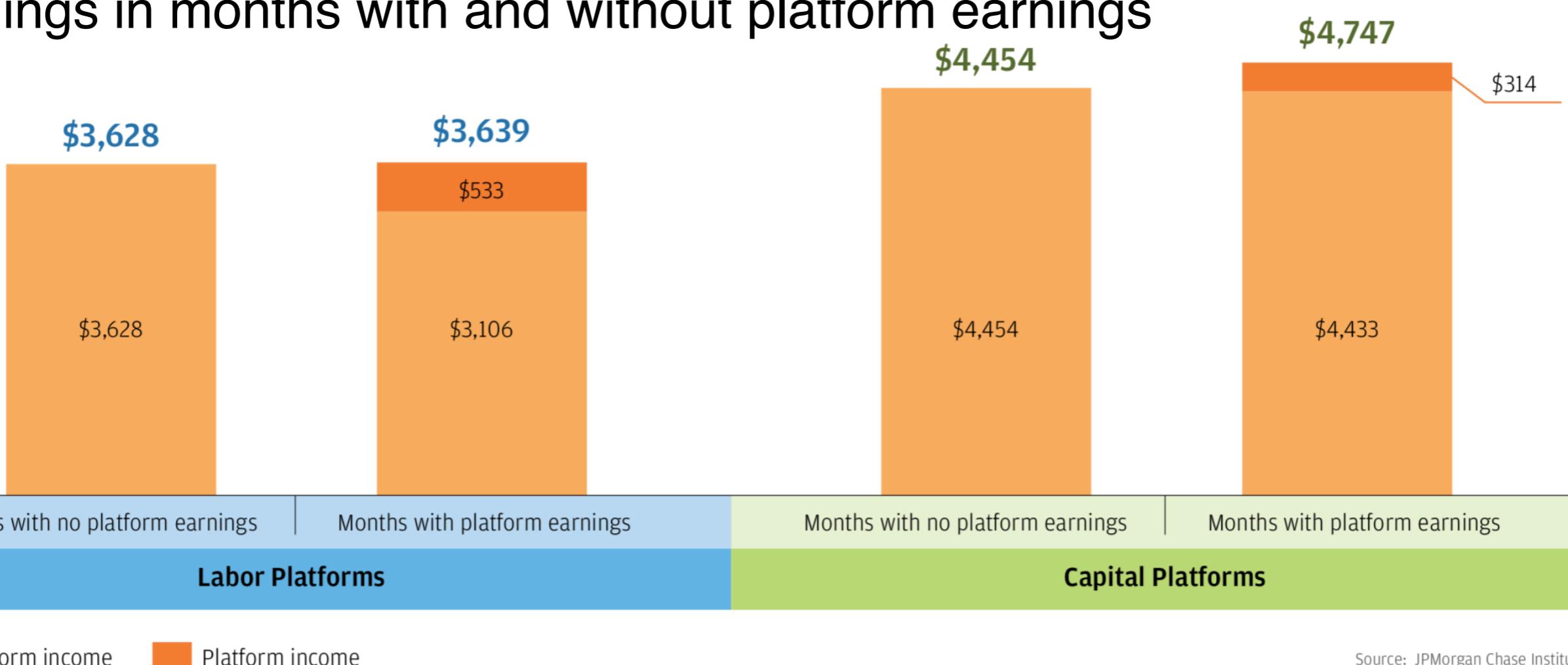
Reliance on, and active participation in, capital platforms



The Online Platform Economy

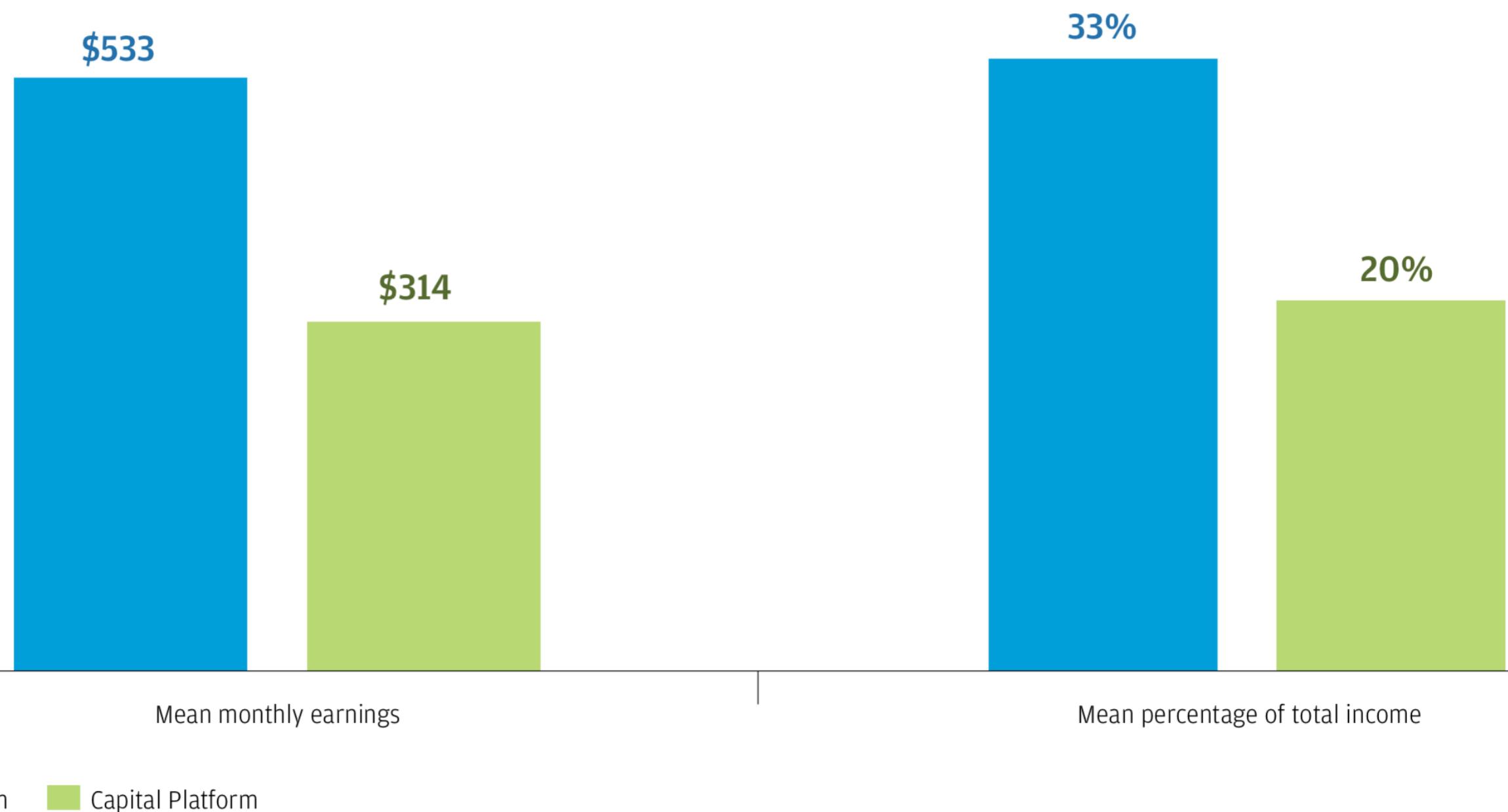
Earnings from labor platforms offset dips in non-platform income, but earnings from capital platforms supplemented non-platform income

Earnings in months with and without platform earnings



The Online Platform Economy

Monthly platform earnings in active months, in dollars and as a percentage of total income



24% of Americans earned money from the digital platform economy in 2016

*% of U.S. adults who earned
money from an **online job
platform** in the last year by
doing ...*



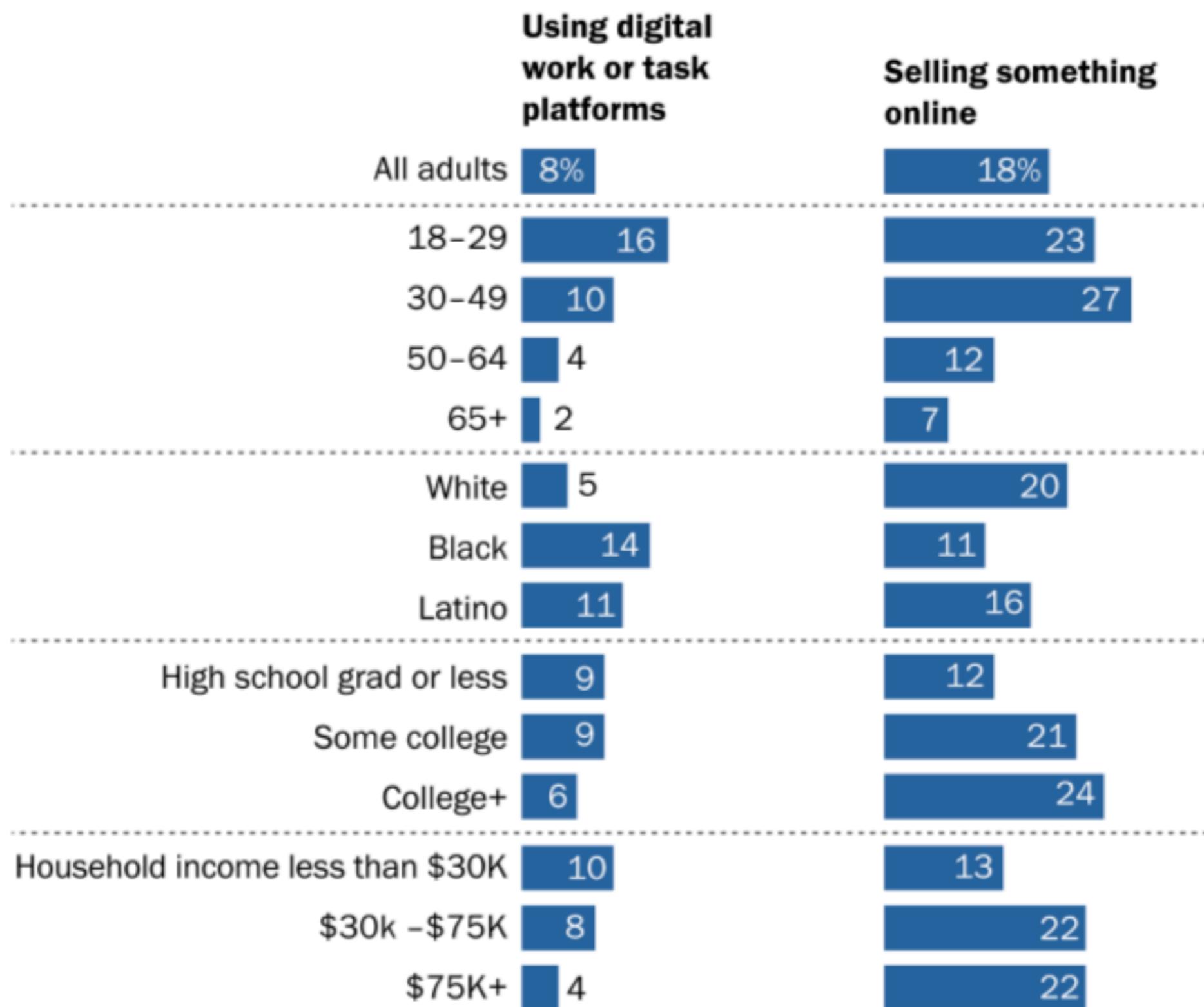
*% who earned money in the
last year by **selling __ online***



Source: Survey conducted July 12-Aug. 8, 2016.
“Gig Work, Online Selling and Home Sharing”

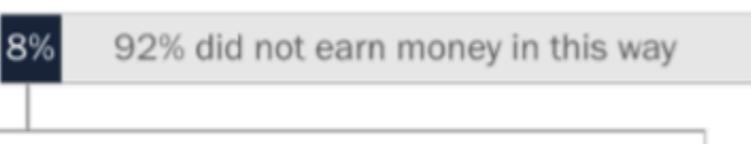
Gig work, online selling appeal to different segments of the population

% of U.S. adults in each group who have earned money in the last year by ...



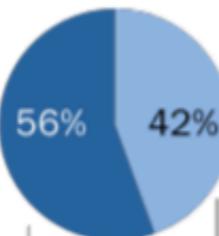
% of U.S. adults who ...

**Earned money in the last year
from online job platforms**



*Of that share, % saying
that income is ...*

**Essential or
important**

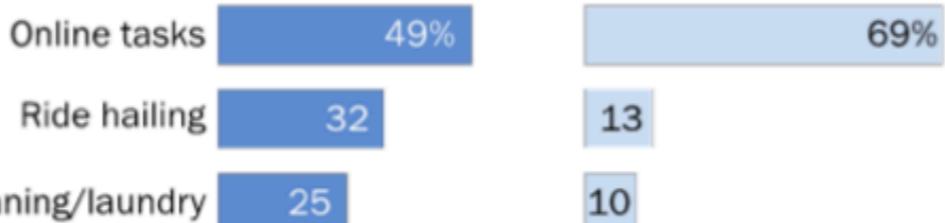


Nice to have

Among those who
say income is
essential or
important ...

Among those who
say income is nice
to have ...

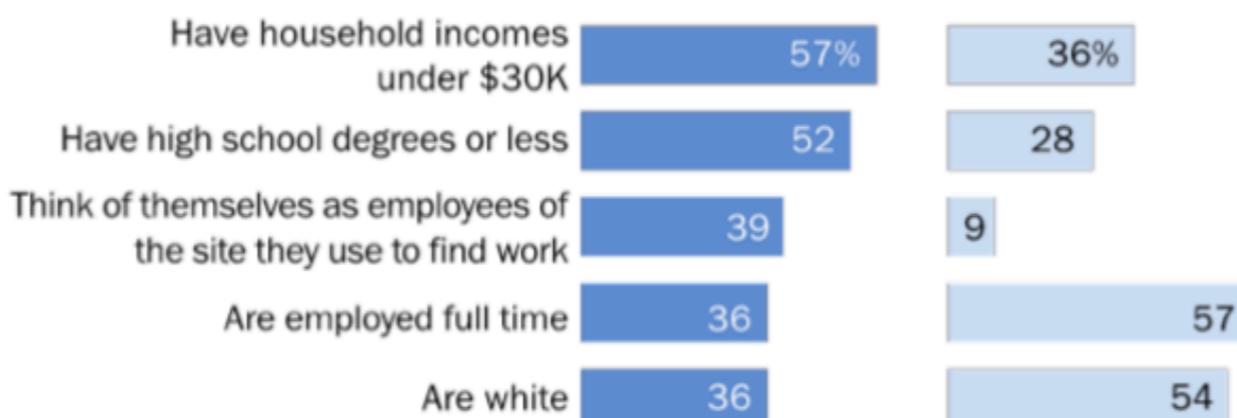
% who do ...



% who have these motivations



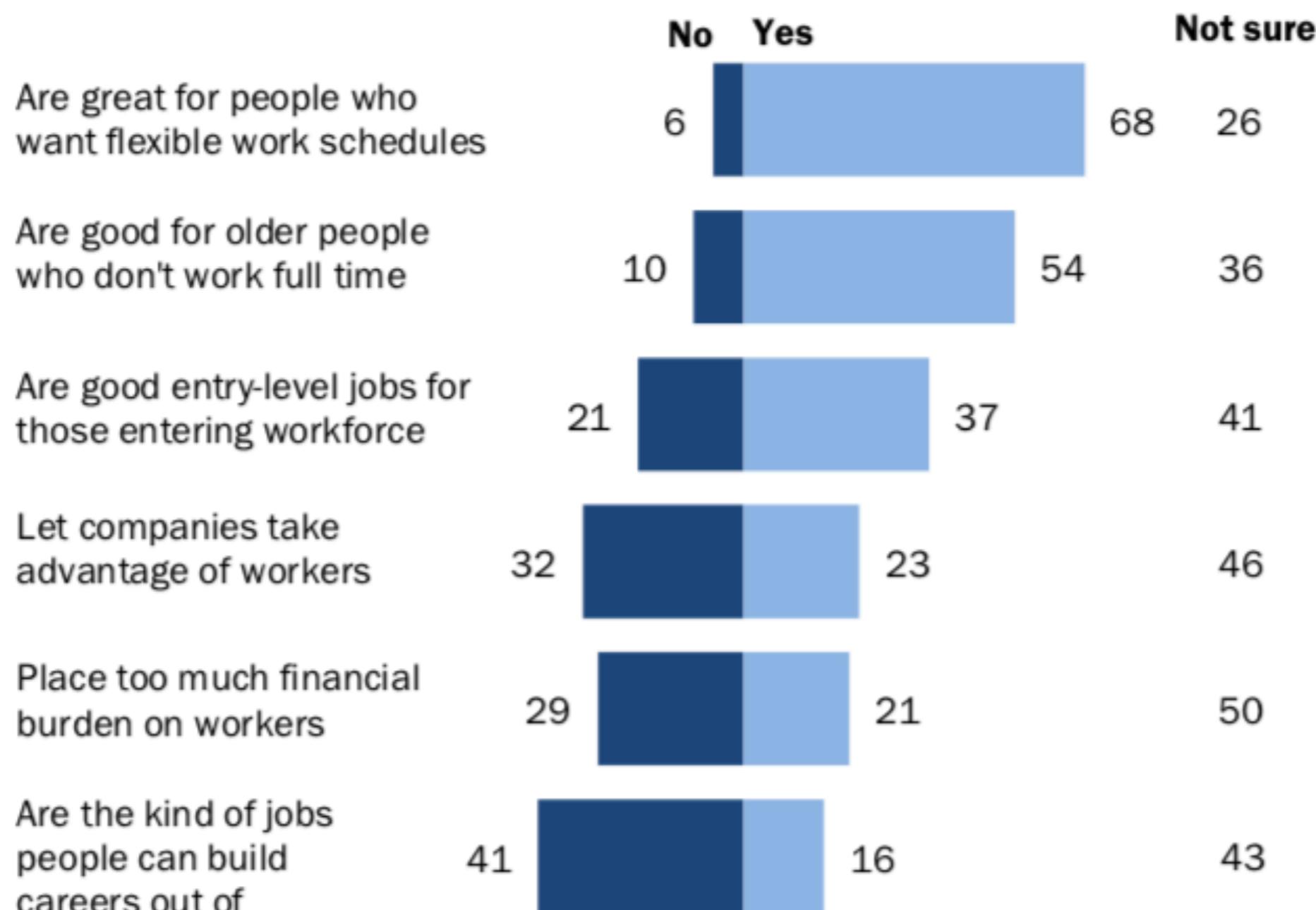
% who ...



Source: Pew Research Center

Americans express mixed views of the benefits of internet-enabled ‘gig work’

% of U.S. adults who say that these jobs ...



The Online Platform Economy

4.2% of adults in the 3 year JPMorgan study participated in the platform economy. It increased 47x from 2012-2015.

In 2016, Pew Research estimated that 24% of Americans earned money from the platform economy. 8% from a gig platform, and 18% from selling something online.

A key question concerns the nature of platform work and employment. Within a traditional employer-employee relationship, workers can usually expect benefits like access to unemployment insurance, employer contributions to Social Security, and worker's compensation, among others. Typically, no such "social contract" exists in the Online Platform Economy

U.S. Department of Labor
Wage and Hour Division
Washington, D.C. 20210



U.S. Wage and Hour Division



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The Department of Labor's Wage and Hour Division (WHD) continues to receive numerous complaints from workers alleging misclassification, and the Department continues to bring successful enforcement actions against

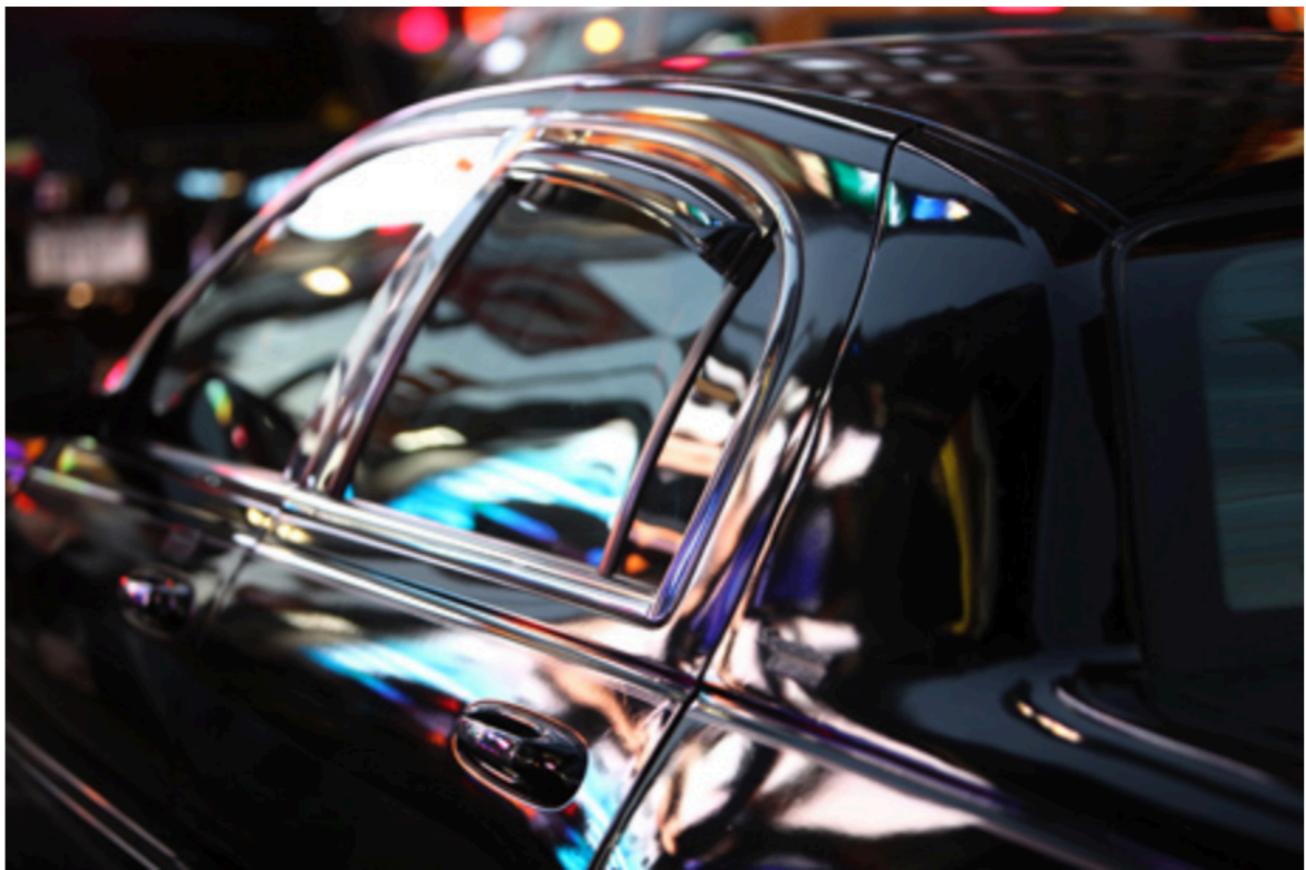
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LATEST NEWS:

In September 2018, the Ninth Circuit Court of Appeals reversed the District Court's decision which had certified a class of most Uber drivers in California and had declared Uber's arbitration clause to be unenforceable. As a result of the Ninth Circuit's decision, all Uber drivers who are covered by an arbitration clause cannot be part of the lawsuit in court but instead can only pursue their claims through individual arbitration. (We expect our court case will continue to include drivers who are not bound by Uber's arbitration clause.) We are pursuing arbitrations for thousands of Uber drivers. If you are signed up with us to pursue an arbitration if it became necessary, please watch your emails for any updates from us related to your arbitration.



In order to join our contact list of drivers interested in the case who want to receive updates, please email us at uberlawsuit@llrlaw.com and tell us your name, email address, and location where you have driven for Uber.

The attorneys representing the drivers are:

U B E R D R I V E R S

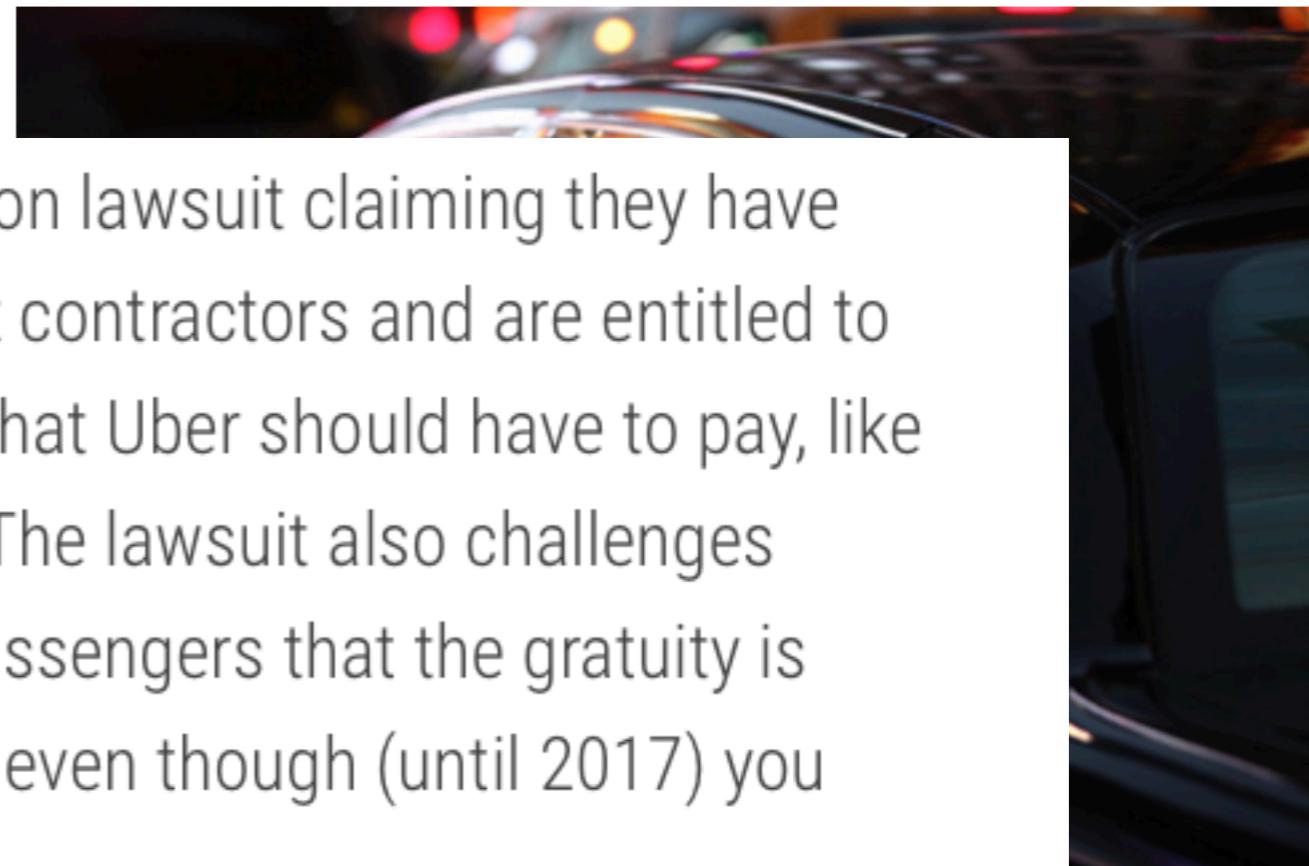
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LATEST NEWS:

In September 2017, the District Court's decision to certify the class of drivers in California as a class was unenforceable. A trial date has been set for January 2018.

Arbitration. (We expect our court case will continue to include drivers who are not bound by Uber's arbitration clause.) We are pursuing arbitrations for thousands of Uber drivers. If you are signed up with us to pursue an arbitration if it became necessary, please watch your emails for any updates from us related to your arbitration.



If you would like to **want to receive updates**, please email us at uberlawsuit@llrlaw.com and tell us your name, email address, and location where you have driven for Uber.

The attorneys representing the drivers are:

case who

IN THE SUPREME COURT OF CALIFORNIA

DYNAMEX OPERATIONS WEST, INC.,)
Petitioner,)
v.) S222732
THE SUPERIOR COURT OF) Ct.App. 2/7 B249546
LOS ANGELES COUNTY,) Los Angeles County
Respondent;) Super Ct. No. BC332016
CHARLES LEE et al.,)
Real Parties in Interest.)

Under both California and federal law, the question whether an individual worker should properly be classified as an employee or, instead, as an independent contractor has considerable significance for workers, businesses, and the public generally.¹ On the one hand, if a worker should properly be classified as an employee, the hiring business bears the responsibility of paying federal Social Security and payroll taxes, unemployment insurance taxes and state employment taxes, providing worker's compensation insurance, and, most relevant for the

present case, complying with numerous state and federal statutes and regulations governing the wages, hours, and working conditions of employees. The worker then obtains the protection of the applicable labor laws and regulations. On the other hand, if a worker should properly be classified as an independent contractor, the business does not bear any of those costs or responsibilities, the worker receives none of the numerous labor law benefits, and the public may be required under applicable laws to assume additional financial burdens with respect to such workers and their families.

Although in some circumstances classification as an independent contractor may be advantageous to workers as well as to businesses, the risk that workers who should be treated as employees may be improperly misclassified as independent contractors is significant in light of the potentially substantial economic incentives that a business may have in mischaracterizing some workers as independent contractors. Such incentives include the unfair competitive advantage the business may obtain over competitors that properly classify some workers as employees and that thereby assume the fiscal and other responsibilities and burdens that an employer owes to its employees. In recent years, the regulatory agencies of both the federal and state governments have declared that the misclassification of workers as independent contractors rather than employees is a very serious problem, depriving federal and state governments of billions of dollars in tax revenue and millions of workers of the labor law protections to which they are entitled.²

¹ See United States Department of Labor, *Commission on the Future of Worker-Management Relations* (1994) page 64 [“The single most important factor in determining which workers are covered by employment and labor statutes is the way the line is drawn between employees and independent contractors”] <https://digitalcommons.ilr.cornell.edu/key_workplace/2/> (as of Apr. 30, 2018).

² See United States Department of Labor, Wage & Hour Division, *Misclassification of Employees as Independent Contractors* <<https://www.dol.gov/whd/workers/misclassification/>> (as of Apr. 30, 2018); California Department of Industrial Relations, *Worker Misclassification* <http://www.dir.ca.gov/dlse/worker_misclassification.html> (as of Apr. 30,

like independent plumbers or electricians, who have traditionally been viewed as *genuine* independent contractors who are working only in their own independent business.

For the reasons explained hereafter, we conclude that in determining whether, under the suffer or permit to work definition, a worker is properly considered the type of independent contractor to whom the wage order does not apply, it is appropriate to look to a standard, commonly referred to as the “ABC” test, that is utilized in other jurisdictions in a variety of contexts to distinguish employees from independent contractors. Under this test, a worker is properly considered an independent contractor to whom a wage order does not apply only if the hiring entity establishes: (A) that the worker is free from the control and direction of the hirer in connection with the performance of the work, both under the contract for the performance of such work and in fact; (B) that the worker performs work that is outside the usual course of the hiring entity’s business; and (C) that the worker is customarily engaged in an independently established trade, occupation, or business of the same nature as the work performed for the hiring entity.