



EITIA ELINKEINOELÄMÄN TUTKIMUSLAITOS
THE RESEARCH INSTITUTE OF THE FINNISH ECONOMY

Chaos or Turbulence in Digital Ecosystems. Hotel Kämp, Helsinki. August 29, 2014.

Rethinking labor (and capital) in the era of the cloud

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NOKIA

The Federation of Finnish
Technology
Industries

Tekes

Rethinking Labor (and Capital) in the Era of the Cloud*

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*** For presentation at the BRIE-ETLA Annual Meeting, August 29, 2014, Helsinki, Finland**

Technological Change and Labor/Capital

The assembly line gives you the corporate capitalist (and industrial union). The Cloud gives you the platform capitalist (and contingent labor)?

Digital Technologies

- **Moore's Law**
(PCs → smartphones → Internet of Things)
- **Cloud computing (data explosion).**
See Zysman 2012 etc.
- **Old and new platforms (Amazon, eBay, Google)**
 - **Facebook, Twitter, Linked-In**
 - **Airbnb, Uber**

What Is New? What Should We Anticipate for Labor?

- **Cyber panopticon**
- **Ability to characterize nearly everything physical digitally and then informate**
- **Replace much white-collar work – characterized and automated with data processing**
- **Connect 40, 50% of world population**
- **Platform = power**

Labor?

- **More globally biddable than ever**
- **Microwork – fill up working day**
- **Formal, e.g., taxi cab – informalized thru contractors, Uber**
- **Informal services such as gardening – cyber formalized, Lawnmower.com**
- **Online and scalable**

What Is Work and Where Is It?

- **Less work, more work (Brynjolfsson, Baumol, and others)**
- **Is surfing the internet work?**
- **Is putting things on Facebook, Pinterest, Youtube, LinkedIn?**
 - **Selling on eBay?**
- **Writing a novel and putting in closet vs. self-publishing Amazon?**

Elance – Top Hiring and Provider Nations

Top 10 Hiring Nations

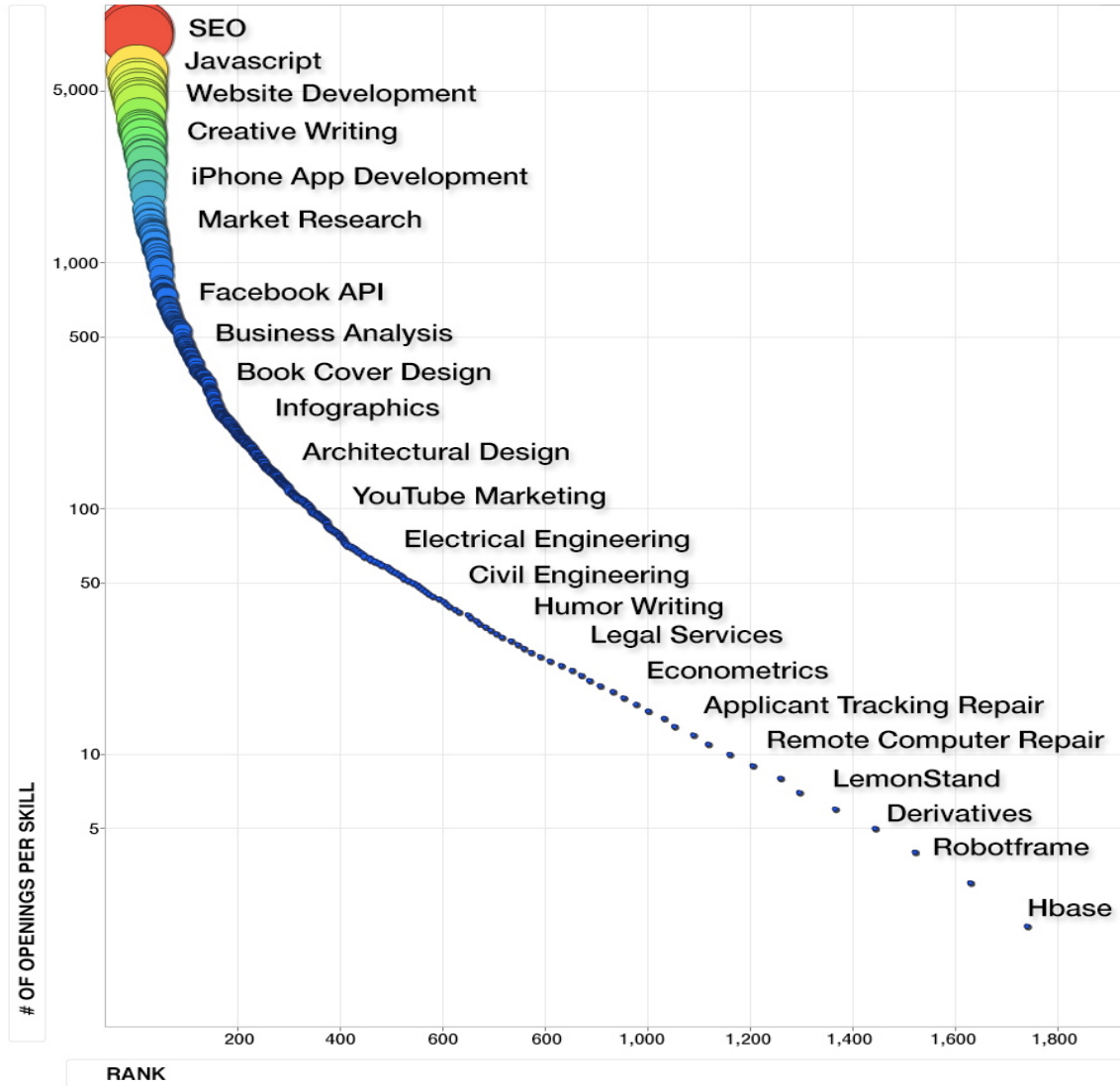
| | |
|-----------------------|-----------|
| United States | 1 |
| Australia | 2 |
| United Kingdom | 3 |
| Canada | 4 |
| UAE | 5 |
| Singapore | 6 |
| Israel | 7 |
| Germany | 8 |
| Netherlands | 9 |
| New Zealand | 10 |

Top 10 Provider Nations

| | |
|-----------------------|-----------|
| United States | 1 |
| India | 2 |
| Ukraine | 3 |
| Pakistan | 4 |
| United Kingdom | 5 |
| Russia | 6 |
| Canada | 7 |
| Philippines | 8 |
| Romania | 9 |
| China | 10 |

oDesk Skills Visualization

An Emerging Long Tail of Specialists



Source: oDesk database. All data represents skills listed in jobs posted during the month of May 2013, and therefore shows one month's worth of skills on oDesk (out of the almost 2,400 skills listed over 2013). Size and color of each skill dot indicates the number of job openings that skill was listed in. For more information please visit the oConomy section of oDesk's blog for a post on this visualization at: www.odesk.com/blog/2013/07/1billion-odesksskillslongtail/

Capital?

- **Still needed, when?**
 - Open source SW, commodity cloud computing, Github
- **More available and aggregatable than ever**
JOBS Act
 - Angel
 - Crowdsourcing -- AngelList, Kickstarter, Indiegogo
 - VC
- **More mobile**
 - Can be accessed nearly everywhere
- **Winner take all**
- **Control of platforms?**

First Wave

- **Amazon Stores – retailers' platform**
- **eBay – Swap meet & garage sale**
- **Craigslist – classified ads**

Welcome to the New World

Facebook, Pinterest, Instagram

**Monetize your non-work activities
the social network, non-compensated
value creation**

**Your leisure activity becomes
something of value**

Uber, Airbnb, Lyft etc.

**Monetize consumer durable assets –
move them to the “capital” side of
the social ledger**

Threat to regulated industries

TaskRabbit, Babysitter.com, Lawnmower etc.

**Create platform for mobilizing
informal, unorganized labor –
cyber formalization?**

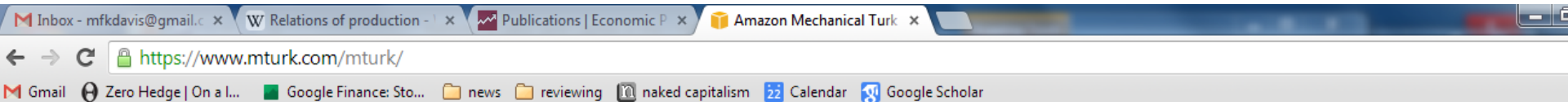
Amazon Mechanical Turk, O-Desk etc.

Micro-work, fill pores of working day

Google, Yahoo! etc.

**Attract you with their data and services,
Monetize the information on the web
by organizing and selling users through ads**

Mechanical Turk -- Microlabor



Mechanical Turk is a marketplace for work.

We give businesses and developers access to an on-demand, scalable workforce. Workers select from thousands of tasks and work whenever it's convenient.

289,755 HITs available. [View them now.](#)

Make Money by working on HITs

HITs - *Human Intelligence Tasks* - are individual tasks that you work on. [Find HITs now.](#)

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work



or [learn more about being a Worker](#)

Get Results from Mechanical Turk Workers

Ask workers to complete HITs - *Human Intelligence Tasks* - and get results using Mechanical Turk. [Register Now](#)

As a Mechanical Turk Requester you:

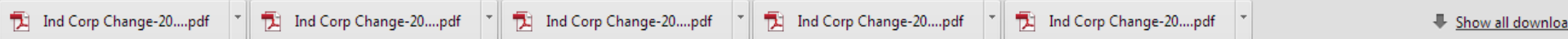
- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results



[FAQ](#) | [Contact Us](#) | [Careers at Mechanical Turk](#) | [Developers](#) | [Press](#) | [Policies](#) | [Blog](#)

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AirBnB – Monetize Excess Space

airbnb tijuana SEARCH SIGN UP LOG IN HELP LIST YOUR SPACE

Search when I move the map

55 Rentals · Tijuana

Filters

- Welcome Casa Del Sol Playas-Tijuana** 20
Entire home/apt Tijuana **\$90** Per night
- Great ocean view & mild weather** 4
Entire home/apt Tijuana **\$95** Per night
- Outdoor terrace with ocean view**
Entire home/apt Tijuana **\$120** Per night
- Beachfront apartment with ocean view**
Entire home/apt Tijuana **\$150** Per night

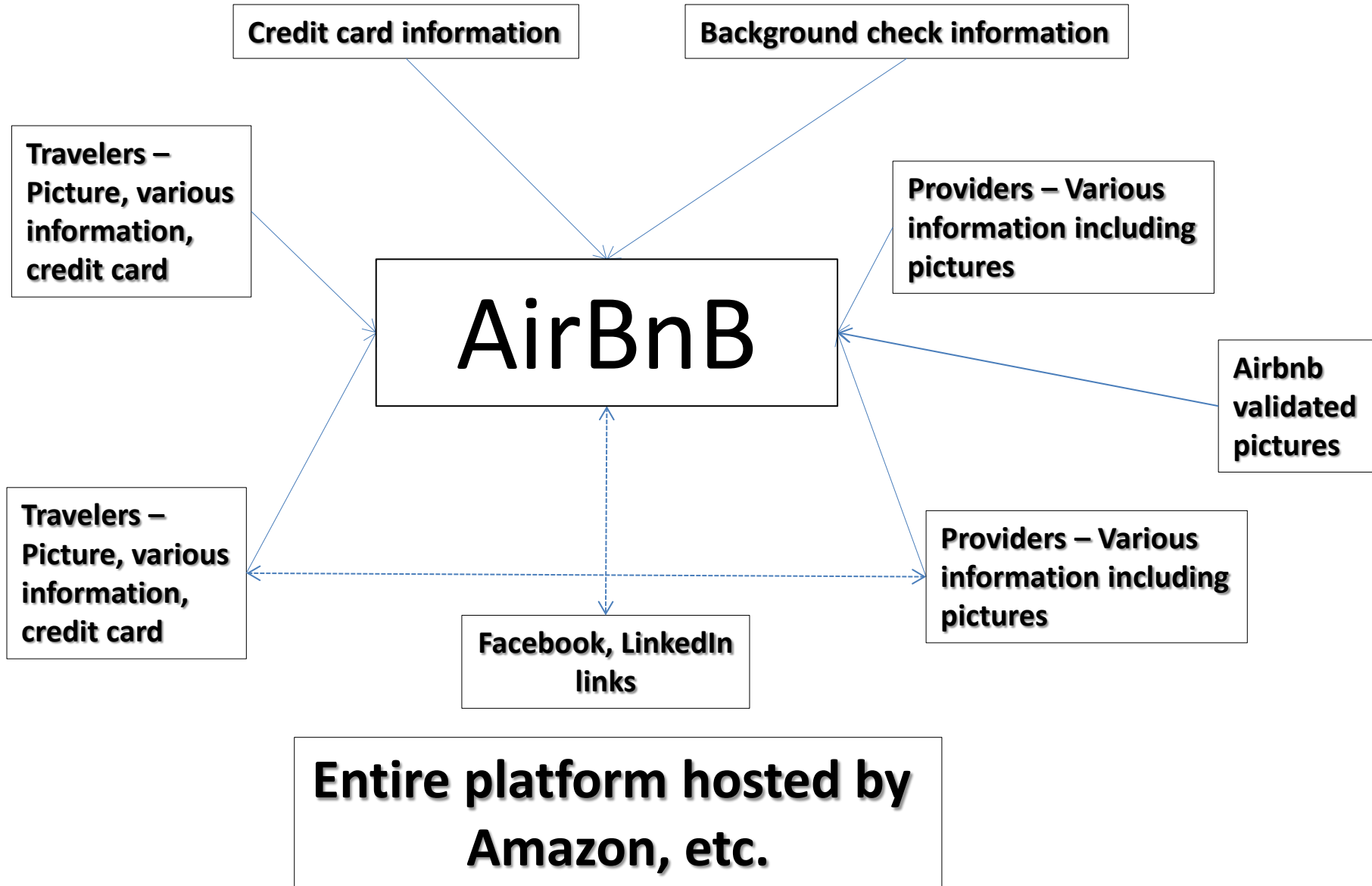
Language and Currency

Ind Corp Change-20....pdf Ind Corp Change-20....pdf Ind Corp Change-20....pdf Ind Corp Change-20....pdf Ind Corp Change-20....pdf

Show all downloads... x

6:00 PM 1/26/2014

Airbnb Model



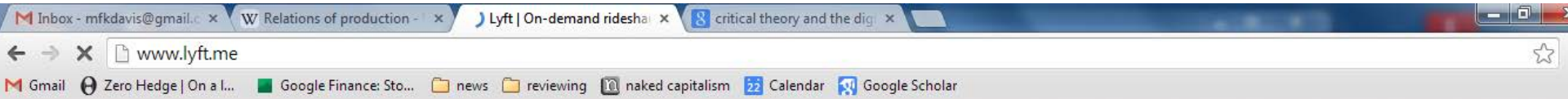
Monetize – Your Car and You As Driver

The screenshot displays the Uber website in a browser window. The browser's address bar shows the URL <https://www.uber.com>. The page title is "THE UBER APP" with the subtitle "Request, ride, and pay via your mobile phone". The main content area features six panels illustrating app features:

- ONE TAP TO RIDE:** Shows a map interface with a "REQUEST BLACK CAR" button and a "PICKUP TIME IS APPROXIMATELY 3 MIN" indicator.
- RELIABLE PICKUPS:** Shows a driver profile for "JOHN" with a "MERCEDES S CLASS" and "32UBER" rating.
- CLEAR PRICING:** Shows a fare estimate of "\$17-20" and a "CHOOSE YOUR UBER" section with options like "BLACK CAR" and "SPLIT FARE".
- CASHLESS & CONVENIENT:** Shows a receipt for "\$17" dated "JAN 23, 2014 11:00".
- FEEDBACK MATTERS:** Shows a "THANKS FOR RIDING UBER" message with a five-star rating.
- SPLIT YOUR FARE:** Shows a "SPLIT FARE" option on the app interface.

The browser's taskbar at the bottom shows several open PDF files named "Ind Corp Change-20....pdf" and the system tray displays the time "6:02 PM" and date "1/26/2014".

Monetize Your Car



Driver Login



Your friend with a car

 Download for iPhone

 Download for Android

Waiting for static.ak.facebook.com...



Show all downloads...



6:05 PM
1/26/2014

Winners Take All Economies?

- **Does entrepreneurial economy reinforce income inequality?**
 - **Do new firms create same number of highly-paid employment as earlier “new” firms?**
 - **Google vs. Intel, apps**
 - **Create ecosystems/platforms of relatively lowly paid or contingent workers?**
 - **Branded products, Apple, etc.**

Winners Take All Economies?

- **Monetization of :**
 - **Digital exhaust (Huberty)**
 - **Social interaction**
 - **Consumer durables**
 - **“Free time” through**
 - **Microlabor**
 - **Unregulated service performance**
 - **Open source production (Github)**

What Does This Mean?

- **The where, what and how of some portions of the global workforce is being transformed**
- **Should we be thinking about new classes or class fractions?**
 - **Creative class (Florida)**
 - **Cognitive-creative class (Alan Scott)**
 - **Symbolic analysts (Reich)**
- **How much of this is driven by financialization and not “real” changes**
- **Globalization and other forces?**

Labor Atomized Throughout Society

- **Online human activity, both work and not work, creates value that is monetized online**
- **Much “long tail” work is not sufficiently valued to produce substantial income, but forms the corpus from which some work becomes valuable**
 - **Flappy birds and other successes**
- **Online world recognition monetized offline**
- **What is correct way to reward, winners or the milieu?**

Value Created Outside of Wage (and Contract) Environment So Is Social Wage Good Economic Strategy?

- **Encourage entrepreneurship**
- **Allow time for creation**
- **Reward the milieu rather than only the “lucky” individual**
- **Encourage disruptive competition**
- **Encourage consumption**

Thank you

