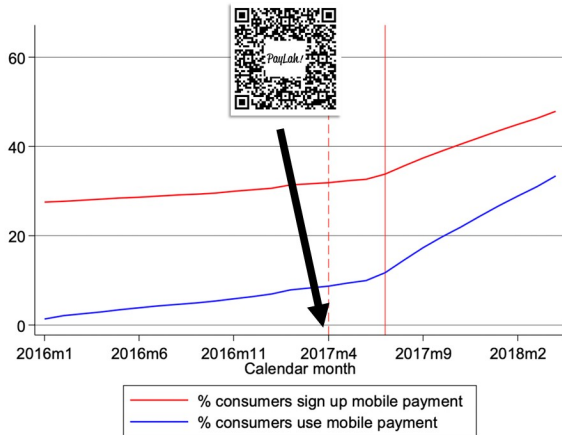


Discussion of
**The Real Impact of FinTech: Evidence from
Mobile Payment Technology**
by S. Agarwal, W. Qian, Y. Ren, H. Tsai and B.
Yeung

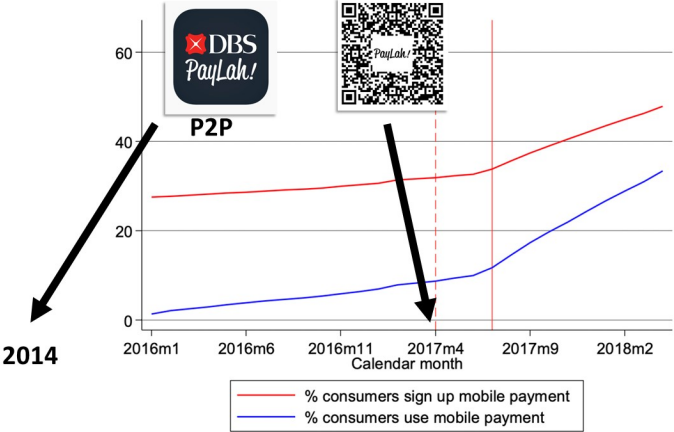
Discussant: Virginia Gianinazzi
Nova SBE

September 11, 2020
Deutsche Bundesbank Virtual Autumn Conference

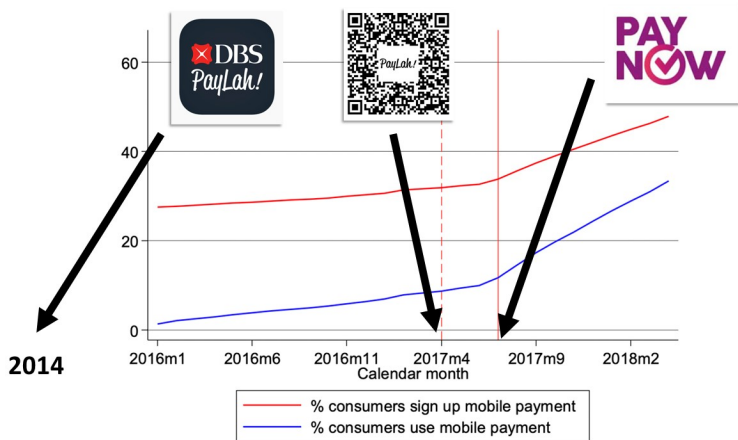
Introduction of QR Code



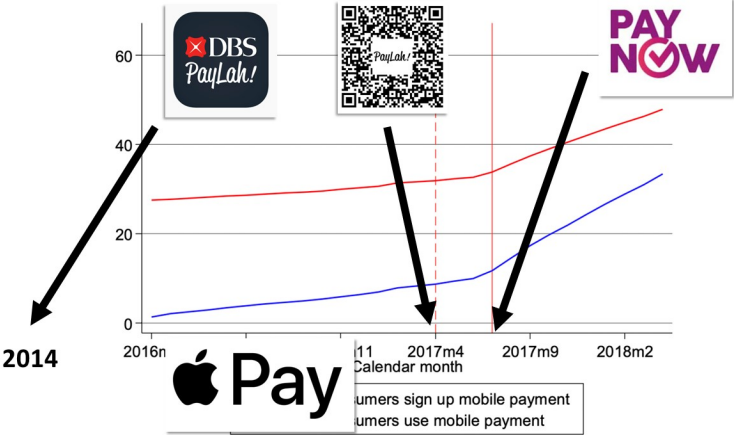
Introduction of QR Code



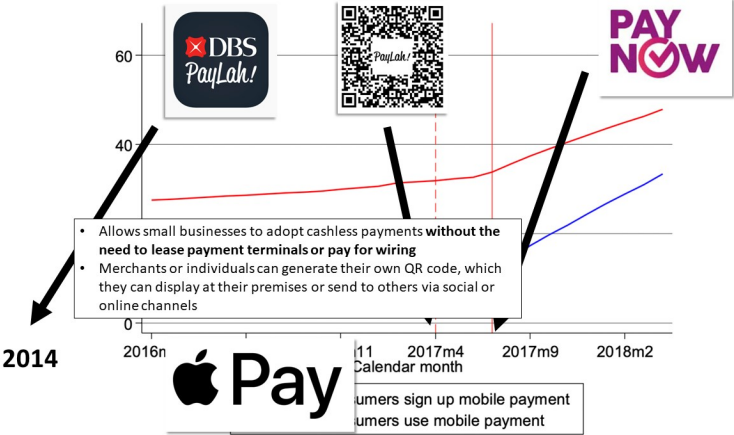
Introduction of QR Code



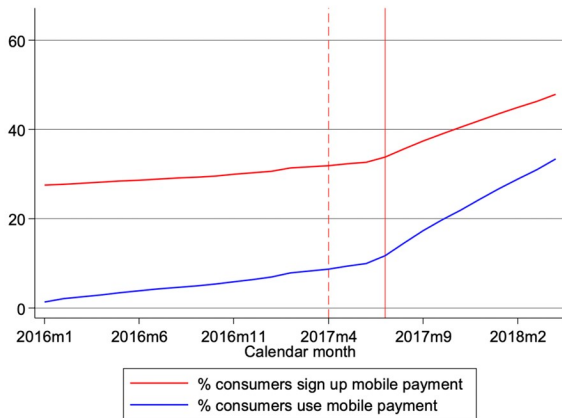
Introduction of QR Code



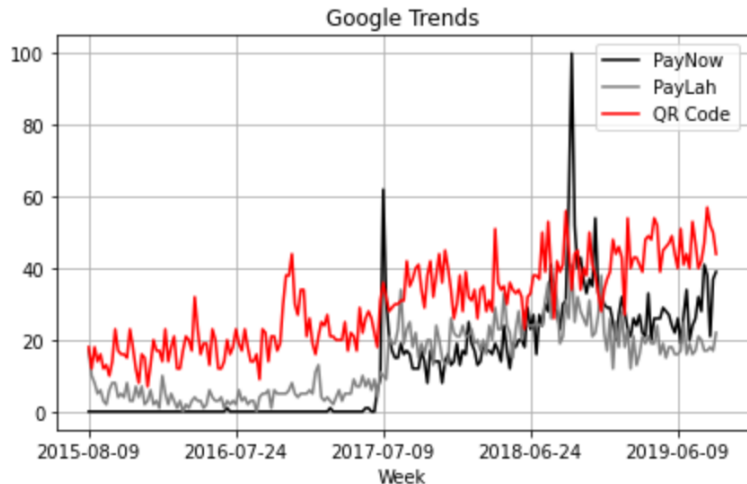
Introduction of QR Code



Introduction of QR Code



Introduction of QR Code



Important Question

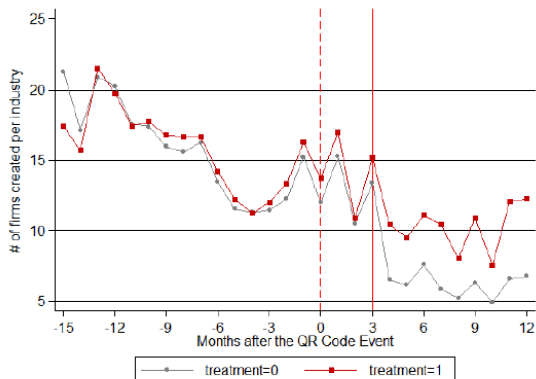
- ▶ The fees paid by merchants to banks for the privilege of accepting card payments are high: more than 9 billion EUR annually (European Commission)
- ▶ Merchants can either pay or (possibly) lose customers
- ▶ Governments have proposed or implemented regulation to cap interchange fees: switch from “merchants pay” to “customers pay” model?
- ▶ FinTech companies are providing cheaper alternatives
- ▶ What are the real effects? important and interesting question!

Business Creation

- ▶ Lower costs, higher profits for merchants
- ▶ Should attract entry by new firms
- ▶ Adoption of payment technologies has network externalities. Effects may take time to realize. Difficult to do an event study
- ▶ Advantage here:
 - ▶ In contrast to adopting credit cards, no cost of adoption from merchant
 - ▶ Many users already have and use the app before QR codes
- ▶ Possible problems
 - ▶ People are used to other cashless methods but 60% of monthly spending in cash
 - ▶ Cash-only business would work
 - ▶ Not sufficiently more convenient for users
 - ▶ Less believable that QR code affects entry decision significantly

Effect on Business Creation

FIGURE 2. UNCONDITIONAL MEAN OF NUMBER OF BUSINESSES CREATED



Effect on Business Creation - Comments

- ▶ Why business creation instead of **net** business creation?
- ▶ Numbers for B2B and B2C are essentially identical. Is this something we would expect?
- ▶ In the pre-event summary stats the numbers are different

TABLE 1. — SUMMARY STATISTICS: ACRA DATA

	Treated industry		Control industry	
	Mean	SD	Mean	SD
Monthly # of creation	18.5	50.2	10.6	47.6
% Non-company firms	45.1	49.8	36.4	48.1
% HDB area	77.1	42.0	72.5	44.6
% prime district	20.0	40.0	28.1	44.9
% high house-price district	36.3	48.1	40.8	49.1
# of industries	95		244	

This table reports the industry-level summary statistics for all new firms created during the pre-event window (2016:01-2017:03). The treated industries are the business-to-consumer industries; the control industries are business-to-business industries. We tabulate the distribution of firms created in different organization types (sole proprietorship/partnership or corporation) and in different areas. At the 2-digit postal sector level, we define an area to be a low-house-price area if its average residential property transaction price during the pre-event window (January 2016 to March 2017) is below the median of all postal sectors. The prime districts include postal districts 1, 2, 6, 9, 10 or 11. HDB areas are those within a 500-meter radius of an HDB building.

B2B and B2C

- ▶ Paper classifies B2B vs B2C based on SSIC 4 digits. How accurate is this?

B2B and B2C

- ▶ Paper classifies B2B vs B2C based on SSIC 4 digits. How accurate is this?

7011	Hotels & Motels
7200	Services-Personal Services
7310	Services-Advertising
7311	Services-Advertising Agencies
7320	Services-Consumer Credit Reporting, Collection Agencies
7330	Services-Mailing, Reproduction, Commercial Art & Photography
7331	Services-Direct Mail Advertising Services
7334	Services-Photocopying and Duplicating Services
7340	Services-To Dwellings & Other Buildings
7350	Services-Miscellaneous Equipment Rental & Leasing
7359	Services-Equipment Rental & Leasing, NEC
7361	Services-Employment Agencies
7363	Services-Help Supply Services
7370	Services-Computer Programming, Data Processing, Etc.
7374	Services-Computer Programming Services

The Event: Introduction of QR Codes

46300	wholesale trade of a variety of goods without a dominant product
47	RETAIL TRADE
471	RETAIL SALE IN NON-SPECIALISED STORES
4710	Retail Sale in Non-Specialised Stores
47101	Supermarkets and hypermarkets
47102	Mini-marts, convenience stores and provision shops
47103	Department stores
47109	Retail sale in other non-specialised stores n.e.c.
472	RETAIL SALE OF FOOD, BEVERAGES AND TOBACCO IN SPECIALISED STORES
4721	Retail Sale of Food in Specialised Stores
47211	Retail sale of fruits and vegetables
47212	Retail sale of meat, poultry, eggs and seafood
47213	Retail sale of confectionery and bakery products (not manufactured on site)
47214	Retail sale of health supplements
47219	Retail sale of food n.e.c.
4722	Retail Sale of Beverages in Specialised Stores
47220	Retail sale of beverages
4723	Retail Sale of Tobacco Products in Specialised Stores
47230	Retail sale of tobacco products
472	RETAIL SALE OF MOTOR VEHICLES, PARTS, ACCESSORIES AND AUTOMOTIVE FUEL IN SPECIALISED STORES

The Event: Introduction of QR Codes

9 46	WHOLESALE TRADE
0 461	WHOLESALE ON A FEE OR COMMISSION BASIS
1 4610	Wholesale on a Fee or Commission Basis
2 46100	Wholesale on a fee or commission basis (excluding online marketplaces)
3 462	WHOLESALE OF AGRICULTURAL RAW MATERIALS AND LIVE ANIMALS
4 4621	Wholesale of Agricultural Raw Materials and Live Animals except Tropical Produce
5 46211	Wholesale of cut flowers and plants
6 46212	Wholesale of aquarium fishes (including food and accessories)
7 46213	Wholesale of pet birds and animals (including food and accessories)
8 46219	Wholesale of agricultural raw materials and live animals n.e.c. (excluding tropical produce)
9 4622	Wholesale of Tropical Produce
0 46221	Wholesale of rubber (including rubber brokers)
1 46222	Wholesale of pepper and other spices
2 46223	Wholesale of coffee, cocoa and tea
3 46224	Wholesale of coconut
4 46225	Wholesale of palm oil
5 46229	Wholesale of tropical produce n.e.c.
6 463	WHOLESALE OF FOOD, BEVERAGES AND TOBACCO
7 4630	Wholesale of Food, Beverages and Tobacco
8 46301	Wholesale of fruits and vegetables (including fresh and frozen)
9 46302	Wholesale of livestock, meat, poultry, eggs and seafood (including fresh and frozen)
0 46303	Wholesale of a general line (wide range) of groceries (e.g. cereals, sugar, edible oils, sauces and dairy products)

Exploit your Data More?

- ▶ Can you use your data to measure QR code use for business?
- ▶ 3.7% of customers in bank data are self-employed vs 14% overall in Singapore (World Bank Data)
- ▶ Can you show that it is used more in non-touristic areas?

Why Real Effects?

- ▶ Substitution from cards to e-wallet: Transfer from banks and credit card companies to merchants. And if banks make less profits, they may lend less in the future
- ▶ Substitution from cash to e-wallet: Reduces costs of cash handling, but tax costs may increase
- ▶ This paper: Not only a substitution, total spending by consumers increases, a large fraction through credit cards (but they don't accumulate credit card debt)
 - ▶ “mobile payment technology provides direct and indirect benefits to all three sectors – merchants, consumers, banks”
 - ▶ “with reduced reliance on cash, consumers face lower transaction costs, which can boost their demand and, in turn, benefit merchants.”

Credit Response by Banks

- ▶ Traditional debit and credit cards: lucrative business. Now offer also e-wallets
- ▶ Threat from entry of Apple Pay, Google Pay, ...
- ▶ Significant increase in total number of credit cards as well as the credit limit. Both for adopters and non-adopters
- ▶ Could this expansion of supply of credit by banks contribute to your results?
- ▶ (Reduced number of ATMs may not be a response to reduced cash use, but another way to get people into using mobile payments more)

Summing up

- ▶ Interesting topic, interesting event
- ▶ More evidence to make to story more believable
 - ▶ what companies are created? Paper says small, but what do they do? Online shops? Can you say more with your data?
 - ▶ How high are the cash handling costs? Looks like something people may underestimate until they start the business
- ▶ I enjoyed reading the paper. Good luck with it!