Outcomes of a comparative study on retail payment behaviour in China and Germany

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* NOTE: Views expressed are those of the authors of the paper and do not necessarily reflect official positions of Deutsche Bundesbank. As this presentation is based on a paper in draft version, please do not cite without author’s permission.
Agenda

1. Introduction
2. Data / Methodology
3. Main findings
4. Conclusions
5. Market outlook

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Introduction

Background and scope of the comparative study

Scope of the study

- **Comparative empirical analysis of payment habits** in China and in Germany
- Identification of potential differences, provision of explanations and, if possible, definition of implications for the future
- Drivers and barriers for innovation in payment services markets

Background of the study

- China’s 2015/16 G20 presidency theme “Towards the Innovative, Invigorated, Interconnected and Inclusive World Economy”; Germany’s 2016/2017 G20 focus on “Digital Finance”
- Idea for joint Chinese-German research project in the area of payments
- Research conducted jointly by Deutsche Bundesbank, Academy of Internet Finance at Zhejiang University, Goethe University Frankfurt with support of GIZ.

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Data / Methodology

Main data sources in China and Germany

Germany: Retail Institute (EHI) survey

- Well-established, annual survey
- 493 companies, ca. 80,000 stores (avg. revenue € 2.97m)
- Rural as well as metropolitan areas (57.6% of total German retail market)
- Payment method categories: Cash, debit card, credit card, electronic direct debit / ELV, retailer cards, others

China: Own field survey at POS

- Small sample of 160 retailers
- International chains and local stores (avg. revenue: ¥ 28.6m / € 3.9m)
- 3 metropolitan regions (Shanghai, Beijing, Hangzhou)
- Payment method categories: Cash, debit card, credit card, Alipay, WeChat, Union Quick, prepaid cards
- Data partly based on merchant estimates (e.g. payment method shares)

Complementary sources

- Additional existing studies *
- Expert opinions/estimates

* e.g. Deutsche Bundesbank (2015): Payment behaviour in Germany, EHI (2017): Online-Payment 2017, and others
Main findings

Differences in payment behaviour at the POS

**China:** Payment method share according to Chinese survey

- **Prepaid Card:** 4.9%
- **Debit Card:** 10.4%
- **Credit Card:** 9.6%
- **Cash:** 17.8%
- **WeChat:** 16.6%
- **Alipay:** 39.5%
- **Union Quick:** 0.7%
- **Others:** 0.6%

*Transaction value shares are partly based on Chinese merchant's estimates.*

**Germany:** Payment method share according to EHI Retail Institute

- **Cash:** 51.3%
- **Debit Card:** 25.5%
- **Credit Card:** 6.1%
- **Electronic direct debit:** 13.4%
- **Invoice:** 2.5%
- **Retailer card:** 0.6%
- **Other:** 1.0%

Source: EHI 2017a.
Deutsche Bundesbank

- **Strong role of non-bank / third-party mobile payment providers at the POS in Chinese megacities**
- **Cash and cards preferred in Germany**
- **No dominant mobile device based solutions (yet)**

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Main findings

Key players in China: Alipay and WeChat

Alipay

- Payment service provider linked to the Alibaba conglomerate
- Founded 2004 to provide internet payment services for Alibaba online shopping site
- Mobile application launched 2009
- 175 million transactions/day, 60% completed via mobile phone **
- Since 2017 available for Chinese customers at selected German POS

WeChat

- Social platform run by Tencent (806 million users in 2016) ***
- combines functionalities known from Facebook and WhatsApp (Video calls, “Moments” etc)
- Integrated digital wallet WeChat Pay: Customers can pay in various situations, both remote and at the POS

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* Source: Presentation at Alibaba Group 2016 Investor Day
** Alibaba, figures for 2016
*** EY 2016
**** Source: wirecard
Main findings
A closer look: Clothing / sports goods

- Mobile payment solutions of Alipay and WeChat Pay account for over 60% of payments in clothing and sports stores in the Chinese sample, while in Germany payments are carried out with cash or cards.

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Main findings

A closer look: Fast-food restaurants and cafes

- **China**: Alipay and WeChat Pay dominating in fast-food restaurants and cafes. Cash share slightly higher than sample average

- **Germany**: approx. 90% of revenue in “cafes/bars/snack bars/fast-food restaurants” paid cash *

*Deutsche Bundesbank Payment behaviour study 2015
### Main findings

#### Differences in payment behaviour in situations of daily life

<table>
<thead>
<tr>
<th>Event</th>
<th>China</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick-and-mortar retail</td>
<td>Alipay, Cash, WeChat Pay</td>
<td>Cash, Debit card, Electronic direct debit</td>
</tr>
<tr>
<td>E-Commerce</td>
<td>Alipay, WeChat Pay</td>
<td>Invoice (i.e. credit transfer), Direct debit, PayPal</td>
</tr>
<tr>
<td>Gas station</td>
<td>Prepaid card, Cash, Alipay / Credit card</td>
<td>Cash, Debit card, Fleet card</td>
</tr>
<tr>
<td>Café / Fast food restaurant</td>
<td>Alipay, WeChat Pay, Cash</td>
<td>Cash, Debit card, Credit card</td>
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<td>Rent payment</td>
<td>Cash, Alipay</td>
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<td>P2P</td>
<td>Cash, WeChat Pay, Alipay</td>
<td>Cash, Credit transfer, Paypal / mobile apps</td>
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</tbody>
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* The table is based on the sources of this report and is not intended to be an exhaustive and/or representative market analysis. Source: Own compilation.

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Conclusions

Germany: Strong role of banks in the payments landscape

Dominance of bank-run payment systems in Germany

- Largest part of payments made via cash, debit card, credit transfer and direct debit, with banks providing essential infrastructure.
- 99% bank account ownership rate*: A2A payments well-established and widely used e.g. for recurring payments

Low adoption of mobile payment solutions

- Lack of consumer demand **
- Low willingness to invest into new payment solutions
- Critical mass / chicken and egg problem
- Standardization challenge
- Distrust from consumers ***

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* Percentage of Germans aged 15+, Source: World Bank Findex database
** Bundesbank 2015
*** See e.g. PWC 2017
Conclusions

China: Leapfrogging to mobile solutions

Strong role of non-banks and “leapfrogging” in China

- Strong market presence of non-bank payment providers (Alipay, WeChat)
- “Two worlds”: High adoption of innovative mobile payments in metropolitan regions vs. reliance on cash, notably in rural areas
- “Leapfrogging” hypothesis

Drivers of the emergence of Alipay and WeChat

- Critical mass to start with
- Trust of consumers
- Low investment cost for merchants
- Banks less dominant in payments than e.g. in Germany
- Non-bank PSPs offering added value to consumers and merchants
Market outlook
Potential future developments

Germany
- Adoption of mobile payments at the POS in Germany?
  - Smartphone as customer’s constant companion
  - Ubiquity of mobile Internet
  - POS infrastructure (establishment of NFC-ready terminals well advanced)
    - Customers will to use offered solutions?
- Instant Payments as a possible driver
- Internet giants as leading payment market players?

China
- Process towards a world of payments without cash?
- Tighter oversight for non-bank payment services in China
- Payment markets in China and Germany getting more similar?
Literature


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Thank you very much for your attention!