

Developing UK Supply Chain Data From Interbank Payment Systems Transactions

Office for National Statistics
Financial Transactions Research

Dragoş Cozma



Background



Vulnerability of supply chains exposed as global maritime chokepoints come under pressure

22 October 2024

The latest Review of Maritime transport urges action to strengthen infrastructure and operations, promote low-carbon shipping and combat growing concerns over fraudulent ship registrations.



© Shutterstock/Gianfranco Vivoli | An aerial view of the Miraflores Locks on the Pacific side of the Panama Canal.



BBC

<https://www.bbc.co.uk/sounds/play>

Global supply chains: is the UK vulnerable? - BBC Sounds

Where Are All the Workers? As the economy opens up again, is the UK short of workers? 28 mins. The Briefing Room. Taiwan and the Threat to ...

Quality is increasingly an issue in traditional data sources for economic measurement

*“ONS should investigate the scope for using data held by the private sector, for instance on **payments** [...] although these may not always be suitable as **core data sources** for regularly produced economic statistics, they may be valuable for **cross-checking** data, filling in **temporary gaps**, and **exploring the significance of new economic phenomena** prior to understanding more systematic measurement”*

[Independent review of UK economic statistics: final report – Professor Charles Bean - GOV.UK](#)

38,704,000

£ 378,634,000,000

Average daily volume and **value** UK
interbank transfers in 2024

[Pay.UK annual statistics](#)

Quick overview – payments ecosystem



Separate work:
[Regional consumer card spending, UK: 2019 to 2023](#)

ONS and Pay.UK/Vocalink are in partnership to develop new supply chain data from Bacs and FPS



← Real-time account-to-account transfers



← Direct Debit, Direct Credit

In 2024, Bacs and FPS processed 11.9 billion UK interbank transfers (99% of total UK volume) totalling £10.1 trillion (10% of value)

Develop industry-to-industry data

Raw data 

Source name	Source bank details	Destination name	Destination bank details	date	Value (£)	--
Mrs Smith	123456 - 0000123	HMRC tax	666301 - 5678967	1/12/24	1500	--
Big company ltd	123888 - 0004586	Another company PLC	503412 - 69785463	3/12/24	3,000,000	--
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Key steps:

1. Determine if an account belongs to an organisation.
2. Match organisations to Companies House and other lookups and assign industry codes.
3. Disclosure controls

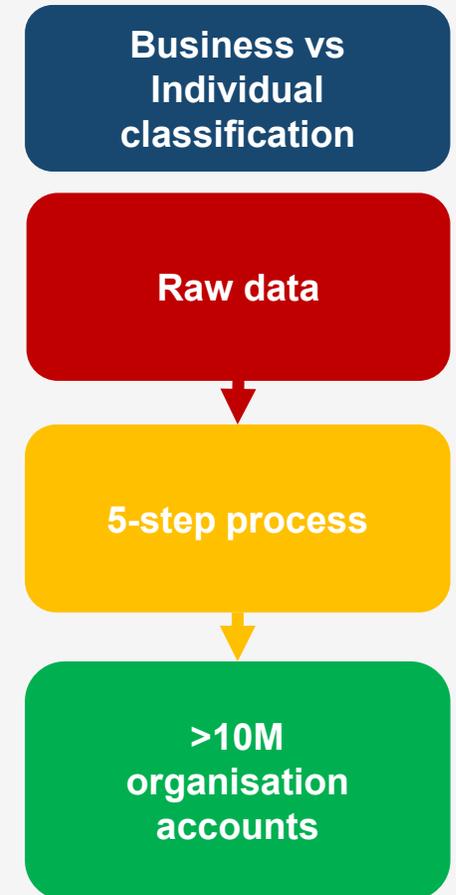


Industry-to-industry Payments Data



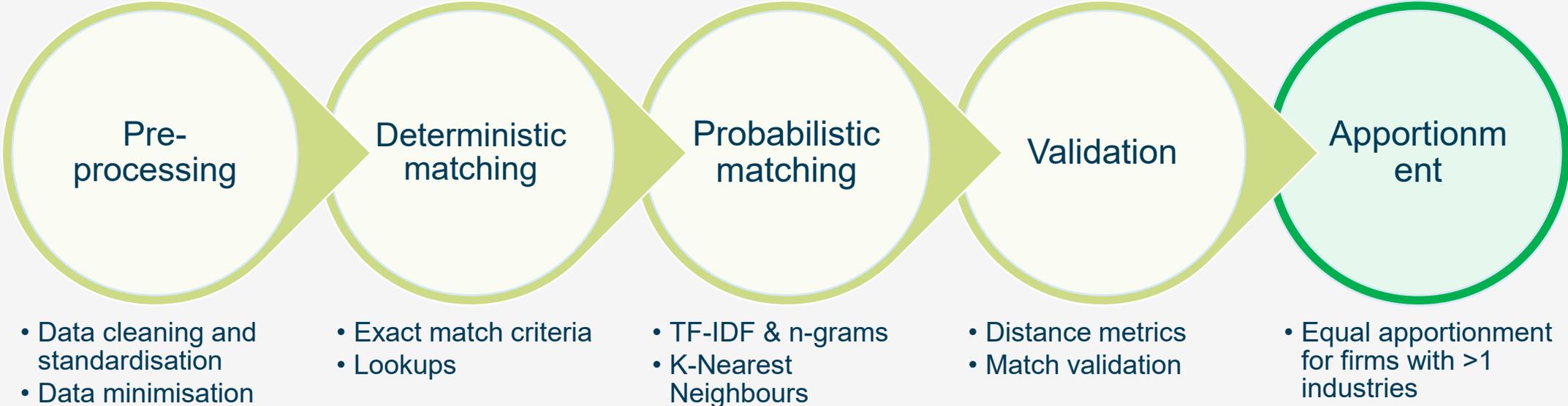
Account classification

1. Accounts connected to the Bacs Payment System = strong indication **organisation**
2. Receipt of salary payment = strong indication **individual**
3. Specific strings within the account name can indicate either an **organisation** ('Limited', 'PLC') or **individual** ('Miss', 'Mr') account
4. Interacting with publicly available accounts can indicate either an **organisation** (corporation tax, PAYE) or **individual** (DWP payments, tax credits)
5. Fuzzy matching account name to Companies House and other lookups indicates likelihood of an **organisation** account



Industry classification

- Match account name to Companies House and public body lookups using the following strategy:

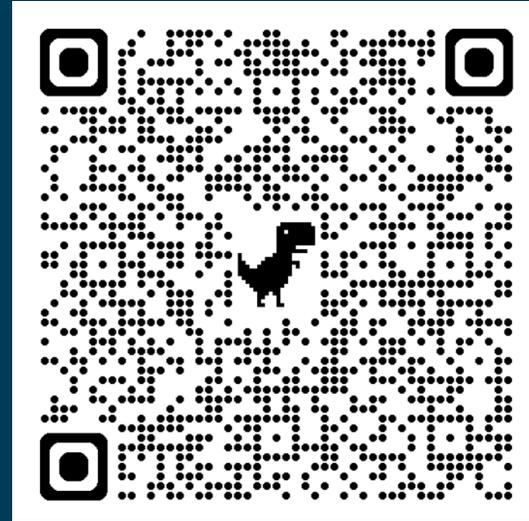


>10M organisation accounts



>3M organisations

Industry-to-industry payment flows, UK: 2017 to 2024



Financial Transactions Data Research | Data Science Campus

Released 13 January 2025

Key features & Use cases

Figure 2: Wholesale and retail trade; repair of motor vehicles and motorcycles, and financial and insurance activities are the two biggest industries for payments made and received

Industry-to-industry Bacs Payment System (Bacs) and Faster Payment Systems (FPS) payments, non-seasonally adjusted, UK

A from:

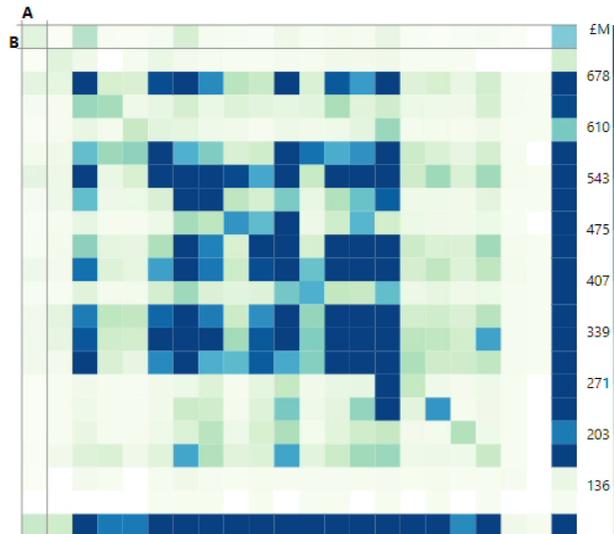
A: Agriculture, forestry and fishing

B to:

A: Agriculture, forestry and fishing

Nov 2024: **£109.99M**

Change date:



1) High coverage:

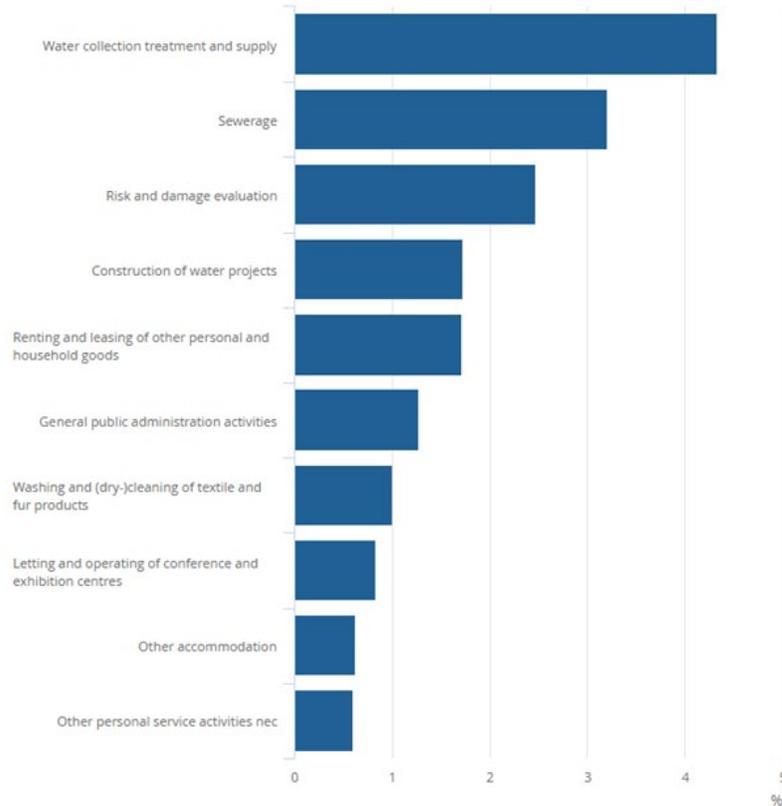
- Payments from over 3m organisations
- Includes both firms and public sector bodies
- Enables whole-economy supply chain mapping
- (*) Data is nominal

Use cases

- ❖ CMA supply chain market power, startup survival

Key features & Use cases

Total water intensity in 2024 by top Standard Industrial Classification (SIC5) industries, defined by the share of payments to water collection, treatment and supply, and sewerage (36000 and 37000 5-digit SIC codes) out of total payments, UK



2) Granularity:

- Available at SIC2 and SIC5 levels (800+ industries)
- Enables sector-specific trend analysis
- (*) Some misclassification possible

Use cases

- ❖ Water and energy dependency analysis across sectors (article)

Key features & Use cases

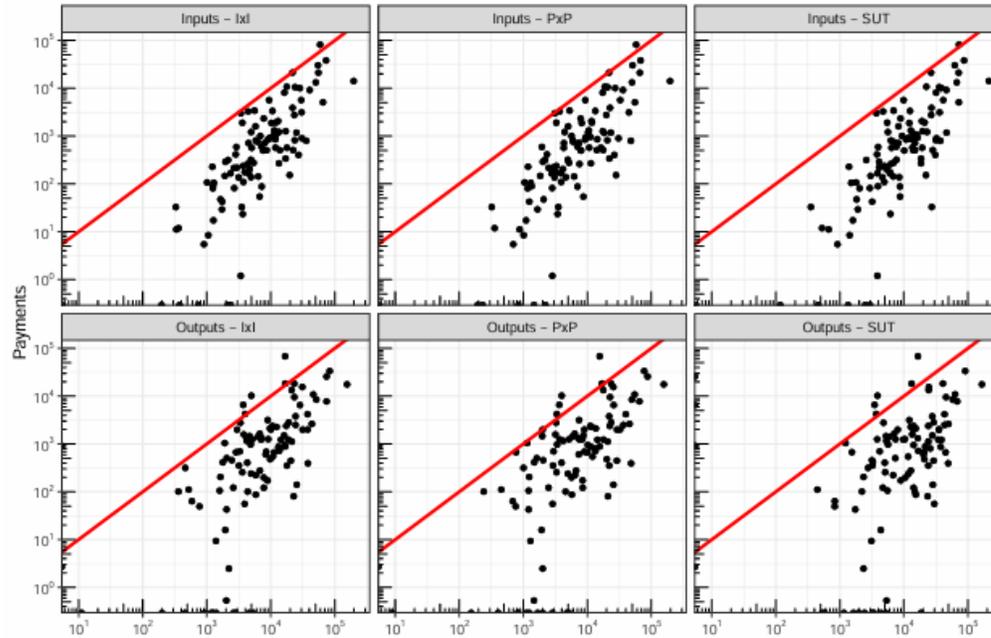


Figure C.5: Comparison of industry sizes

Notes: This figure shows the differences of industry-level aggregate inputs and outputs. Payment data values are shown at the vertical axis, and those for different ONS IOTs (IxI, PxP, SUT) at the horizontal. The red line is a 45 degree line, at which the values in the payment data would be equal to those in the ONS table.

[Hötte, K., & Naddeo, A. \(2024\). National accounting from the bottom up using large-scale financial transactions data: An application to input-output tables.](#)

3) Real-time:

- Data available (*) for the previous month
- Captures evolving supply chain dynamics
- Exploring new data sources into compilation of National Accounts (early comparison)
- (*) Timestamp is when transaction occurred
- (*) Includes intermediary payments

Use cases

- ❖ GDP nowcasting
- ❖ Network modelling GNAR-edge (Alan Turing Institute)

Next steps & impact

- **2025 data development plans**
 - further data update with regional breakdown
 - moving towards a regular publication of industry/region-industry/region data
- **Further data development, possibly including:**
 - Size of organisation by payments made/received
 - Utilising information from CH for further firm characteristics:
 - Age (date incorporated)
 - Type and status of organisation
 - Country
 - Consumer payments
- **Integration into official statistics production**
 - National accounts: GDP, Input-Output tables; Inter-regional trade

Thank you
For your attention



Q&A

1. What further developments (beyond regional breakdowns) would you like to see in the payment flow data?
2. Are there any uses cases you can see for this data that we've not yet identified?
3. Are you aware of any other countries using interbank transfer data (as opposed to card payments data)?